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A B S T R A C T

of the dissertation for the degree of Doctor of Philosophy

PROBLEMS OF LEGAL REGULATION OF ELECTRONIC COMMERCE

Speciality: 5608.01 – “Civil law; entrepreneurial law;
family law; private international law”

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GENERAL CHARACTERISTICS OF THE WORK

The relevance of the topic and the degree of development.

The relevance of the research work is determined by the development of the market economy, which involves the use of new methods of participation of subjects in civil law relations. One of these methods is the implementation of commercial transactions through electronic data exchange, including the use of special methods of data transmission and storage. In modern times, information transmission is the most important field of human activity, and clear legal regulation is required in this sphere, also as more people are involved in active information exchange, its importance increases. In a short time, information has become a necessary tool for accompanying goods and services, concluding contracts, confirming events and facts. Modern technologies of global communication enable economic relations, as well as the process of creation of intangible benefits to exist in electronic form. It is possible to organize the joint work of a large number of people located at a considerable distance from each other, the possibility of establishing direct contact with each other, and completely free movement of intangible assets with personal discretion.

The possibility of interaction between counterparties provides the advantage of electronic forms of interaction in general, especially business activities, regardless of distance. Undoubtedly, the advanced computer and communication infrastructure has become one of the main factors of the successful socio-economic development of the modern state and the business activity of citizens. This factor makes e-commerce increasingly important in modern times. Its development is so important that most of the world's largest companies prefer to use e-commerce over traditional offline business.

According to the latest reports of the most influential research companies (Gartner, Forrester, IDC Research, Insider Intelligence), *"the volume of retail sales through the Internet is developing at an*

intensively increasing pace".¹ For comparison, let's note that "in 2021 this figure is 4.9 trillion US dollars, in 2022 is 5.54 trillion US dollars, and in 2025 it is expected to be 7.38 trillion US dollars, this indicator means a 50% increase compared to the figures of 2019".²

The mentioned statistic data are an indicator of the vital importance of e-commerce in the world and how it affects all members of society. In such a case, the legal regulation of electronic commerce at a more advanced level that meets the requirements of the time becomes an objective necessity. Legal regulation of e-commerce is also emerging as a national security issue.

Since the early 90s of the 20th century, the number of contradictions in legislation related to electronic commerce has increased significantly all over the world in one way or another. In fact, the transition of information relations from paper form to electronic form has exceeded the importance and scale of the changes in economic relations due to changes in management and production forms. The transformation of traditional relations into a qualitatively different form, the large-scale nature of information circulation has led to the realization that the existing regulatory and law enforcement practice is not sufficient to regulate business relations developing in electronic information networks of global communication. Almost every state is facing this problem today, many of them have already implemented legislative reforms in this area. The lack of a legislative tradition regulating relations in the field of information and electronic commerce in the Republic of Azerbaijan makes the situation even more complicated. The current legislation is clearly insufficient to solve such problems: there are gaps in the legal technique, there is fragmented regulation, stimulating competition in the field of electronic commerce and ensuring entrepreneurial freedom is at a problematic level, in

¹The Top E-Commerce Analysts for E-Commerce Technology (Nov 1, 2021): [Electronic resource] / <https://is.gd/Ya226t>

²Retail e-commerce sales worldwide from 2014 to 2027 (in billion U.S. dollars) // E-Commerce> Key Figures of E-Commerce, February 6, 2024: [Electronic resource] / <https://is.gd/vbQbqj>

information systems, methods of information and legal influence appear on subjects and objects previously unknown to law, traditional legal relations are reestablished and new social relations and relationships are created.

The listed problems are legal and need to be solved. A comprehensive approach requires, first of all, specific identification of existing gaps and problems in the theoretical and practical field. For the formation of an advanced legal system in the field of e-commerce, new, more flexible and up-to-date approaches should be prioritized in the most relevant areas, especially in spheres such as concluding electronic contracts, using electronic signatures and ensuring security in the field of e-commerce, and legal reforms should be carried out in this direction. In recent times, the increasing attention of experts of various international organizations to this field³ determines the relevance of the topic.

The rapid development of e-commerce leads to the fact that more and more transactions, both in international trade and in the domestic market, are conducted not by drawing up a single document or by exchanging documents, but in a special information environment that allows the parties to the contract to express their will.

The integration of the Republic of Azerbaijan into the world economic system inevitably requires local companies to use relevant technologies not only in foreign but also in domestic markets. The development of electronic commerce is one of the most important areas of state policy according to the acts of the President of the Republic of Azerbaijan.⁴

³Experts discussed the problems of regulating e-commerce in the Commonwealth countries (Economy October 19, 2022) (in Russian): [Electronic resource] / <https://is.gd/gFINMJ>

⁴Strategic roadmaps for the national economy and key sectors of the economy // Approved by the Decree of the President of the Republic of Azerbaijan on December 06, 2016 (amendments and additions until July 18, 2023) (in Azerbaijani): [Electronic resource] / <https://is.gd/m5k2Jn>;
State Program on the Expansion of Digital Payments in the Republic of Azerbaijan in 2018-2020 // Approved by the Decree of the President of the Republic of

Legislative regulation of electronic circulation lags far behind the practice of its use, which creates serious both theoretical and practical problems. In the absence of a fundamental and logical legal regulation of any new relationships, abuses and other practical problems arise that hinder the development of both these relationships and the economy as a whole. Insufficient legal regulation of relations related to electronic commerce leads to difficulties in evaluating certain actions as transactions or contracts, attempts to carry out transactions in electronic form, the legal nature of which is contrary to this method of execution, and the involvement of inappropriate subjects in relevant relations.

In the B2C e-commerce index of the UN Conference on Trade and Development (UNCTAD), the Republic of Azerbaijan ranks only 68th out of 151 countries. With this location, it is also behind the neighboring states – Georgia (46) and Armenia (66).⁵

These problems appear in various spheres of the legal system of the Republic of Azerbaijan, and in this regard, legislative reforms aimed at optimizing the regulation of electronic transactions in some legal fields should be carried out, the experience of advanced countries should be studied and used, and important international acts in this field should be ratified.

The relative novelty of electronic documents and electronic signature institutions and the diversity of their use leads to inconsistencies in legal definitions, approaches and methods of legal regulation. For this reason, the study of foreign experience is inevitable. Despite the fact that the electronic signature institution in Azerbaijan has had a legislative basis for nearly 20 years, discussions about the role of the state in regulating relations related to the use of electronic signatures in domestic legal practice and the ability of electronic signature subjects to regulate the relations independently are going on.

Azerbaijan on September 26, 2018 (amendments and additions until June 14, 2019) (in Azerbaijani): [Electronic resource] / <https://is.gd/5gOcqS>

⁵UNCTAD B2C e-commerce index 2018 focus on Africa // United Nations 2018. - 21 p.: [Electronic resource] / <https://is.gd/SvH8lb>

The issues of contracts and the use of electronic signatures in electronic commerce and the civil-legal regulation of these relations still remain the subject of active discussion in scientific circles and the legal community. Existing legal gaps and conflicts also result from the fact that the existing legislation in the studied area is not sufficiently developed, in other words, the number of legislative acts is not enough, in addition, a number of international legal acts have not been ratified. Today, the reality is that existing legislation clearly cannot keep up with the rapid development of technology, the dynamics of civil circulation, and often creates barriers to contract regulation in this sphere.

Taking into account the legal problems mentioned above, it should be emphasized that the relevance of the research work is also related to the fact that despite the lack of clear and unambiguous positions and opinions both in theory and in practice, the legislator is also slow to adopt effective solutions to overcome problems arising in the field of electronic commerce.

Many problems can be solved by taking into account the legal provisions of civil, informational and other legal fields, but the pace of development of information technologies is significantly ahead of the legislative determination of the practical application of the results obtained in modern business activity. Such legal loopholes lead to the commission of very dangerous acts that harm public relations protected by law using the information space. In general, the development of e-commerce is inversely proportional to the provision of security, that is, the more the former develops, the more security threats increase. Almost simultaneously with the beginning of the use of information technologies in the economy, security issues in the information environment became a topic of discussion. Although the legal regulation of electronic commerce has very broad directions, the research work is examined within the context of civil (private) law, as defined in its subject matter. The mentioned determines the relevance of the thesis topic, selection as a research object, and necessity to investigate it in a comprehensive manner.

In studying the issue of legal regulation of electronic commerce, particular importance is given to scientific research in the

Republic of Azerbaijan's trading partners and countries with similar legal systems to the Republic of Azerbaijan. So that the research conducted by D.V.Kofeynikov, A.G.Sergo, D.M.Ogorodov, D.V.Tuyeva, D.M.Kublyakova, S.V.Vasilyev, N.V.Krisanova, I.S.Yevdokimova, N.A.Dmitrik, A.V.Shamrayev, A.P.Vershinin, V.M.Yelin, A.K.Jarova, I.L.Bachilo, L.A.Sergiyenko, Y.L.Paperno, N.V.Minenkova, I.R.Saliyev, P.Heyer, M.Puppis, R.L.Markus, A.Savin, V.Y.Mochyonov, I.Y.Bistrenina, N.V.Kozinech and other scientists in this direction attracts attention with its high scientific value. For example, Mochyonov, V.Y. "Legal regulation of electronic commerce". Dissertation for the degree of PhD in Law, Moscow, 2006, 175 p.; Saliyev, I.R. "Civil-legal regulation of electronic commerce in Russia: a modern legal model". Dissertation for the degree of PhD in Law, Kazan, 2013, 198 p.; Kozinech, N.V. "Features of legal regulation of cross-border electronic commerce". Dissertation for the degree of PhD in Law, Moscow, 2017, 209 p.; Bistrenina, I.Y. "Electronic commerce". Moscow: Dashkov and K Publishing House, 2019, 90 p.; Kofeynikov, D.V. "International legal regulation of electronic commerce in BRICS countries". Dissertation for the degree of PhD in Law, Moscow, 2017, 209 p. and so on.

The following works on e-commerce have been published in the Republic of Azerbaijan: Akbarov, M.G. "Electronic commerce". Baku: University of Economics Publishing House, - 2011. - 212 p.; Majidli, S.T. "Internet Law and Ethics": Textbook. Baku: Elm ve Tehsil, - 2013. - 224 p.; Aliyev A.G., Abbasova V.A., Abedini, M.A. "Issues of regulating the implementation of electronic commerce technologies": [Electronic resource] / <https://is.gd/s1yWr6>; Gasimzada, R.S. "Electronic commerce in Azerbaijan: current status and development directions". Azerbaijan State University of Economics (Master's thesis): [Electronic resource] / <https://is.gd/SY39jR>. However, the legal regulation of electronic commerce in our country has never been the subject of an independent complex monographic study.

The object and subject of the research. The object of the study is the problems of legal regulation of electronic commerce. The subject of the study is legal issues related to regulation in the field of

electronic commerce: the nature of domestic acts in the direction of civil legal regulation of electronic commerce transactions, determining the importance of legal acts on international legal regulation, the practice of applying existing legal norms, etc.

Research goals and objectives. The main goal of the study is the analysis of the theoretical and legal basis of the legal regulation of electronic commerce and aspects of law enforcement. In addition, the aim of the study is to develop scientifically based proposals for the improvement of the national legislation that ensures the legal regulation of electronic commerce and to identify general principles. In order to achieve the stated goals, the following tasks have been defined:

- explore the concept, characteristics and doctrinal approaches to types of electronic commerce;
- analyze the legal sources of electronic commerce and the national legislation in this field;
- determine international legal acts in the field of electronic commerce;
- review the legal regulation of electronic document circulation;
- analyze the general characteristics of an electronic contract;
- examine legal issues related to the conclusion and execution of contracts in the field of e-commerce;
- clarify the role of “electronic signature” in the field of electronic commerce;
- determine the legal problems related to the implementation of electronic commerce in the Internet space;
- analyze legal issues related to ensuring privacy and security in the field of electronic commerce.

The research methods. The research work involves systematic analysis, generalization of normative and scientific materials, historical approach from general legal methods; comparative jurisprudence, logic and statistical analysis typical for non-legal sciences from special scientific methods and other methods. Their application allowed the applicant to conduct a thorough and objective investigation of the issues under consideration.

The main scientific propositions defended. The following scientific propositions expressing the scientific innovation of the research are submitted for defense:

1. Electronic commerce is an entrepreneurial activity with unique characteristics carried out through the exchange of information between the seller (supplier), the buyer (customer) and/or the electronic document circulation intermediary regarding the production, advertising, sale of goods, provision of services and performance of work in written, audio, visual form using any of the free network SSL (*secure sockets layer*) and SET (*secure electronic transaction*) methods through information technologies.

2. Special legislation, which constitutes the normative basis for the legal regulation of electronic commerce as a system combines normative legal acts that establish legal norms (substantive, procedural and conflict of laws, domestic and international) that can participate in the regulation of electronic commerce. The application of this legislation in the process of legal regulation is based on the principle that *special law overrides general law (lex specialis derogat lex generalis)*.

3. The fact that electronic commerce is “*borderless*” objectively requires the use of international legal acts in legal regulation. The need for effective legal regulation of electronic commerce requires the harmonization of domestic legislation with these acts. In the context of the flexible nature of electronic commerce, international legal acts (for example, the Model Law) that establish “*soft law*” norms act as a form of harmonization of domestic legislation.

4. The cross-border nature of e-commerce relations necessitates the use of the conflict of laws method in addition to the substantive law method in the legal regulation of these relations. However, the existence of substantive international law norms (usually international treaties) excludes the use of the conflict of laws method in legal regulation.

5. Basing the regulation of electronic commerce on the principle of freedom of will necessitates the use of customary norms, especially trade customs, in legal regulation. The systematization of

trade customs at the international level can be considered as a unification of norms related to electronic commerce.

6. The direct application of international treaties to which the Republic of Azerbaijan is a party, establishing specific (self-executable) legal norms related to electronic commerce, in the legal system of the Republic of Azerbaijan does not depend on the contradiction existing between the norms of those treaties and the relevant legislation of the Republic of Azerbaijan.

7. An electronic contract is a new form of expression of will, an electronic transaction that creates, changes and terminates tripartite civil law relations involving the seller, the buyer and an information intermediary as a special subject in electronic commerce.

8. Although the use of information technologies in the field of electronic commerce allows for more efficient business organization, it is accompanied by the potential cross-border transfer of personal data. In order to prevent the potential threat in this regard, the electronic signature serves the development dynamics of electronic civil circulation and ensures the protection of the rights and interests of individuals using electronic documents (including electronic formalization through special programs).

Scientific novelty of the research. The choice of the topic of the research work is due to the urgency of the problem and its lack of investigation in legal science. The present thesis is the first monographic scientific research work dedicated to the problems of legal regulation of electronic commerce in our country. The author's model of promising directions for the development of legislation was shown in the given thesis, suggestions were put forward for improving the existing legislation and increasing the efficiency of its application in relation to the nature of information. For the first time, the theoretical-legal and practical problems of the legal regulation of electronic commerce have been comprehensively investigated, the international and domestic experience determining the current trends in the legal regulation of public relations related to electronic commerce has been analyzed, the place and role of issues related to the legal regulation of electronic commerce in the legal system of the Republic of Azerbaijan have been defined, their complex nature and

interdisciplinary importance have been substantiated, and gaps and shortcomings in the legal regulation of social relations under review have been revealed and appropriate recommendations have been made.

Theoretical and practical significance of research. The theoretical importance of the research is that the provisions and results produced in the research work lead to the creation of effective legal regulation mechanisms in the field of electronic commerce, justify the provisions that are not reflected in the existing normative legal acts.

The results and practical recommendations developed as a result of the research can be taken as a basis for the activities of state bodies to improve and develop the existing legislation in the field of legal regulation of electronic commerce. In addition, the proposed practical recommendations can increase efficiency in the development of the business environment in general, and in the protection of the rights and freedoms of business subjects. The results of the research work can be used when conducting further scientific research, as well as when teaching the subjects Civil law, Private international law, Entrepreneurial law, Contract law and Information law.

Approbation and application. The main provisions of the thesis have been published in authoritative scientific journals, as well as in the materials of scientific-practical conferences.

The name of the institution where the dissertation work was performed. Dissertation work was performed at the Civil Law department of the Law Faculty of Baku State University.

The structure of the research work. The research paper consists of an introduction, three chapters with nine paragraphs, a conclusion and a list of used literature. Excluding the list of used literature, the total volume of the dissertation consists of 249707 signs without space. The volume of the sections of the dissertation is as follows:

- Title page - 341 signs;
- Contents - 2090 signs;
- Introduction - 19207 signs;

- Chapter I - 81072 signs;
- Chapter II - 99390 signs;
- Chapter III - 40165 signs;
- Conclusion - 7442 signs.

THE MAIN CONTENT OF THE THESIS

The **Introduction** of the thesis defines the relevance of the research topic, the degree of scientific processing of the problem, the goals and objectives of the research, states the object, subject, research methods, scientific innovation, theoretical and practical importance, presents defense propositions, provides information about the approbation of the research results and the structure of the thesis.

The first chapter of the thesis is entitled **“Theoretical and regulatory basis of electronic commerce”** and consists of three paragraphs. The first paragraph of the given chapter which is entitled **“Establishment of electronic commerce, normative understanding and scientific approaches”** states that among the types of entrepreneurial activity, e-commerce activities carried out through information technologies occupy a unique place.

According to the applicant, the concept of “electronic commerce” is understood in a narrow and broad sense. In a narrow sense, it refers to the purchase and sale of goods by using information systems, corresponding to the concept of “trade”. In a broad sense, it includes not only the purchase and sale of goods, but also the provision of services and the performance of works. This case makes this concept synonymous with the concept of “entrepreneurial activity”. The author believes that the content of the concept of “electronic commerce” should be explained by starting from the content of the concept of “entrepreneurial activity”. Entrepreneurial activity acts as a part of the concept of “economic activity”, which is a broad concept. The researcher concludes that e-commerce is a special type of entrepreneurial activity implemented through information technologies. Relationships arising in the field

of electronic commerce are included in the scope of regulation of a number of legal fields (civil, financial, administrative, criminal, etc.). Electronic commerce has specific characteristics and legal quality determination and can be called a legal category.

The second paragraph of the first chapter entitled **“Sources of legal regulation of electronic commerce and the legislation of the Republic of Azerbaijan”** states that jurisprudence approaches the concept of the source of law from 2 directions. In the material sense, the source of law is understood as the real force that creates legal instructions and ensures their implementation. In the formal sense, the source of law refers to the external form of expression of legal instructions. In this sense, the source of law can be considered as methods of expression of will aimed at the legal regulation of social relations, regardless of the content of the relevant power structures in society.

The sources of law in the field of electronic commerce are reflected in Article 3 of the Law of the Republic of Azerbaijan “On Electronic Commerce”. Taking into account the above, the legislative acts regulating the relations arising in the field of electronic commerce can be generally grouped as follows:

- the Constitution of the Republic of Azerbaijan;
- international agreements;
- field legislation;
- special legislation;
- other normative legal acts.

According to legislation, the legal regulation of e-commerce has become international in accordance with the modern integration trends, while on the one hand it refers to the international agreements that have been ratified, on the other hand, the internal legislative acts are harmonized according to the requirements of the foreign economic cycle and become exemplary regulatory acts.

According to the applicant, the legislation in the field of electronic commerce can be classified according to the specific features of the acts included in that legislation. Based on this criterion, a distinction is made between complex legal acts that

reflect the norms of all legal fields and sectoral legal acts that reflect the norms of specific legal fields.

Acts included in the legislation in this area are divided into acts of a material nature (such as the Law of the Republic of Azerbaijan “On Electronic Commerce”) and acts of a procedural nature according to the content of those acts.

According to the criterion of subordination, the mentioned legal acts are classified as basic acts (Civil Code of the Republic of Azerbaijan, Law of the Republic of Azerbaijan “On Electronic Commerce”) and auxiliary acts (Acts of the Cabinet of Ministers of the Republic of Azerbaijan, Acts of the State Tax Service under the Ministry of Economy of the Republic of Azerbaijan).

Although there are no direct instructions on the regulation of relations in the field of electronic commerce in the Constitution of the Republic of Azerbaijan, there are a number of provisions that determine the basis of their legal regulation. For example, Part II of Article 15, Articles 29 and 59 of the Basic Law form the general basis for the legal regulation of electronic commerce.

Decrees and orders of the President of the Republic of Azerbaijan, decisions of the Cabinet of Ministers also have a special place in the legal regulation of electronic commerce.

The third paragraph of the first chapter studies **“The role of international legal acts in the legal regulation of electronic commerce”**. The author states that the international treaties that the Republic of Azerbaijan is a party to are part of the legislation on electronic commerce. Through international agreements states, including other subjects of international law, can regulate various issues. Unlike the generally recognized principles and norms of international law, international treaty norms do not create a direct obligation for the state. First of all, the basis for this should be created by constitutional and then by special legislative acts.

The author comes to the conclusion that international agreements and recommendations that focus specifically on electronic commerce play an important role in the system of international legal acts in the field of electronic commerce, in addition to universal conventions. Development prospects of

e-commerce in the Republic of Azerbaijan create an important demand for the study of international legislation and experience in this field. Taking into account that relations in the field of electronic commerce have a very flexible nature, it is necessary to regularly adapt domestic acts in this field to international standards.

The second chapter of the dissertation entitled **“Legal mechanisms of electronic commerce: general characteristics of electronic contract and electronic signature”** consists of four paragraphs. The first paragraph defines **“Legal regulation of electronic document circulation”**. It is noted that the emergence of new technologies for mass communication and information collection, storage and processing has significantly changed traditional ideas about information documentation, as electronic document exchange is significantly different from paper document exchange.

According to the applicant, considering the presence of electronic document circulation in all spheres of daily life, as well as the easiness with which information can be changed, the development of mechanisms for protecting electronic documents from unauthorized (or illegal) changes and the legitimization of all these processes have become an objective necessity. Legislators of different countries approach the regulation of the mentioned processes and, most importantly, the concept of “electronic document circulation” at the legal level in different ways, but they all proceed from the general principles of civil law.

Legislation generally promotes the widespread recognition and development of electronic document circulation. Its legal status is based on the provisions of the civil legislation of the Republic of Azerbaijan, which provides for the possibility of concluding contracts through the exchange of documents by electronic or other means of communication.

According to the author, an electronic document can be defined as follows: “An electronic document is understood as an electronic communication written on a material device, which can be defined as information in electronic form, the authenticity of which is confirmed with a sufficient degree of reliability, recognized by the

participants of the electronic document circulation, approved by an authorized body or is in accordance with the requirements established by law”.

The second paragraph of the second chapter entitled **“General characteristics of the electronic contract”** states that the implementation of entrepreneurial activities by concluding contracts over telecommunication networks has become common. But there is almost no direct reference to the term “electronic commerce” in international documents.

According to the author, the exact definition of electronic commerce can be taken from the United Nations Convention “On the Use of Electronic Communications”. In most cases, electronic commerce is conclusion and implementation of contracts by using electronic communication. In connection with the conclusion of electronic transactions, the concept of “electronic communication” should be interpreted more broadly than “electronic document”. Therefore, not only electronic document circulation tools, but also electronic information exchange in general are suitable for concluding electronic transactions. The aforementioned Convention confirms this by allowing counterparties to determine the method of telecommunications used to conclude contracts.

The electronic form of the contract is a new form of expression of will. It exists together with oral and written forms of the contract. For this reason, the author believes that it would be appropriate to add a special chapter containing the definition and legal regulation of the electronic form of the transaction to the Civil Code of the Republic of Azerbaijan. Electronic documents should not be mere imitations of paper documents.

It is considered that, based on the analysis of the electronic document concept, it is more appropriate to call the agreements concluded in electronic form (that is, through the exchange of electronic messages using various electronic means of communication) as electronic contracts. The analysis of the concept of a transaction gives grounds for mentioning such an idea that its subject is the actions of civil law subjects aimed at creating,

changing or terminating their civil rights and obligations. The same process applies to electronic transactions.

The third paragraph of the second chapter analyzes **“Legal problems related to the conclusion and execution of contracts in the field of electronic commerce”**. One of the main problems arising during the conclusion of contracts using electronic data is the difficulty of determining the place of conclusion of the contract. In practice, such issues arise most often in international private law. Their resolution is important to determine which jurisdiction applies to the concluded contracts and the applicable law in each specific case. The conclusion of an electronic contract in an electronic information network is transnational in nature and therefore, falls within the scope of legal regulation of international private law. In electronic legal relations, this issue does not arise only when the counterparties are residents of different states. The characteristics of electronic networks are that an offeror can post a bid on any network server, regardless of its geographic location, it is not necessary to be in the country where the offeror is a citizen. As a general rule, if the server hosting the contract form or robot software do not belong to the offeror, then it is not known in which country the contract will be concluded. In turn, the partner can cancel acceptance from any state, as well as from places in the world that are not under the jurisdiction of any state: open seas, from the board of the plane.

The applicant believes that when characterizing electronic transactions, it is necessary to pay special attention to two main points – conclusion and execution of the transaction. In the context of concluding contracts, offers and acceptances may be made in the form of electronic communications. This is in accordance with the principles of civil law.

When concluding a contract in e-commerce, tripartite civil-legal relations are created, in which, in addition to the seller and buyer, a special subject – an information intermediary, participates, this subject can be called the subject of legal relations without being a party to the contract.

The fourth paragraph of the second chapter entitled **“General characteristics of the electronic signature”** states that the

electronic signature is a tool that serves the development dynamics of the electronic civil circulation and ensures the protection of the rights and interests of the people who use the electronic document. Electronic signature is directly established in both international and national legislation as a mean confirming the author of an electronic document and its authenticity. The concept of electronic signature is found in many international and national acts of world states. Unfortunately, every state or international organization tries to amend the definition of an electronic signature, to describe its additional features, to clarify its purpose in a different way. In practice, there is no common understanding of electronic signature, and synonyms such as electronic signature and digital signature are often used. All this leads to a certain degree of violation of the integrity of the legislation, the general picture of the regulation of relations related to the use of electronic signature, and the complication of the international-legal regulation of the use of electronic signature.

Despite the different approaches to the same concept in various international documents and the legislation of different states, the author states that, based on international cooperation, there is a need to eliminate differences about electronic signature and to converge opinions in this direction.

Like other means, an electronic signature has certain disadvantages along with its advantages. The electronic signature creation algorithm is a one-way function. Although it is possible to find an algorithm for creating an electronic signature, that is, a private key, with information about the public key and the result of the calculation (the electronic signature itself), it is very difficult. Of course, if outdated techniques are used for a long time, then the probability of revealing the private key algorithm increases significantly. In this case, the applicant recommends keeping up with scientific progress and changing the technical means of the electronic signature.

The next disadvantage is that the electronic signature allows to draw only indirect conclusions about the author of the document, because the party receiving the electronic document confirmed by the

electronic signature cannot be completely sure of the creation of technical means. The authentication of the electronic signature only indicates that the person signing the document knows the private key.

The third chapter of the thesis **“Legal problems on the realization of electronic commerce”** consists of two paragraphs. The first paragraph of the mentioned chapter entitled **“Legal problems related to the implementation of electronic commerce in the Internet space”** states that the problem of legal regulation of electronic commerce came about at the end of the last century due to the informatization of society, the transition to a new type of society – the information (post-industrial) society. The conclusion of various types of contracts by means of electronic communication and the increase in the number of such contracts, the emergence of disputes related to contracts within the framework of the electronic commerce system have shown that the legal regulation of electronic commerce is insufficient. Electronic commerce should be systematically regulated by legislation. There is a need to clearly and concretely regulate the e-commerce system in Azerbaijan. The sphere of electronic commerce is generally regulated by international law, but since the Internet allows counterparties from different countries to conduct transactions, the lack of effective and uniform legal regulation is a serious obstacle to their protection. Taking into account the development dynamics of information and communication technologies and electronic commerce, appropriate international legal and national regulation is an objective necessity.

The second paragraph of the third chapter considers **“Legal issues related to ensuring privacy and security in the field of electronic commerce”**. It is stated that in modern conditions, the regulation of the procedure for the exchange of electronic documents in the implementation of electronic payments, as well as the issues of ensuring confidentiality and security in the field of electronic commerce have not been fully resolved. All these need development from the point of view of civil-legal regulation, including the formation of a modern model of legal regulation. In connection with the use of information and telecommunication tools in the implementation of electronic commerce, there are general security

and privacy threats in this area: problems such as computer viruses, computer fraud, computer hacking, computer attacks, non-transmission or delay in message transmission, transmission of data to incorrect address, disclosure of confidentiality of data can be listed. For this reason, the aforementioned directions are of great importance for electronic commerce activity.

Although the Law of the Republic of Azerbaijan “On Information, Informatization and Protection of Information” does not define personal information, the concept of “confidential information” is used. From the analysis of the Law, it can be concluded that confidential information is a different concept.

The specific regulatory legal document in the sphere of personal data protection in the Republic of Azerbaijan is the Law “On Personal Data” dated May 11, 2010. Article 2.1.1 of that Law defines “personal data”. The author believes that this concept is abstract and has the broad meaning. The provisions of the Law do not reveal the concept of personal data in detail. The following questions arise: What information that allows to identify this or that natural person can be considered as personal information? What is the scope of the definition of personal data? On the other hand, the terms “direct” and “indirect” in this concept are not clarified, which leads to ambiguities in practice and opens the way to abuse.

The applicant believes that personal data is information attributed to that individual based on various criteria (physical, mental, physiological, economic, cultural, social characteristics, relationships and associations) in order to identify the individual.

In the **Conclusion** of the dissertation, the following main results were determined as a result of the research:

1. Relations arising in the field of electronic commerce are subject to regulation by a number of legal areas (civil, financial, administrative, criminal, etc.). Electronic commerce has specific characteristics and legal quality, and can be called a legal category. The concept of electronic commerce is understood in a narrow and broad sense. In a narrow sense, it refers to the purchase and sale of goods by using information systems, consistent with the concept of trade. In a broad sense, it encompasses the purchase and sale of

goods, as well as the provision of services and the performance of works. This makes the concept synonymous with the concept of entrepreneurial activity.

2. Legislation on e-commerce is included in the legislative system of the Republic of Azerbaijan as “special status” legislation. This legislative system includes domestic regulatory legal acts that establish legal norms related to e-commerce and international treaties to which the Republic of Azerbaijan is a party. According to the applicant’s position, the rapid development of relations in the field of electronic commerce necessitates the adoption of a single codified act that would regulate these relations.

3. Taking into account the “borderless” nature of e-commerce, it is necessary to give priority to international legal acts in legal regulation and to harmonize the legislation of the Republic of Azerbaijan with these acts. In this regard: a) International treaties to which the Republic of Azerbaijan is a party must be directly applicable. In cases where they cannot be directly applicable, the provisions of international treaty norms are included in the sectoral legislative acts of the Republic of Azerbaijan; b) The inclusion of “soft law” norms into the special legislation of the Republic of Azerbaijan takes place in the form of reception. In this form, it would be expedient to include the provisions on “information message”, “electronic information exchange”, “initiator of information message”, “addressee of information message”, “intermediary in relation to a specific information message” etc., established in the Model Law, into the Law of the Republic of Azerbaijan “On Electronic Commerce”; c) The conflict of laws method applicable in the event of a foreign element is excluded in the presence of unified substantive legal norms related to electronic commerce; d) The application of customs in electronic commerce should be based on Article 11 of the Civil Code and Article 1 of the Law “On Private International Law”.

4. It would be appropriate to give the following definition to an electronic document: An electronic document is understood as an electronic communication written on a material device, which can be defined as information in electronic form, the authenticity of which is

confirmed with a sufficient degree of reliability, recognized by the participants of the electronic document circulation, approved by an authorized body or is in accordance with the requirements established by law.

5. The electronic form of the contract is a new form of expression of will. It exists together with oral and written forms of the contract. For this reason: a) it is more appropriate to call agreements concluded in electronic form (i.e. through the exchange of electronic messages using various electronic communication means) as electronic transactions; b) it is appropriate to add a special chapter to the Civil Code of the Republic of Azerbaijan containing the definition and legal regulation of the electronic form of the transaction.

6. When characterizing electronic transactions, it is necessary to pay special attention to two main points – the conclusion and execution of the transaction. In the context of concluding contracts, an offer and acceptance can be made in the form of electronic communications. This is consistent with the principles of civil law. The same grounds for invalidity apply to electronic transactions as to ordinary transactions.

7. Along with the advantages which ensure the protection of the rights and interests of persons using electronic documents, an electronic signature also has certain disadvantages. The electronic signature creation algorithm is a one-way function. Although it is possible to find an algorithm for creating an electronic signature, that is, a private key, having information about the public key and the result of the calculation (the electronic signature itself), it is very difficult. Undoubtedly, if outdated technical means are used for a long time, then the probability of disclosure of the private key algorithm increases significantly. In this case, the applicant recommends keeping up with scientific progress and changing the technical means of the electronic signature. The next disadvantage is that the electronic signature allows only indirect conclusions about the author of the document, since the party receiving an electronic document certified by the electronic signature cannot be completely sure of the creation of technical means. The authentication of the

electronic signature only indicates that the person signing the document knows the private key.

8. An electronic document signed with an electronic signature by its status is equivalent to written document that provide the possibility of legal protection of the rights of the persons. The ability to act as evidence in court proceedings is a necessary quality of an electronic document signed with an electronic signature. An electronic document can be considered to have legal force if it can be recognized as evidence in court and such a document can protect the legal rights and interests of the persons participating in the circulation of electronic documents. An electronic document signed with an electronic signature in legal force is equal to a written document signed with a handwritten signature, it has the main features of a written document (including the possibility of submitting copies of an electronic document). Each participant of civil legal relations can use electronic documents and electronic signatures in the protection of their civil rights.

9. It would not be correct to give preference to civil or criminal or administrative processes when using the electronic evidence method in court proceedings in the Republic of Azerbaijan. It is possible to use the electronic proof method in processes from all spheres, and there are no fundamental obstacles in this direction. The applicant believes that the main problems are related to purely technical issues – necessary software, Internet network and information security.

10. Despite the progress in the development of legal regulation of electronic transactions, many problems have not been solved until now. The most urgent issues that need to be resolved are: 1) lack of sufficient opportunities and appropriate conditions for compliance and control of legislation in the field of electronic transactions; 2) differences in the regulation of the main principles of the use of electronic signature in national legislations (for example, the principle of technological neutrality); 3) the need for significant investments in the certification of electronic signature systems and the involvement of qualified specialists; 4) failure to define important

conditions for electronic commerce despite the regulation of the main issues related to electronic signature.

11. The main obstacle to the recognition and enforcement of a foreign court decision regarding e-commerce is whether there is an international agreement between the Republic of Azerbaijan and the state in whose territory such a decision was made. If this obstacle is successfully overcome, the list of possible grounds for a court of the Republic of Azerbaijan to refuse to recognize and enforce such a decision is not extensive. The transborder nature of the Internet leads to the conclusion that it is appropriate to regulate jurisdictional issues at the international level. It is proposed to conclude an international agreement that defines the jurisdiction applicable to activities related to the use of the Internet, or even contains uniform rules on certain issues. In this sense, the recognition of the Hague Convention “On Choice of Court Agreements” by the Republic of Azerbaijan, adopted at the XX session of the Hague Conference on International Private Law on June 30, 2005, is appropriate.

12. Anyone who conducts business on the Internet or processes business elements that involve personal data faces the potential cross-border transfer of personal data. In this regard, in addition to complying with localization requirements, we consider it appropriate to include in privacy policies and contracts with individual data subjects their consent to such transfers.

The following scientific works of the author have been published on the topic of the thesis:

1. Classification of national legislative acts in the field of legal regulation of electronic commerce // - Baku: Ganun, - 2021. № 10, - p. 36-42.

2. Legal regulation of electronic document circulation: theoretical and practical problems // - Baku: Ganun, - 2022. № 09, - p. 65-70.

3. Problems of realization of e-commerce in the Internet space // Materials of the international scientific conference on “History of science and scientology: interdisciplinary studies” held at the Institute of History of Science of ANAS, - Baku: - 14 October, - 2022, - p. 350-355.

4. Legal issues related to taxation of e-commerce // - Baku: Ganun, 2022. № 11, - p. 27-33.

5. Legal problems related to the conclusion and execution of contracts in the field of electronic trade // - Drohobych (Ukraine): LAW UA, - 2022. № 03, - p. 107-113.

6. Security ensuring problems on electronic trade // - Drohobych (Ukraine): European perspectives, - 2022. № 04, - p. 152-157.

7. International legal acts in the field of electronic commerce // - Baku: Scientific News of the Police Academy, - 2022. № 03, - p. 90-97.

8. Possibilities of influence of the internet on dynamics of development of electronic commerce // Collection of articles based on the materials of the CXXIX international scientific and practical conference “Innovative approaches in modern science”, - Moscow: - November 8, - 2022, - p. 63-69.

9. The essential role of electronic contracts in the legal regulation of electronic commerce // - Collection of articles of the International Scientific and Practical Conference “Actual Issues of the Development of Economics and Law”, - Petrozavodsk (Russian Federation): - November 14, - 2022, - p. 63-67.

10. The Concept of Electronic Commerce // - Baku: Ganun, - 2023. № 05, - p. 34-38.

11. Legal sources of electronic commerce // - Collection of articles of the XXIX International Scientific and Practical Conference “Actual Issues of Modern Science and Education”, Penza (Russian Federation): - May 20, - 2023, - p. 194-196.



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