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**LEGAL REGIME OF INFORMATION STORING  
IN A CLOUD STORAGE**

Specialty 5.1.3. Private law (civil law) sciences

**ABSTRACT OF THE DISSERTATION**  
for a degree of a Candidate of Legal Sciences

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**The relevance of the dissertation topic.** The global accelerated development of science and technology has allowed the human society to use various information technologies (hereinafter referred to as IT) in the daily routine and in professional activities. Cloud storages of information play an important role among these technologies. Cloud storage of information is an online storage model into which users' data are uploaded and stored in a data processing center (hereinafter referred to as DPC). Cloud storage of information is a special high-tech digital service. Specific character of its use necessitates an analysis of the legal regime for storing information by using this technology.

Cloud storages are ubiquitous. The technological basis and the technique means are similar, but legal regulation of these relations varies in different countries. The relevant section of the research is devoted to the analysis of common features, tendencies and differences in legislation, doctrine and practice in the Russian Federation (hereinafter referred to as the RF) and foreign countries. The following countries were selected for the comparative legal study: Russia, the Federal Republic of Germany (hereinafter referred to as the FRG), the United States of America (hereinafter referred to as the USA) and the People's Republic of China (hereinafter referred to as the PRC). These states have a high level of development in the areas of both legislation and IT.

Features, sequences and directions of developing the legal regime for information storing in cloud storages are revealed based on study of the experience of Russia and foreign countries. Comparative legal analysis allows us to identify common features and explore the possibility of using foreign regulatory methods. Individual legislative models and decisions applied in the considered foreign countries, as well as models and standards proposed by international institutions operating in this area can be borrowed to create an effective legal regime. Unified approaches and principles are being developed in this area at the international level, so this will ensure greater clarity and universality to the legal mechanisms used in regulating relations for storing information in cloud storages.

The prospect of expanding the usage of technology requires a more in-depth analysis of its legal regime formed in Russia and the most developed countries from a



legal and technological point of view. For example, since 2014 the Ministry of Digital Development, Communications and Mass Media of the Russian Federation (hereinafter referred to as the Russian Ministry of Digital Development) has been implementing the Gosoblako (State Cloud Project). The widespread distribution of the technology under consideration is explained both: by natural technological development of society and by the fact that it is economically profitable to use it. The research of the legal regime of information storing from the viewpoint of scientific approaches, positions of the legislator, legal experts is important, since the results of this research can be used in relation to other technologies.

In the research the legal regime of information storing in cloud storage is considered, which includes: the regime of a program for electronic computers (hereinafter referred to as computer program) — incorporeal property; the regime of a data processing center — tangible property that is the backbone for the operation of the cloud storage program; the regime of user information — incorporeal property that a user uploads to the cloud storage.

Legal relations in the use of cloud storage of information are considered from the viewpoints of civil law and private international law, since the global development of this technology and the use of the Internet often determine the presence of a foreign element. The legal regime of information storing in cloud storage affects copyright issues — a user's copyright for the information she / he uploads, for the database that she / he created while using the cloud storage; copyright for the cloud storage program and intellectual property; confidentiality of the information — protection of user's information from distribution outside the cloud storage; protection of personal data.

The complexity of the legal regulation of relations related to the information storing in the cloud storage lies in the fact that not all aspects of these legal relations are regulated by legal norms created for them, it is typical for many IT. Creating new laws for each new IT is not always productive, as it is not known whether a technology would be used for a long time. In this regard contracts and judicial practices play a leading role in regulating the relations in the use of cloud storages of information, the analogy of law and statute as well as positions of legal experts are often used.



**The degree of development of a scientific problem.** The scientific works of A. I. Savelyev, which deal with the use of cloud storage, contractual arrangement of legal relations, licensing issues and others, were decisive for the choice of research topics. The researches by I. A. Bliznets, G. A. Gadzhiev, B. M. Gongalo, G. P. Ivliev, E. I. Kaminskaya, V. A. Laptev, A. V. Neznamov, L. A. Novoselova, I. M. Rassolov, O. V. Ruzakova, A. G. Sergo, S. A. Sereda, T. Ya. Khabriyeva, N. N. Chernogor and other researchers devoted to the issues of civil law, copyright, patent law in the light of IT regulation can be distinguished. Works devoted to the foreign element in relations on the use of IT and the Internet by E. A. Abrosimova, S. A. Babkin, A. V. Bankovsky, A. A. Inyushkin, V. O. Kalyatin, A. G. Lisitsyn-Svetlanov, M. V. Majorina, A. V. Neznamov, L. V. Terentyeva and others were of great interest.

The dissertation for Doctor of Law degree by A. M. Kartskhiya on the topic “Civil legal model of regulation of digital technologies” (Moscow, 2019), dissertations for the Degree of Candidate of Legal Sciences by Yu. S. Bikbulatova on the topic “Information and legal regulation of relations arising from the use of cloud computing (service-oriented distributed information systems)” (Moscow, 2018), I. A. Nesterova on the topic “Legal regulation of relations arising from the use of cloud technologies” (Moscow, 2017) are of scientific interest.

In legal science in foreign countries there is also a process of forming legal approaches to the regulation of various aspects of legal relations, which are formed through the use of the Internet and IT. In Germany J. Katage, F. Koch, D. Kroeger, F. Niemann, J.-A. Paul, J. Tager, H. Hanken, T. Hehren and others deal with these issues. In the USA — E. Winfield, R. Weber, M. Gates, T. Grens, D. Johnson, D. Mente, D. Morris, M. Moseley, S. Murugezan, P. Mall, J. Neclerio, R. Neufeld, D. Post, S. Wilsky, L. Edwards and others. In the PRC — Kin R., Liang M., Sukoko B., Chen J., Cheng Ya., Huo Z., Yang S. et al. These scientists have made a significant contribution to the formation of scientific approaches to the regulation of legal relations developing when using IT.

**The purpose of the dissertation research** is to conduct a comprehensive analysis of the legal regime of information storing in a cloud storage, to identify aspects



that need regulation and scientific understanding, to propose and justify the development directions for the legal regulation of information storing in the cloud storage in Russia.

**It is necessary to solve the following tasks to achieve this purpose:**

1) to analyze the legal regime of information storing in the cloud storage from the point of view of the information stored in the cloud storage; of computer programs that are used to store information; of the data processing center that ensures the functionality of information technology;

2) to study the legal characteristics and features of contracts for the use of cloud storage of information in the scientific literature of the RF, the FRG, the USA and the PRC;

3) to present the terms of a model agreement for the use of cloud storage of information based on a comparative legal analysis of agreements existing in practice, which are concluded by users with organizations providing public cloud storage of information in the RF, the FRG, the USA and the PRC;

4) to study the legal problems connected with the termination of the contract for the use of cloud storage;

5) to analyze the conflict-of-law contexts with a view to determine the applicable law to relations on the use of cloud storage of information in the event of a foreign element.

**The object of the study** is the legal regime of information storing in a cloud storage, its main characteristics and features.

**The subject of the dissertation research** are the legal relations related to the operation and use of cloud storages of information; contractual relationships.

**The theoretical basis of the study** includes the research works of Russian and foreign scientists who deal with the development of civil law in the context of the formation of digital economy. In Russia a scientific base is being formed on the issue of regulating legal relations arising from the use of IT and Internet, including the use of cloud storage technology. Among Russian legal scholars the following authors can be distinguished: E. V. Alferova, I. L. Bachilo, V. A. Borisov, V. V. Vitryanskiy,



E. P. Gavrilova, A. V. Glushkova, I. A. Evseeva, V. V. Zaitsev, O. V. Zaitsev, M. V. Zakharova, O. O. Zvonarev, M. B. Kasenova, A. A. Klishin, P. V. Krashenninnikov, D. V. Lukash, E. E. Nikitina, A. V. Ragulina, M. A. Rozhkova, S. A. Sinitsyn, E. A. Sukhanov, Yu. K. Tolstoy, A. S. Trifonova, N. A. Shebanova, M. A. Yakushev and etc.

The theoretical basis of the study is the works of classical legal experts: S. S. Alekseev, D. N. Bakhrakh, S. N. Bratus, M. M. Boguslavskiy, A. V. Venediktov, V. A. Dozortsev, O. S. Ioffe , Yu. Kh. Kalmykov, L. A. Lunts, N. S. Malein, A. V. Malko, N. I. Matuzov, V. P. Mozolin, D. V. Murzin, R. O. Khalfina, V. F. Yakovlev and others.

**The methodological basis of the study** is a complex of general scientific and special research methods. General scientific methods: analytical method — the study of the components and essence of legal relations on the use of cloud storage of information, which is accompanied by synthesis; inductive and deductive methods; methods of modeling, systematization, etc. During the study the following special methods were used: comparative legal method designated to compare the legislative and contractual regulation of legal relations on the use of cloud storage of information in Russia and foreign countries, which made it possible to highlight the features of legal regimes specific for the states under consideration; logical and legal; methods of grammatical and systematic interpretation of legal norms; formal legal; synergistic method, etc.

**The information base of the study** includes the regulatory legal acts of Russia and foreign countries on information storing in a cloud storage; policy documents; agreements that are used in practice by major cloud storage providers.

In the Russian Federation the main attention is paid to the following sources: the Civil Code of the Russian Federation (hereinafter - the CC of the RF), the Federal Law (hereinafter - the FL) of the RF of July 27, 2006 No. 149-FL “On Information, Information Technologies and Information Protection”, the Federal Law of the RF of July 27 .2006 No. 152-FL “On Personal Data”, Federal Law of the RF of July 7, 2003 No. 126-FL “On Communications”, Federal Law of the RF of May 4, 2011 No. 99-FL



“On Licensing Certain Types of Activities”, Federal Law of the RF of July 20, 2020 No. 211-FL “On financial transactions using the financial platform”, etc.

In Germany when regulating legal relations arising from the use of cloud storage of information they are guided by the German Civil Code (hereinafter referred to as the GCC), the German Trade Code (hereinafter referred to as the GTC), the Act of the Federal Republic of Germany on Copyright and Related Rights of 1965, the Telecommunications Act of the Federal Republic of Germany Law of 2007, the Works Constitution Act of the Federal Republic of Germany of 1972, etc. Since the Federal Republic of Germany is a member of the European Union (hereinafter referred to as the EU), the leading legal acts are also the General Data Protection Regulation, approved by the EU Decree 2016 /679, EU Directive 2009/24/EC “On the legal Protection of Computer Programs”, etc.

In the US the legal regime for cloud storages is governed by the US Copyright Law of 1976, the US Digital Millennium Copyright Act of 1998, the US Uniform Computer Information Transactions Act of 2000, the US Health Insurance Portability and Accountability Act of 1996, etc.

In the PRC the leading regulatory legal acts in this area are the PRC Civil Code of 2021, Cybersecurity Law of the PRC Law of 2017, the PRC Copyright Law of 1990, the PRC Telecommunications Regulations of 2010, the PRC Regulation for Computer Software Protection of 2002, etc.

**The empirical basis** of the study is made up of the recommendations and materials of organizations involved in the regulation of IT including cloud storage technologies. Among these organizations are: National Institute of Standards and Technologies of the USA (hereinafter referred to as NIST USA); the working group “Legal basis for cloud computing” established by the Federal Ministry for Economic Affairs and Energy of Germany; Cyberspace Administration of China; Committee of the State Duma of the Russian Federation on information policy, information technologies and communications; Expert Council of the State Duma of the Russian Federation on the digital economy and blockchain technologies, etc. Case law materials were also examined in the course of the research.



**The validity and reliability of the research results** is ensured by using a set of research methods including comparative legal method, according to the object, purpose, tasks and logic; correlating the theoretical positions of legal scholars with contracts that are concluded by large organizations providing cloud storages of information and the results of scientific work; approbation and implementation of the obtained results in practice.

**The scientific novelty** of the dissertation research lies in the fact that the study has formed a systematic understanding of the legal regime of information storing in a cloud storage, which includes the experience of Russian regulation and examples of regulation of using technology in foreign countries, such as the USA, the FRG, China, France and etc. The study is complex and systematic and includes interdisciplinary aspect, which increases the value of the study for science.

Issues related to storing information when using this modern IT are comprehensively considered in the dissertation: the legal regime of the cloud storage program is studied; types of information and modes of access to information contained in the cloud storage are analyzed; a civil law contract for the use of cloud storage in Russia and foreign countries was studied; theoretical aspects of these agreements are compared with contractual structures used by large Russian and foreign IT companies. Based on the completed analysis, the main terms of a model contract for the use of cloud storage of information are highlighted.

The legal regime of information that is uploaded to the cloud storage, the types and the modes of access to it are decisive for legal relations pertaining to the use of cloud storage. Information is an object of civil legal relations, cloud storage technology can be applied to any user's information. If the information uploaded in the cloud storage is classified as a commercial secret, its user would need to provide in the clauses on the following in the contract for the use of this service: non-distribution of this information to third parties, restricted access to such information for certain categories of the user's employees (if the user is a legal entity).

The legal regime of information is connected with the terms of the contract for the use of cloud storage. Studying the legal nature of this contract, identifying the



features of contractual structures, comparing theoretical and practical approaches to this contract allow us to identify the issues important for the scientific study: providing guarantees to the user when using cloud storage technology related to the information that she / he uploads; quality and stability of cloud storage. Theoretical study of these issues will allow to reduce the likelihood of legal conflicts between users and IT companies in practice.

When considering legal relations on the use of cloud storage of information it becomes necessary to analyze the rights of users. Users of IT, such as cloud storage of information, are individuals, legal entities, government agencies, international organizations. The regulation of services in the Internet is at the stage of formation, thus the abuses of users' rights by IT companies and violations of users' rights when using cloud storage cannot be ruled out. The study revealed cases of violation of users' rights in the documents of a large IT company.

Legal relations on the use of cloud storage of information often have a foreign element in their composition, and such element may be demonstrated in the fact that: 1) the user can move from one state to another and use the cloud storage; 2) an organization that provides cloud storage may operate in several states; 3) the user's information in the cloud storage can be moved from the data processing center of one state to the data processing center of another state. This study proposes a solution to the issue of determining the applicable law according to the connecting factors at the location of the data processing center as the most effective.

**The dissertation formulates and defends the following main provisions (conclusions):**

1. In the dissertation the legal regime of information storing in cloud storage is defined from the viewpoint of its components. The legal regime for information storing in a cloud storage includes permissions and prohibitions pertaining to the subjects of relations when working with: information contained in such cloud storage; computer program — cloud storage of information; a data processing center that allows a large amount of information to be contained in the cloud storage and through which the cloud



storage program can be used in relation to a large number of users. This approach contributes to the formation of systematic legal research.

2. The legal nature of a contract for the use of cloud storage of information is defined in the study. The subject of such contract is the provision of a complex digital service — information storing in a data processing center. The parties to the contract are the user (individual / legal entity, government agency) and the organization providing cloud storage. In Russia and foreign states this contract is considered as a mixed one. In Russia a mixed contract for the use of cloud storage of information includes elements of license agreement and service agreement. In foreign countries a mixed contract may include the elements of lease agreement. Mixed contract is the most optimal for formalizing legal relations in Russia. However, it should be taken in account that the elements of the types of contracts included in a mixed contract were created and used for a long time not for information storing in cloud storages and not in the field of information technology.

3. Based on the examined agreements between the users and the organizations providing public cloud storages in the RF, the FRG, the USA and the PRC, the main conditions of a model contract for the use of a cloud storage of information are formulated in the dissertation. The model contract is a nonbinding document that can be used in the RF by organizations providing cloud storage to improve the model contract with users. The subject of this contract is the provision of digital service for information storing in cloud storages. Parties — a user (individual / legal entity or government agency) and an organization providing a public / collective / private cloud storage of information. The initial terms of the model agreement may include provisions on the quality of the digital service, on the safety of user's information and its inaccessibility to third parties and the organization providing the service, on the liability of the parties, on downtime in the operation of the cloud storage, on the amount of the penalty in case of violation of the user's rights, on the user's responsibility in case of uploading information to the storage that could cause damage to the data processing center, on the procedure for concluding and terminating the contract. The model



contract can become the basis for development of regulation in this area, will improve the quality of digital services for information storing in a cloud storage.

4. The dissertation revealed the consequences of termination of the contract for the use of a public cloud storage of information by implicative actions. Where the user unilaterally withdraws from the contract by her / his implicative actions, the organization providing the cloud storage of information has legal uncertainty regarding the information storing in a data processing center and the terms of such storing for this user, and economic costs increase. The necessity of enshrining a notification procedure in the contract for the use of cloud storage of information upon termination of this contract has been identified.

5. The dissertation defines conflict-of-law connecting factors that are used to determine the applicable law for legal relations on the use of a cloud storage of information in the event of a foreign element, if the parties have not determined this law in the contract, in the event of a tort: the location of the data processing center as the property of the organization providing cloud storage of information, and the location of the user's information; the place of business of the organization providing the cloud storage of information; depending on the status of the user as a consumer; the place of injury in the data processing center. The connecting factor which determines the applicable law at the location of the data processing center, i.e. the physical location of the user's information, makes it possible to ensure the foreseeability of legal relationships for the use of cloud storage. This factor can be used for both contractual and tort statute.

**Theoretical significance of the research** is expressed in a comprehensive study of the legal regime of information storing in the cloud storage, its features and key components. The conducted research can be used for developing a scientific base in regulation of legal relations on the use of IT, their civil circulation in the context of digital economy development in the Russian Federation.

The theoretical provisions discussed in the dissertation are aimed at systematizing scientific knowledge while adapting legal regulation in the context of transformation of legal relations in the framework of the digital economy development.



**Practical significance of the obtained research results is:**

— presentation of the systematic scientific study that can be used by IT companies in developing a regulatory framework and agreements with users to launch various IT services into civil circulation as well as by government agencies and IT companies for joint creating a model contract for the use of cloud storage of information;

— teaching academic disciplines on the subject of legal regulation of relations on the use of IT, updating and expanding the subjects of academic programs on civil law, civil and commercial law of foreign states, private international law, creating relevant courses and special courses. The conducted research is used in the teaching process in the higher education system.

**Approbation of the research results.** The main provisions and conclusions of the dissertation were discussed and approved at a meeting of the Department of Legal Support of the Market Economy and were reflected: in reports at international and all-Russian scientific and practical conferences; when performing research work; when developing curricula and conducting classes in the higher education system.

The structure of the dissertation is determined by the purpose and tasks of the study. The study consists of an introduction, three chapters (including 9 paragraphs), conclusion, list of abbreviations and bibliography.

**Publications of the author on the theme of research.** On the topic of the dissertation research four articles were published in publications indexed in international citation databases, six articles were published in publications recommended by the Higher Attestation Commission under the Ministry of Education and Science of Russia, of which three were published in the scientific publications recommended by the RANEPA Academic Council for the publication of articles on jurisprudence. The research materials were published in the papers of international and all-Russian conferences.