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SECURITY AND PROTECTION OF PERSONAL DATA UNDER THE CONDITION OF ECONOMICS DIGITALIZATION

Wide spread occurrence of information technologies has become the basis for forming a new field – digital economics in which the basic raw material of manufacture is personal data. According to the analysts' estimations, up to 2020 approximately 50 billion devices will be connected to the Internet network and the amount of the data which will be generated by these devices will reach 44 trillion GB. Intense flows of this data have a big cost and are used in all the spheres of economics: from investigation of the market and advertisement to petroleum field and financial sector [1]. Thus, in 2011 the global income on the big data and business-analytics market is USD 7.6 billion, in 2017 is USD 35 billion and in 2027 the income in the amount of USD 103 billion is predicted [2].

A digital economy and digital technologies will provide considerable advantages of economy and business: the labour productivity increases, possibilities of realization of trade and financial operations broaden, cross-border communications are considerably accelerated. However, despite of a number of advantages, digitalization of the economy also has certain risks. Since the main resource of the digital economy is data, it is extremely important for all participants of economic relations that information that relates to their commercial, financial, political and personal spheres of activity, on the one hand, is readily accessible, and on the other hand, it is well protected against unauthorized use. It is known that in the digital economy, gigabytes of information, which belongs to the so-called personal data (personal information and contact data, information on financial transactions and cash flow, social network data, health data etc.) are collected and processed daily. The dissemination or misuse of such information is a violation of the rights and freedoms of citizens and may cause

significant moral and / or material damage for them. Therefore, the protection of personal data privacy, privacy and the rights of digital users, and growth of trust among citizens in cyberspace is a prerequisite for the prosperity of the digital economy and minimization of associated risks [3, 4].

The need to ensure the security and protection of personal data in our time is an objective reality. Today people can't independently resist the encroachment to their private life. New technical capabilities for collecting and processing personal information, the use of e-commerce and social networks require actions to protect personal data.

Taking into account the Law of Ukraine «On protection of personal data» and the last achievements of practical investigators in the sphere of security, the following methods of the protection of personal information should be marked:

- programme methods of the protection of data are the group of methods which is based on using simple and complex programmes intended for solving the tasks connected with the provision of information safety (DLP-systems and SIEM-systems);

- hardware methods of the protection of information – any electric, electronic, optical, laser and other devices that are embedded into information and telecommunication systems: special computers, systems of the control of employees, the protection of servers and corporate networks;

- cryptographic methods – the implementation of cryptographic and stenographic methods of data protection for safe transfer by a corporate or global network;

- legal methods define the state and foreign standards in the sphere of the protection of personal information and include decrees, patents and duty instructions;

- organizational methods permit to create the procedure of the work of users with confidential information, to select the personnel, to organize the work with documentation and data storages;

- ethical and moral methods are moral norms or ethical rules formed in the society or certain collective group the compliance to which promotes the protection of personal information and their

violation is equal to the non-compliance of conduct rules in the society or collective group;

- depersonalization of personal information is the actions in consequence of which it is impossible to define the belonging of personal information to a definite user or another subject of personal information without using an additional information.

The use of these traditional methods of protecting personal data has not lost its relevance in the digital economy. At the same time, the further penetration of digital technologies into all spheres of life and the transformation of economic relations under the influence of these technologies require the involvement of innovative and upgrading of existing methods. The countries in which digital economics has reached considerable scopes are already having a big experience of the implementation of innovation methods of the protection of personal data. For Ukraine, the perspective directions in the sphere of the protection of personal data may be the following:

- the adaptation of the Ukrainian legislation regarding the protection of personal data to the realities of digital economics: recognition of the absolute right to correction and removal of own personal data – «the right to oblivion»; the introduction of viable mechanism of legal responsibility for the violation of the legislation in the sphere of the protection of personal data; the specification of the provision regarding international cooperation and transborder transfer of personal data [6].

- decentralized data storage on the basis of Blockchain technology. The idea of the method lies in the following: all the files downloaded by a user into the network are encrypted and split into small parts (blocks) with the spread throughout the network. Herewith, due to the complex authentication system, only the owner of the data has the access to the original file and its blocks. The effectiveness of this method is evidenced by the fact that some countries have already begun to introduce at the state level technologies based on Blockchain for storing personal data of citizens. For example, at the beginning of 2017, the government of Estonia involved a local blockchain company that developed a reliable data storage system of Estonian patients based on Blockchain technology.

- the development of digital identification infrastructure. Under the conditions of digital economics, the issues of electronic (digital) identification actualize the possibility of performing many operations with the help of the Internet network. In Ukraine, the processes of electronic identification are still in the development stage, because electronic identification tools that are used in information systems do not fully provide security, personal data protection, authenticity of identification, and ease of use.

Thus, in the context of the development and establishment of the digital economy, the involvement of traditional and the development of new methods for protecting personal data will create conditions for minimizing the risks of unauthorized access to these data.

References

1. Большие данные в цифровой экономике: товар или национальное достояние? URL: <https://tass.ru/pmef-2017/articles/4273948>. (Last accessed: 05.09.2018).
2. Forecast of Big Data market size, based on revenue, from 2011 to 2027. URL: <https://www.statista.com/statistics/254266/global-big-data-market-forecast/> (Last accessed: 05.09.2018).
3. Protecting our personal data in a digital economy. URL: <https://www.europeanfiles.eu/digital/protecting-personal-data-digital-economy>. (Last accessed: 05.09.2018).
4. Цифрова адженда України – 2020. URL: <https://ucci.org.ua/uploads/files/58e78ee3c3922.pdf>. (Last accessed: 05.09.2018).
5. Про захист персональних даних : Закон України від 01.06.2010 р. № 2297-VI. Дата оновлення: 31.01.2018. URL: <http://zakon.rada.gov.ua/laws/show/2297-17> (Last accessed: 05.09.2018).
6. Digital Business Requires Digital Security. URL: <http://www.smartglobekw.com/digital-business-requires-digital-security/> (Last accessed: 05.09.2018).
6. Волосецький В. О. Іноземний досвід правового регулювання захисту персональних даних / В. О. Волосецький // Міжнародний науковий журнал «Інтернаука» . – 2016. – № 12(1). – С. 148-151.