INTRODUCTION

The evolution of development from primitive computer networks and computer devices to modern high-tech networks and devices took place in a short time. Information technology is one of the main characteristics of modern society (MATHIESEN, 2014). In this regard, the issues of modernization of law enforcement activities, including through the development and implementation of innovative digital technologies, are of particular relevance today (THORGÅARD BITTEN SORENSEN, 2018).

The use of information technologies for the creation, transfer, storage, modification, accumulation of information arrays and databases plays an important role in the activities of law enforcement agencies providing the possibility of information interaction between law enforcement agencies of different states.

Modern realities have shown that all law enforcement agencies in all countries were not sufficiently prepared to work in digital format. The classical methods of obtaining and registering information turned out to be ineffective in the digital format (SETHIA, 2016).

A way out of this situation is in the transition to a qualitatively new law enforcement level, including the use of new information and digital technologies (KOVTUN et al., 2020).

The lack of full-fledged digital interaction between law enforcement agencies and their lag in digital development from the pace of the informatization process development in society (MEISSONNIER ANTOINE, 2019) leads to the fact that in the criminal sphere, crimes committed by means of modern technologies and in network infrastructures remain unpunished, which naturally stimulates their continuation and an increase in their number. Within the framework of civil law relations, law enforcement agencies are deprived of the opportunity to obtain a certain part of information, the term for the consideration of cases in this category increases, and access to justice is hindered (https://www.coe.int). To effectively fulfill their tasks at the present stage, law enforcement agencies need to abandon the use of outdated technologies in law enforcement, since their use significantly slows down the process of introducing more effective information tools, but at the same time, the introduction of completely new alternative information technologies should be carried out gradually with their preliminary approbation.

METHODOLOGY

The work uses various general scientific techniques and methods of logical cognition: analysis and synthesis, systemic, functional and formal-logical approaches. The formation of conclusions was facilitated using the content analysis method, formal legal and comparative legal methods.

DISCUSSION AND RESULTS

The information technology development requires the improvement of law enforcement methods and means. Despite different legal systems and regional legislation peculiarities,
countries that create their own systems for digitalization of law enforcement are faced with common problems. Lack of due attention to these areas significantly slows down the transition to a digital form of law enforcement activities and hinders the possibility of their interaction in the digital space.

The first thing law enforcement agencies face is the transfer of paper work to digital format; without this, full-fledged digitalization of law enforcement is impossible. The practice of partial implementation of electronic digital office work in law enforcement is already used in a number of countries (CALO et al., 2016). For example, the use of “electronic criminal cases” is quite widespread within the judicial systems of such foreign countries as Austria, Great Britain, Germany, Denmark, Italy, Canada, the Netherlands, Saudi Arabia, the USA, Sweden, South Korea, etc. The electronic case system has also been introduced in a number of the post-Soviet states: Georgia, the Republic of Kazakhstan, the Republic of Moldova, Ukraine, Estonia, etc” (ANDREEVA & ZAJCEV, 2018).

However, a full-fledged conversion of all law enforcement activity processes to a digital form and the creation of a full-fledged electronic-digital document flow has not yet been made in these countries (BURDINA & PETUKHOV, 2018). The introduction of electronic document management will help to increase the efficiency of receiving and exchanging information both within a country and abroad. The fulfilment of this task will allow law enforcement agencies in real time to receive information about the data contained in the materials of the electronic digital file or database. The exchange of information and interaction should naturally be carried out in an electronic digital format, which determines the need for digitalization of all stages of law enforcement. Very often, a problem on the way of converting the usual paper workflow into a digital format is the difficulty of identifying compiled documents and their certification. Speaking about the problem of identifying digital documents compiled within the framework of electronic digital cases, it is naturally appropriate to use, first of all, an electronic signature. In addition to the electronic signature, there is a successful experience of using other options for certifying the documents being created. For example, “in Germany, along with the use of electronic digital signatures, it is possible to apply any other reliable procedures that ensure the authenticity and integrity of transmitted electronic documents (§ 41a)” (TREFILOV, 2011). “In the Republic of Kazakhstan, a graphic tablet and a writing pen (stylus) are used, which allow creation a digital analogue of the handwritten signature of its owner” (http://adilet.zan.kz).

The development of electronic digital document circulation in law enforcement, without considering the possibility of combining national databases and electronic documents into a single common international network, is a problem that will significantly slow down the process of integrating national electronic digital document circulation systems into a single international system.

According to the authors, it is important to agree on a common interface for data exchange and the format of their filling at the international level before the formation of national electronic digital files and databases begins. This is primarily since common formats for storing information in a single system and standards for electronic digital document management should be organized. It is necessary to agree and define uniform requirements for filling out, creating an electronic digital file and databases for the use of a single format by all interested parties, which will allow without errors and data and time losses to integrate all available information into the international electronic digital document management system of law enforcement agencies.

Another promising area of law enforcement, the implementation of which requires focusing on future international integration, is the introduction of artificial intelligence into the system of administering justice and conducting online court sessions. One of the most effective, in our opinion, systems for introducing artificial intelligence into the administration of justice has been achieved by China, which since 2017 has transferred some of the court proceedings to remote consideration. For this, three digital courts have been created and are operating in China. These courts have jurisdiction over certain categories of civil and administrative cases considered in the first instance. These courts consider cases related to violations in the Internet space (online purchases, financial loans, copyright protection). The entire process of
considering cases has been transferred to digital space. The parties independently register an account with their real name on the official website of the Internet court and confirm their identity through facial recognition. The parties communicate through e-mail and WeChat messenger. All data are entered by the parties themselves; they file a statement of claim, calculate the fee, send objections, etc. After the submission of documents, the stage of mediation begins. If the mediation is unsuccessful, then court proceedings take place. On the basis of the largest messenger, a service has been created that allows users to participate in court hearings without visiting the court: the hearings take place via video chat; a preliminary decision is made by artificial intelligence (ZHURKINA & MAKSIMENKO, 2020). The spread of this practice internationally is a necessary reality today. The number of transactions in the digital space is growing every month (GAVRISHOV et al., 2017) and the geography of transactions is the whole world and, naturally, the number of violations in the Internet space is growing. This makes the introduction of online litigation of disputes in demand at the international level and indicates the need to create an international court based on the use of an artificial intelligence system in the digital space.

However, it should be borne in mind that the introduction of artificial intelligence in the activities of law enforcement agencies may have significant drawbacks (www.coe.int). Therefore, any digitalization of law enforcement is an issue that requires balanced decisions and an integrated approach. It is impossible to ignore one of the most promising areas in law enforcement in our opinion: the storage and use of databases using blockchain technology. Modern tasks of law enforcement agencies in any country are to gain access to information posted, sent, and stored on remote servers, devices, to be able to receive and process large amounts of data, to solve complex problems faster than existing traditional algorithms (ANTONOV, 2014). In connection with the increase in the possibilities of obtaining and processing information based on a variety of computing systems organized according to the principle of neural networks, the collective use of these capabilities by law enforcement agencies will increase the speed of obtaining information, increase the amount of processed and received information.

The advantages of blockchain technology are resistance to hacking, the impossibility of changing individual blocks, pseudonymity, the absence of intermediaries, and transparency of systems. Many states are already implementing these systems within their countries. “The Brazilian government is experimenting with uPort. The Brazilian Ministry of Planning, Budget and Management is testing an independent uPort blockchain application for personal identification developed by ConsenSys. The platform created on the basis of Ethereum allows users to edit their own profiles, and the Ministry will check the legitimacy of uploaded personal documents” (SOLDATKINA, 2019).

In China, blockchain technologies are being introduced to register copyrights and fight plagiarism, and they have also begun using a blockchain-based electronic stamp system to track and seal real estate. The courts of the Dubai International Financial Centre have announced plans to launch “Trial on Blockchain” to manage legal operations, decentralized information exchange and simplify workflow. Note that in addition to national e-justice projects, in Europe there is the implementation of supranational projects in this area. This is how the pilot “Network of Judicial Registers” is already being implemented, within which eleven EU countries (Belgium, Czech Republic, France, Germany, Spain, Italy, Luxembourg, Netherlands, Poland, Slovakia, Great Britain, etc.) are already exchanging information on criminal records in electronic form. It served as the basis for the computerized ECRIS system, which was created to ensure the efficient exchange of information on criminal sentences between EU countries (https://www.files.ethz.ch). Similar systems, but with a large amount of data, should be implemented not at the supranational level, but at the international level, too.

The use of blockchain technology in an international format will make it possible to create a database of law enforcement agencies that stores an ever-increasing amount of information, undeleted data about previous blocks and data having been stored at the time of their creation. The storage devices in this system will have servers in different states. That will allow them to store an unlimited amount of information. The introduction of modern blockchain technology in the activities of law enforcement agencies will make it possible to establish an operational exchange of necessary data, create the most complete database on all the
necessary areas of law enforcement activities and receive information in real time from anywhere in the world.

It should be noted that full-fledged international cooperation of law enforcement agencies in the digital space is possible only with the normative legal consolidation of the procedure for its implementation. The development of national legislation is catastrophically behind the development of digitalization and, accordingly, the dynamic changes in the situation in the country and the world (OGANESIAN et al., 2020). And in case of the international format, this gap is even greater. Concepts for the use of digital technologies are certainly gradually being formed, and today it becomes obvious the need for a scientific detailed study of this block, using the positive and negative experience of all countries, analysing possible risks and, of course, additional financial investments (MARKHGEYM et al., 2020; TONKOV et al., 2020).

**CONCLUSIONS**

As a result of the study, we concluded that a necessary condition for the development of modern law enforcement activities in any country is interaction with foreign law enforcement agencies. In conditions of political instability between states, difficulties arise in the exchange of information between law enforcement agencies. Members of international collective security, through lobbying and political pressure, as well as the introduction of sanctions, restrict the admission and provision of information at international requests of law enforcement agencies from the array of accumulated information. To solve law enforcement problems, a close-knit teamwork is needed without the political preferences of individual states. Today, there is a need for closer integration of the activities of law enforcement agencies in the digital space.

Full-fledged international cooperation between law enforcement agencies through digital technologies will lead to breakthrough changes and will positively affect the activities of all interacting law enforcement agencies, the achievement of their goals and objectives. This will require the development of international legal structures that would allow the use of completely new information technologies to be included in the legal sphere, as well as creating norms that clearly define the legal status of information technologies, consolidating the process of digitizing documents and regulating data exchange processes when using electronic law enforcement systems, the order of access to information, the administration of justice using the capabilities of artificial intelligence. As a result of the systematic international interaction between law enforcement agencies, a single digital space will be formed, which will be expressed in a set of databases and data banks, the creation of information systems and the use of information and telecommunication systems operating based on common principles and general rules.

**REFERENCES**

ANDREEVA, O.I., ZAJCEV, O.A. Prospects for conducting Russian criminal proceedings in electronic format. Criminal justice, 2018, 12, 57-61. (In Russian). Available at: https://www.researchgate.net/publication/331897493_PROSPECTS_FOR_CONDUCTING_RUSSIAN_CRIMINAL_PROCEEDINGS_IN_ELECTRONIC_FORMAT. Access: Jan. 21, 2021.

ANTONOV, J.V. Legal instruments of e-democracy for development of civil society in the international practice. Czech Yearbook of International Law. Vol. V. NY: Juris Publishing: 2014,19-38. ). Available at: https://www.researchgate.net/publication/272246903_Legal_Instruments_of_E-Democracy_for_Development_of_Civil_Society_in_the_International_Practice. Access: Jan. 21, 2021.

BURDINA, E., PETUKHOV, N. Efficiency of the use of judicial resources and the problems of reorganization of courts. Economic policy, 13(2), 126-147, 2018. (In Russian). Available at: https://cyberleninka.ru/article/n/effektivnost-ispolzovaniya-sudebnyh-resursov-i-problemy-organizatsii-sudov. Access: Jan. 21, 2021.
CALO, R., FROOMKIN, A.M., KERR, I. (Ed.). *Robot law*. Cheltenham, UK. Northampton, MA, USA: Edward Elgar Publishing, 2016.

CEPEJ *European Ethical Charter on the use of artificial intelligence (AI) in judicial systems and their environment*. https://www.coe.int/en/web/cepej/cepej-european-ethical-charter-on-the-use-of-artificial-intelligence-ai-in-judicial-systems-and-their-environment. Access: February, 17 2021.

GAVRISHOV, D.V.; GUSEVA, A.A.; KOSOLAPOVA, N.A.; MARKHGEYM, M.V.; NOVIKOVA, A.E. Foreign experience of constitutional regulation of the right to information. The Turkish Online Journal of Design, Art and Communication TOJDAC, 2017.April. Special Edition: 298-302. Available at: http://dspace.bsu.edu.ru/bitstream/123456789/24182/1/Gavrishov_Foreign_Experience.pdf . Access: Jul 21, 2021.

INSTRUCTIONS ON CONDUCTING CRIMINAL PROCEEDINGS IN ELECTRONIC FORMAT, approved by the Order of the Prosecutor General of the Republic of Kazakhstan dated January, 3(2), 2018. URL: http://adilet.zan.kz/docs/V1800016268. Access: February 17, 2021.

JUSTICE IN EUROPE FACING THE CHALLENGES OF DIGITAL TECHNOLOGY. Available at: https://www.coe.int/en/web/commissioner/-/justice-in-europe-facing-the-%20challenges-of-digital-technology. Access: February17, 2021.

KOVTUN, Y.A., VINOKUROV, E.A., KAPUSTINA, I.Y., POLENOV, R.V., OZEROV, K.I. International trends in the justice digitalization development. *Turismo: Estudos & Práticas* (UERN), Mossoró/RN, Caderno Suplementar, 03, 2020. Available at: http://natal.urn.br/periodicos/index.php/RTEP/article/view/1882. Access: Jul 21, 2021.

MARKHGEYM, M.V., NOVIKOVA, A.E., TONKOV, E.E., GUTOROVA, A.N., & TSALIEV, A.M. Protection Indicator in the Constitutions of the European Federations. *International Journal of Criminology and Sociology*, 9, 2342-2346, 2020. Available at: http://dspace.bsu.edu.ru/handle/123456789/41902?mode=full. Access: Jul 21, 2021.

MEISSONNIER ANTOINE, “The digitalization of the archives of the Ministry of Justice”. *Les Cahiers de la Justice*, 2019/2, № 2: 337-347. Available at: https://www.cairn-int.info/journal-les-cahiers-de-la-justice-2019-2-page-337.htm. Access: Jul 21, 2021.

OGANESIAN, T.D., MARKHGEYM, M.V., NOVIKOVA A.E., SAFRONOVA E.V., TONKOV E.E. Length of legal proceedings and the pilot judgment procedure of the European Court of Human Rights: new challenges and problems. *Revista San Gregorio*, № 42. Special Edition: 2020, 293-305. Available at: http://revista.sangregorio.edu.ec/index.php/REVISTASANGREGORIO/article/view/1569.. Access: Jul 21, 2021.

SETHIA, A. Rethinking admissibility of electronic evidence. International Journal of Law and Information Technology, 24(3), 229-250, 2016. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3278828. Access: Jul 21, 2021.

SOLDATKINA, O.L. Possibilities of using blockchain technology for informatization of the judicial system. *Russian justice*, 3, 38-40, 2019. (In Russian). Available at: https://www.researchgate.net/publication/340301495_On_the_Use_of_Blockchain_Technologies_in_the_Judicial_System_of_the_Russian_Federation. Access: Jul 21, 2021.
THE E-JUSTICE MODEL IN BELGIUM. E-tools for criminal case management within selected EU Member States. Available at: https://www.files.ethz.ch/isn/142038/FULL.pdf. Access: February 17, 2021.

THORGAARD BITTEN SORENSEN. Digitalisation: An Opportunity or a Risk? Journal of European Competition Law & Practice, 2018, 9 (6), 349-350.

TONKOV, E.E.; PENSKAYA, T.M.; KUNEIKO, A.N.; BIDOVA, B.B.; NIKITINA, A.P. Technologies introduces in Russian state in modern time. Geplat: Caderno Suplementar, 2020, 2. Available at: https://www.researchgate.net/publication/347698947_TECHNOLOGIES_INTRODUCES_IN_RUSSIAN_STATE_IN_MODERN_TIME. Access: Jul 21, 2021.

TREFILOV, A.A. FRG’s Criminal Code System (with an attachment in the form of a translation of the FRG’s Criminal Code Procedure to Russian). Saarbrücken : Lambert acad. publ., 2011, 427 p. (In Russian)

ZHURKINA, O.V. MAKSIMENKO, E.I. Digital justice on the example of China’s Internet Courts. Questions of Russian and International Law, 6A, 2020, 138-143. (In Russian). Available at: http://www.publishing-vak.ru/file/archive-law-2020-6/17-zhurkina-maksimenko.pdf. Access: Jul 21, 2021.

International trends in the interaction between law enforcement bodies in the digital space

Tendências internacionais na interação entre órgãos policiais no espaço digital

Tendencias internacionales en la interacción entre los órganos encargados de hacer cumplir la ley en el espacio digital

Resumo
Os autores comprovam a viabilidade da introdução de tecnologias digitais na aplicação da lei moderna. A posição sobre a necessidade de consolidação normativa do procedimento para a criação e uso de bancos de dados internacionais de agências de aplicação da lei baseadas na tecnologia blockchain, e a introdução de tecnologias de inteligência artificial é comprovada. A necessidade de uma implementação gradual, mas ofensiva das tecnologias digitais na aplicação da lei, é determinada. A principal tarefa para uma integração internacional bem-sucedida é a digitalização completa da aplicação da lei em cada país e com base em padrões uniformes que permitirão que todas as agências individuais de aplicação da lei sejam combinadas em uma única agência internacional de aplicação da lei.

Abstract
The authors substantiate the feasibility of introducing digital technologies into modern law enforcement. The position on the need for normative consolidation of the procedure for the creation and use of international databases of law enforcement agencies based on blockchain technology, and the introduction of artificial intelligence technologies is substantiated. The need for a phased, but offensive implementation of digital technologies in law enforcement is determined. The main task for successful international integration is the complete digitalization of law enforcement within each country and on the basis of uniform standards that will allow all individual law enforcement agencies to be combined into a single international law enforcement agency.

Resumen
Los autores corroboran la viabilidad de introducir tecnologías digitales en la aplicación de la ley moderna. La posición sobre la necesidad de consolidación normativa del procedimiento para la creación y el uso de bases de datos internacionales de organismos encargados de hacer cumplir la ley basadas en la tecnología blockchain, y la introducción de tecnologías de inteligencia artificial está fundamentada. Se determina la necesidad de una implementación gradual, pero ofensiva, de las tecnologías digitales en la aplicación de la ley. La principal tarea para el éxito de la integración internacional es la digitalización completa de la aplicación de la ley dentro de cada país y sobre la base de normas uniformes que permitan que todos los organismos encargados de hacer cumplir la ley se combinen en un solo organismo internacional encargado de hacer cumplir la ley.

Palavras-chave: Blockchain. Informação. Tecnologia. Aplicação da lei. Digitalização.

Keywords: Blockchain. Information. Technology. Law enforcement. Digitalization.

Palabras-clave: Blockchain. Información. Tecnología. Aplicación de la ley. Digitalización.