REVISTA D'INTERNET, DRET I POLÍTICA
REVISTA DE INTERNET, DERECHO Y POLÍTICA

https://idp.uoc.edu

ARTICLE

Digitalization of the criminal process: is simplification always for the better?

Oleksandr Halahan
National Academy of Internal Affairs

Iryna Krytska
Yaroslav Mudryi National Law University

Anush Tumanyants
Yaroslav Mudryi National Law University

Iryna Dubivka
National Academy of Internal Affairs

Date of submission: November 2022
Accepted in: February 2023
Published in: October 2023

Abstract

Based on monitoring of current foreign criminal procedural legislation and its application, as well as scientists' points of view, an analysis of the process of digitalization of criminal justice in some leading countries, in particular Ukraine, was carried out. The positive aspects of the systematic transfer of proceedings to digital mode were highlighted – optimization of pre-trial investigation and trial procedures, saving budget funds, reducing the number of authorized entities involved in certain procedural actions, applying effective methods of electronic communication, and so on. Risks include a lack of proper technological support and the threat of cyberattacks, intensification of abuse and falsification of evidence. Prospects for the development of digitalization have been determined in terms of interaction with electronic registers, the simplification of application transfer, petitions and complaints directly through the system of electronic cases and so on. Arguments are given on the expediency of applying an integrated approach to the implementation of the concept of electronic judicial proceedings, in particular the use of electronic document management and access to court cases in electronic form, the use of modern digital technologies in the implementation of procedural actions, and ensuring the proper recording of the trial by videoconference. It is emphasized that the basis of such digital innovations in the field of criminal justice should be the principle of humanism, that is, with human rights and legitimate interests as a priority.

Keywords

digitalization of criminal proceedings; information and communication technologies; pre-trial investigation; trial; digital evidence; respect for individual rights

© 2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
© of this edition: 2023, Universitat Oberta de Catalunya

Universitat Oberta de Catalunya

Digitalización del proceso penal: ¿la simplificación siempre es para mejor?

Resumen

Basándose en la supervisión de la legislación procesal penal extranjera vigente y la práctica de su aplicación, así como en los puntos de vista de los científicos, se llevó a cabo un análisis del proceso de digitalización de la justicia penal en algunos países líderes, en particular en Ucrania. Se destacaron los aspectos positivos de la transferencia sistemática de procedimientos al modo electrónico: optimización de los procedimientos de instrucción previa y judiciales, ahorro de fondos presupuestarios, reducción del número de entidades autorizadas que intervienen en determinadas actuaciones procesales, aplicación de métodos eficaces de comunicación electrónica. Los riesgos incluyen la falta del apoyo tecnológico adecuado y la amenaza de ciberataques, la intensificación de los abusos y la falsificación de pruebas. Se han determinado las perspectivas para el desarrollo de la digitalización en términos de interacción con los registros electrónicos, simplificación de la transferencia de solicitudes, peticiones, quejas directamente a través del sistema de expedientes electrónicos, etc. Se argumenta sobre la conveniencia de aplicar un enfoque integrado a la implementación del concepto de procedimientos judiciales electrónicos, en particular, el uso de la gestión electrónica de documentos y el acceso a casos judiciales en formato electrónico, el uso de las tecnologías digitales modernas en la implementación de actuaciones procesales, garantizando la correcta grabación del juicio por videoconferencia. Se enfatiza que tales innovaciones digitales en el ámbito de la justicia penal deben basarse en el principio del humanismo, es decir, la prioridad de los derechos humanos y los intereses legítimos.

Palabras clave

digitalización de procesos penales; tecnologías de la información y la comunicación; instrucción previa; juicio; prueba digital; cumplimiento de derechos individuales

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya
Universitat Oberta de Catalunya

Introduction

Modern criminal procedural activity is closely related to the information and technical conditions in which it is implemented. The rapid development of information technologies and the digitalization of social, legal and economic relations cause current legal norms and practical activities to become outdated. As a result of such a "procedural inhibition", the fulfilment of the tasks of criminal proceedings is significantly delayed and in some cases rendered completely impossible. In the modern world, the regulatory framework on the basis of which crimes are investigated and prosecuted should be more flexible and at least partially keep pace with the development of other processes (Mykhaylenko, 2022).

For more than 10 years, Ukraine has been living under the new rules of criminal proceedings, and this new paradigm is undergoing constant transformation. During this period, over one hundred changes and additions were made to the Criminal Procedure Code of Ukraine, and their content is dictated by the inability to provide at the stage of legislative work a model for the use of criminal procedural prescriptions and changes in objective reality (pandemic, war, and so on). The dynamics of such transformations of the criminal procedural legislation do not always keep pace with the modern needs of criminal justice.

We must state that certain institutions of the criminal process require modernization, such as the following issues: the beginning of a pre-trial investigation, documentation and use of information from the content of electronic information systems and communication systems, the use of digital technologies for procedural actions during the trial, and so on.

Thus, the issue of introducing the concept of electronic criminal proceedings into the practical activities of pre-trial investigation bodies and criminal justice does not lose its relevance, and the gradual digitalization of their activities is a necessary condition for creating an effective mechanism for the legal regulation of criminal procedural relations in which public and private interests intersect.

To this end, we will carry out a general description of the best practices for introducing information and communication technologies into the modern criminal process and explore the problematic issues of applying the provisions of criminal procedural legislation during the legal regime of martial law. Such an approach to highlighting the problem of the digitalization of the criminal process will make it possible to determine the perspectives of the legislative regulation of certain procedures and enforcement at a national level.

1. General characteristics of best practices for the introduction of information and communication technologies in the modern criminal process

The gradual transition of criminal proceedings to electronic proceedings is associated both with the progress of information and communication technologies and with modern requirements to accelerate the exchange of information, improve the state of observance of human rights and freedoms, and undertake comprehensive analysis of information in decision-making. It is natural that the fulfilment of the tasks of criminal proceedings in modern conditions cannot be ensured without effective consideration of the European and international experience of criminal justice.

The trend of introducing information and communication technologies into the world and the development of modern electronic society require the introduction and further development of digitalization of criminal proceedings in many democratic countries, which requires a detailed and systematic analysis of current legislation and clarification of the algorithm of electronic criminal proceedings.

In the Strategy for the Development of the Justice System and Constitutional Justice for 2021-2023, clause 4.1.4. indicates the need for "the introduction of modern electronic clerical work in court, electronic case management, electronic communications with the court, the judge's office and the office of the participant in the process" (Strategy for the Development of the Justice System and Constitutional Justice for 2021-2023). At the same time, the issue of adopting the Unified State Concept for the Introduction of Electronic Criminal Justice in Ukraine is still open and requires immediate scientific elaboration and legislative solution. A similar problem exists in many other countries, so the analysis of these issues will be useful for developing appropriate proposals to optimize the digitalization process in criminal justice.

© 2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
© of this edition: 2023, Universitat Oberta de Catalunya
Universitat Oberta de Catalunya

Generally speaking, one leader in the field of application of video technologies in legal proceedings is France. It created Contact Video Justice (justice through a video system) – administrative virtual racks with Internet access, allowing citizens to make a request, receive and sign documents, and talk to a lawyer using a webcam. In turn, Poland adopted a somewhat more modest approach to this issue and in 2009 created an electronic court to consider court decisions and speed up the process of consideration of claims for debt collection (Stach, 2020).

Quite creative and at the same time effective are individual initiatives of electronic proceedings introduced by other countries. In particular, the Estonian CPC provides for the implementation of the trial in electronic digital format and the transfer of petitions, applications, complaints directly through the electronic case system (Kalancha, 2019). The criminal proceedings of the Republic of Moldova propose for consideration such recommendations as the ad hoc procedure, which provides for the appointment of a forensic expert in the specialization necessary for the examination and the possibility of publishing during the trial the video testimony of a minor witness so as not to involve him or her again (Kalancha, 2020).

In modern realities, improving the information support of pre-trial investigation plays an important role, since it is aimed at simplifying and accelerating the process of disclosing the circumstances of criminal offences (Kovalev, 2022). On these issues, it is worth noting the positive experience of electronic interaction successfully implemented in the Czech Republic between pre-trial investigation bodies and other subjects of the process. A striking example to follow is the electronic system of the Czech Republic E-Case Management System (eCMS), which began to function in 2006 in the police. Its specificity lies in the material support of law enforcement agencies with gadgets connected to the eCMS, which allow you to check persons, vehicles, register proceedings, take fingerprints, and so on. The main advantage of such a system is the ability to record the conducted search actions and gain access to all electronic documents. It is this system that has been taken as a basis in Ukraine (Zhuchenko, 2021).

It should be noted that each of the European countries introduced digital technologies as needed and in areas where they were required. This has meant differences in the levels of development of e-justice and methods of its implementation. Of course, some digital transformation processes are common in European countries, such as the creation of electronic registers and databases, the wider use of electronic documents and digital signatures, online consultations, and, since the beginning of quarantine measures, the consideration of cases in video conferencing. However, the implementation of relevant technologies depends on a country's chosen policy regarding e-justice.

In particular, the following information and communication technologies can be distinguished in the judicial system: a back office that supports processes related to the administration of cases, the production of documents and court management, the processing of texts and databases, technologies that make it possible to perceive what is happening in the courtroom itself, and external communication technologies that ensure communication with the parties and inform the public outside the courts. The essence of these different technologies is the same: to reduce the functions of a judge in a judicial process to making a decision, taking into account all circumstances. All preparatory and organizational work is a function of technology. Therefore, there is no doubt that the e-court system has long been a necessity that greatly simplifies access to justice.

Positive foreign experience in the introduction and implementation of the electronic digital form of criminal cases only confirms the expediency of further modernization of criminal procedure. Among such provisions, those that merit attention include interaction with electronic registers, transfer of petitions, applications, complaints directly through the system of electronic cases, and the implementation of trials in electronic digital format.

We believe that certain technological solutions can be used not only by Ukraine, but also by other countries with similar criminal justice structures. These particularly include automatic notification to the relevant electronic information platform of authorized and other interested persons about the start of pre-trial investigation, the automation of electronic interaction between the investigator and the prosecutor, the formation of templates of electronic procedural documents in the register, the full integration of paper criminal proceedings into electronic proceedings on the basis of this system; introduction of interaction of pre-trial investigation bodies with other subjects of criminal proceedings by analogy with the data box, and the creation of a special electronic system that will interact with state registers and databases necessary for criminal proceedings.

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya
Universitat Oberta de Catalunya

Thus, there is no doubt that technological solutions in the administration of justice must be accountable, sustainable and highly transparent. However, not all innovations should be unquestioningly implemented, even if the technology initially looks incredibly promising. At the same time, as rightly noted in scientific literature, "both algorithms and the law are tools for ordering and rationality. This commonality of their nature gives hope that the union of law and algorithms can be a successful foundation for fairness and justice" (Cofone, 2019).

Most promising is the potential for procedural fairness when using algorithms, since they can contain indestructible sequences that preclude arbitrary violation of the procedure. With the proper provision of proper content, security and *laissez-faire*, algorithmic tools can contribute to a more equitable administration of justice.

2. Digitalization of certain procedures during the pre-trial investigation in Ukraine

Electronic criminal proceedings can be defined as a regime of criminal procedural activity based on compositional algorithms of automated criminal procedural procedures and electronic information systems integrated with it. Such proceedings are implemented by the subjects in electronic format and recorded in the official electronic procedural document.

Introduced in 2012 into the work of Ukrainian law enforcement agencies, the Unified Register of Pre-Trial Investigations (hereinafter referred to as the URPTI) is an automated electronic database system, according to which the collection, storage, protection, accounting, search, synthesis of data used for reporting, as well as providing information on information entered in the Register, in compliance with the requirements of criminal procedural legislation and legislation, which regulates the protection of personal data and access to information with limited access (Criminal Procedure Code of Ukraine, 2012).

The materials of the pre-trial investigation contained in the information and telecommunication system of pre-trial investigation are transferred, their copies are provided in electronic form, and by decision of the investigator, prosecutor, investigating magistrate, they are transferred or provided in paper form.[1] Over the past ten years, this mechanism has proven effective and laid the foundations for further digitalization of criminal proceedings.

The introduction of a single integrated electronic system of criminal justice bodies, combined with national electronic registers and databases, aims to transfer to the electronic information environment measures to ensure criminal proceedings, investigative (inquiry) actions, accumulation, systematization, transfer and research of evidence, as well as adoption by specialized subjects of pre-trial investigations of procedural decisions in electronic format, ensuring compliance with reasonable deadlines (Bevzyuk, 2019).

At the same time, despite significant changes in the direction of digitalization of the criminal process, it is necessary to state the lack of proper technological support and cybersecurity, which creates obstacles in the development of electronic document management. In the process of solving these issues, the key task should be to determine the systematic and moderate use of digital systems.

Given that Ukraine is a "pioneer" in the use of certain information and communication technologies precisely in conditions of hostilities, which led to the introduction of a special legal regime on its territory, it has experience in legislatively normalizing certain procedures, conducting investigations and trials relevant in terms of the subject of research.

After the introduction of martial law in Ukraine on 24.02.2022 (Decree of the President of Ukraine, no. 64, 2022) in the content of Art. 615 of the Criminal Procedure Code of Ukraine, there was a provision that during martial law, in the absence of technical possibility of access to the Unified State Register, the decision to start a pre-trial investigation is made by the investigator or prosecutor: information to be entered into the Unified State Register is entered at the earliest opportunity (Criminal Procedure Code of Ukraine, 2012).

We consider such changes in the legal regulation of the decision to start a pre-trial investigation under martial

1. Part 3 of Article 106-1 of the Criminal Procedure Code of Ukraine (2012).

© 2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
© of this edition: 2023, Universitat Oberta de Catalunya
UOC Universitat Oberta de Catalunya

law to be positive, since during hostilities the URPTI may function intermittently or not at all. The key condition for the implementation of this procedure is considered by the legislator to be the lack of technical access to the specified Register, which may be associated with the following circumstances: the exit of computer or network equipment from service, power and communication interruptions, the Internet, lack of access to the same, problems with transport, blocking and seizure of administrative buildings, lack of access to territories, which may lead to the inability to enter information for a long time to Registry.

Under such conditions, it seems a predictable and logical resolution as a whole to record the decision to start a pre-trial investigation with a paper document. However, we consider this method of legal regulation imperfect, since the analysed provisions of the Criminal Procedure Code of Ukraine may adversely affect the effectiveness of criminal proceedings at the initial stage of the investigation due to the physical inability to draw up a resolution at the start of a pre-trial investigation or enter relevant information into the Register. In this regard, the authorized subjects of the criminal process will be significantly limited in the exercise of their powers. At the same time, it is possible to predict quite significant difficulties for the defence party, because it is possible to prove the justification for the application by the investigator or prosecutor of the provisions of paragraph 1 of part 1 of Art. 615 of the Criminal Procedure Code of Ukraine. It can be extremely difficult to determine whether they had the opportunity to enter information into the Unified State Register, either at all or when it appeared in an armed conflict.

Also, with a fresh wave of cyberattacks during the war period, to ensure the quick and effective investigation of crimes related to the military aggression of the Russian Federation against Ukraine, on 15.03.2022 the Verkhovna Rada of Ukraine adopted Law No. 2137-IX, aimed at increasing the effectiveness of pre-trial investigation "in hot pursuit" and at countering cyberattacks (Law of Ukraine No. 2137-IX, 2022). The amendments made to the CPC of Ukraine will be valid both during the special legal regime of martial law and after its completion. Below, we consider some of the innovations that relate to the subject of our research.

Particular attention should be paid to the interpretation by national judicial systems of the concept of "electronic evidence" and the procedures for its receipt and evaluation. Indeed, as the doctrine rightly points out, the field of digital evidence is expanding rapidly and it offers an important new source of information that will help prosecutors secure more sentences (Goodison *et al*., 2015). Taking into account foreign experience, as well as the settlement of these aspects in other procedural laws, there is an urgent need to determine the place of digital evidence in the system of procedural sources of evidence, followed by regulation of new approaches to their collection, research and evaluation, based on the peculiarities of their technical nature and the need for their authentication and verification.

In practice, computer equipment or storage devices and secret surveillance are increasingly being seized (Bujosa Vadell *et al*., 2021). From now on, according to the legislation of Ukraine, copies of computer data produced by the investigator or prosecutor with the involved specialist are recognized by the court as the original document: an independent source of evidence in accordance with Part 2 of Art. 99 CPC of Ukraine. At the same time, information on the manufacture of a copy and the method of their identification must be entered into the protocol drawn up as a result of the procedural action. A computer data carrier is attached to the protocol.

According to the documents, provided that they contain relevant information, materials of photography, sound recording, video recording and other storage media (including computer data) may belong. However, under the current legislation, the investigator or prosecutor is obliged to invite at least two uninterested persons (understood) to present a person, corpse or thing for identification or examination of a corpse, including those related to exhumation, investigative experiments, and identification of a person. Exceptions include cases of continuous video recording of the course of the relevant investigative action.

In our opinion, such a procedure is able to ensure the legitimacy of the investigative action, the use of technical means for its fixation and the admissibility of the results of its conduct in criminal proceedings. At the same time, it should be understood that the use of technical means of recording criminal proceedings in no way replaces the protocol of the relevant procedural action, but only complements it, ensuring clarity and objectivity regarding the activity of the subject of the investigation.

The legislative approach of other countries to the understanding of electronic evidence and its assessment is somewhat different from that of Ukraine. In particular,

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya
Universitat Oberta de Catalunya

in the United States of America there is no division of evidence into species. Evidence is evaluated in terms of its admissibility. It transpires that it is for this reason that there is no discussion regarding the possibility of the existence of "digital evidence" and its place in the evidence in criminal cases. Although US lawmakers do not distinguish between "electronic" evidence and conventional evidence, they still note its specificity. A number of requirements are made of the evidence in criminal proceedings in said country, one of which is reliability. The production of digital evidence in criminal investigations indicates a tendency to refuse to fully recognize a computer business record due to the complex differences between records created by a computer, records created by people but stored on a computer, and records that have been digitized and then saved as an archived log file (Jarett *et al*., 2009). This rule determines the complexity, uncertainty and, ultimately, the admission of evidence in many cases. Digital information for proof must be authenticated, meaning it must be confirmed that this is the same information that was obtained from a particular medium. For all evidence to be admitted, it is necessary to establish a framework for authenticity, which in many cases requires witnesses to certify the authenticity of digital information.

Canadian law establishes not only rules for evaluating evidence in general, but also additional criteria for the admissibility of electronic documents. Article 31.1 of the Canadian Evidence Act requires the authentication of electronic documents, provided that their authenticity can be confirmed by the integrity of the system of recording and storing electronic documents (Article 31.3) or by cross-examination under oath (Article 31.5). The burden of proving the authenticity of an electronic document rests with the person who provides it as evidence (Article. 31.3) (Canada Evidence Act, 1985).

One of the features of the proof procedure in the French criminal process is the freedom to choose the method of obtaining evidence. At the same time, the inquiry body has the right to perform any actions to establish the circumstances of the crime committed. Such specificity, in our opinion, is due to the presence of "free evidence": not bound by the procedural form and not regulated by law. As evidence in a criminal case, not only can the original digital information seized together with its carrier be used, but also a copy of said information.[2]

Analysis revealed a number of impediments to the introduction of digital technologies in criminal proceedings, including in terms of evidence, which exist in both Ukrainian and foreign legislation and in law enforcement practice. These reasons are largely explained by the traditional attitude to the criteria of evidence in criminal proceedings of different countries, but the common problem is the lack of a unified theory of digital evidence as the basis for the development of legal terminology and the procedural procedure for interpreting digital evidence. In our opinion, such a theory would unify the rules for obtaining and further using digital evidence, linking digital technologies with the principles of criminal justice. Practical support for this theory should involve the training of qualified specialists, including the improvement of digital skills of investigators (detectives), prosecutors and judges.

Also, as you know, all procedural decisions of the investigator or prosecutor must be made in the form of a resolution. In order to provide proper execution of decisions of law enforcement agencies, Ukrainian legislation has established the possibility of producing a resolution in electronic form. At the same time, the electronic signature of the official who made the relevant procedural decision or the Information and Telecommunication System of pre-trial investigation is qualified. Given the huge volume of war crimes that currently require quick and effective investigation, we consider such changes to be justified and appropriate.

In general, the legislative provisions described in the subsection, which are related to the settlement of criminal procedural legal relations, as well as the normalization of certain procedures for obtaining and using evidence using modern technologies, will simultaneously simplify and speed up pre-trial investigation in certain criminal proceedings, without affecting its quality and without limiting the legal rights and interests of the subjects of criminal procedure. At the same time, it should be remembered that by introducing such innovations in favour of the public good, under no circumstances should violations of the legal rights and interests of individuals be allowed.

2. Part 5 of Article 56, part 3 of Article 97 of the Code of Criminal Procedure (2006).

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya
UOC Universitat Oberta de Catalunya

A complete transition of criminal proceedings from paper to electronic is inevitable in the future, but both during the transition process and in the future, the accused must have the choice of the optimal manner of contact with the law enforcement officer. Their opinion on this issue should be taken into account as much as possible, because the fate of the accused is decided during criminal proceedings. In order to properly ensure the right to protection and access to justice, the accused should be given the right by law to choose the form of criminal proceedings with which they prefer to work, familiarize themselves with the documents, receive copies, and file complaints in the traditional way (on paper) or through electronic document circulation.

Concluding this part of the study, the prospect of further research into these issues should be emphasized, given the need to analyse the positive foreign practice of administrative and legal regulation of the functioning of the information and telecommunication system of pre-trial investigation and determine the possibility and expediency of borrowing it in order to implement it into national legislation and practical application.

3. Organizational, technical and procedural features of the peculiarities of the establishment of electronic legal proceedings under special legal regimes

In courts, the functioning of electronic records management is ensured by the existence of the Unified Judicial Information and Telecommunication System (hereinafter referred to as the UJITS), which stipulates the transfer of criminal proceedings to the e-format, in particular in accordance with the requirements of the legislation of 17.08.2021. The High Council of Justice approved the Regulation on the procedure for the functioning of individual subsystems (modules) UJITS, which, among other things, determines the procedure for functioning in courts and in justice bodies of individual modules. "Electronic Cabinet", "Electronic Court", and the functioning of videoconferencing as a separate subsystem determine the procedure for performing procedural actions in electronic form using the specified UJITS subsystems (Regulations on the procedure for the functioning of individual subsystems).

Given the expediency of implementing the concept of electronic judicial proceedings, it is important to recognize that the subsystem "Electronic Court" allows for the submission of court documents in electronic form to the participants of the trial, as well as sending procedural documents to such participants in electronic form in parallel with documents in paper form in accordance with procedural legislation. The aforementioned testifies to the existence of legal principles for introducing the concept of electronic criminal proceedings into legal practice.

However, it should be emphasized that the introduction of remote work of courts under martial law requires the most efficient use of electronic document management and access to court cases in electronic form. The ESITS provided for by the procedural legislation should ensure the exchange of documents in electronic form between the courts, between the court and participants in the trial, and between participants in the trial, as well as the recording of the trial and the participation of participants in the trial in the court session by videoconference.

An important guarantee of legal, fair and effective justice is the objective and impartial distribution of criminal proceedings materials among judges in compliance with the principles of priority and the same number of proceedings for each judge (uniform load) (On the judiciary and the status of judges. Law of Ukraine, 2022). At the same time, under martial law, situations may arise: the exit of network equipment from service, interruptions in electricity and communication, the Internet, and so on, which make it impossible to access UJITS and can thus "paralyse" the work of courts. Thus, the head of the relevant court, whose powers include monitoring the effectiveness of the court apparatus, organizing the maintenance of judicial statistics in the court and information and analytical support of judges in order to improve the quality of judicial proceedings, and so on (Articles 24, 29, 34, 39, 42 of the Law of Ukraine "On the Judiciary and the Status of Judges") should ensure the distribution of materials of criminal proceedings among judges in compliance with the relevant principles (On the judiciary and the status of judges. Law of Ukraine, 2022).

In the future, assessing the advantages and disadvantages of introducing information and communication technologies into the criminal process, it is certainly advisable to focus on such important positive manifestations as the preservation of time, human and material resources, the release of people from excessively monotonous, typical work in favour of

© 2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
© of this edition: 2023, Universitat Oberta de Catalunya
UOC Universitat Oberta de Catalunya

increasing attention to creative tasks, the justification of key procedural decisions that require evaluation by internal conviction, and so on. On the other hand, shortcomings or risks involved in the introduction of information and communication technologies include problems associated with possible bias and discrimination arising from the basic algorithms of artificial intelligence technologies.

In this context, attention should be paid to certain legal guidelines already established in this regard. In particular, key standards for the introduction of artificial intelligence into the judicial system, including criminal intelligence, are defined in the European Charter on the Ethics of the Use of Artificial Intelligence in Judicial Systems and the realities around them, adopted on December 3-4, 2018 in Strasbourg by the European Commission on the Effectiveness of Justice (European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and the Realities Surrounding Them, 2018). Analysis of this document highlighted the basic principles of the use of artificial intelligence technologies in justice, namely: respect for fundamental human rights, inadmissibility of discrimination, quality and safety, implementations "under the control of the user", openness, impartiality, and transparency (European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and the Realities Surrounding Them, 2018).

In general, we can state that despite a number of risks and miscalculations that need to be regulated by law and worked out in practice, the very concept of judicial reform in the direction of its digitalization is progressive and relevant. After all, the issue of introducing remote forms of court work, switching to an electronic form of judicial proceedings, and accessing the electronic office of a judge is extremely important, and the war has only actualized these issues. On the one hand, relevant amendments to the legislation are necessary to preserve the life and health of the participants in the trial and will form the basis for making timely decisions on the evacuation of court employees, and on the other hand, they will contribute to compliance with international standards for compliance with the requirements of the Constitution of Ukraine on the administration of justice under martial law.

Conclusions

Despite significant changes in the digitalization of the criminal process in many European countries, the adoption of the Unified State Concept for the Introduction of Electronic Criminal Justice is relevant for many modern democracies. It requires a systematic and moderate approach, proper technological support and cybersecurity, and the creation of conditions to prevent discrimination, abuse and falsification of evidence. Positive aspects of digitalization include the optimization of the procedures of pre-trial investigation and trial, preservation of budget funds, reduction in the number of authorized entities involved in certain procedural actions, application of effective methods of electronic communication, and others.

The implications of technological changes for criminal justice must be assessed in terms of the balance of threats and opportunities offered by new technologies: security breaches, privacy violations, and structural erosion of privacy. A significant level of threat is also hidden and implicit. This involves, above all, manipulative influences on the judiciary and specific processes and the invisible undermining of the rule of law and human rights, including their authority and values.

Analysis of criminal procedural norms and theoretical ideas about the modernization and digitalization of the criminal process during the special legal regime (in the example of martial law introduced in Ukraine) testifies to certain conceptual legislative shortcomings in terms of the normalization in the code of paper-technical form of fixing criminal procedural actions with a significant simplification of the procedure for drawing up written documents and the determination of the obligation of continuous video recording of the relevant investigative actions without concepts. Further prospects in this regard are seen in the digitalization of interaction with electronic registers, simplification of the transfer of applications, petitions, complaints directly through the system of electronic cases, and others.

The introduction of the concept of electronic judicial proceedings under the conditions of special legal regimes, the main idea of which is to transfer courts to the format of remote work, is undoubtedly creative and simultaneously the most divine way to implement the function of justice, which requires a comprehensive, efficient use of electronic document management and access to court cases in electronic form, and the use of modern digital technologies in the implementation of procedural actions, ensuring proper recording trial by videoconference. The basis of such digital innovations in the field of criminal justice should be the principle of humanism: that is, the priority of human rights and legitimate interests.

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya

References

BELOUS, V. (2015). *OPEN DATA and OSINT as relevant categories of information support for crime investigation. Information support for the investigation of crimes: materials of the International Round Table*. 29 May. Odessa: Legal Literature, 340 p.

BEVZYUK, I. (2019). *Electronic criminal proceedings as a means of communication of the prosecutor*. Materials of the round table. July 25. Kyiv: National Academy of Public Prosecutions of Ukraine, p. 56.

BUJOSA VADELL, L. M.; BUSTAMANTE RÚA, M. M.; TORO GARZÓN, L. O. (2021). "La prueba digital producto de la vigilancia secreta: obtención, admisibilidad y valoración en el proceso penal en España y Colombia". In: *Revista Brasileira de Direito Processual Penal*, vol. 7, no. 2, pp. 1347–1384. DOI: https://doi.org/10.22197/rbdpp.v7i2.482

COFONE, I. N. (2019). "Algorithmic discrimination is an information problem". *Hastings Law Journal*, pp. 1389-1444 [online]. Available at: https://repository.uchastings.edu/hastings_law_journal/vol70/iss6/1/

COUNCIL OF EUROPE (2018, December). *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and the Realities Surrounding Them*. Strasbourg: Documents and Publications Production Department. Available at: https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c

FRANCE (2006, January). *Code of Criminal Procedure* [online]. Available at: https://sherloc.unodc.org/cld/uploads/res/document/fra/2006/code_of_criminal_procedure_en_html/France_Code_of_criminal_procedure_EN.pdf

GOODISON, S. E.; DAVIS, R. C.; JACKSON, B. A. (2015). *Digital Evidence and the U.S. Criminal Justice System: Identifying Technology and Other Needs to More Effectively Acquire and Utilize Digital Evidence*, p. 32.

GOVERNMENT OF CANADA (1985). *Canada Evidence Act* [online]. Available at: https://laws-lois.justice.gc.ca/eng/acts/c-5/

JARETT, H.; BAILIE, M.; HAGEN, E.; JUDISH, N. (2009). *Searching and Seizing Computers and Obtaining Electronic Evidence in Criminal Investigations* [online]. Available at: https://www.justice.gov/file/442111/download

KALANCHA, I. (2019). "Electronic segment of the Estonian criminal process". *Comparative and analytical law*, no. 3, pp. 212–216.

KALANCHA, I. (2020). "Electronic segment in the criminal procedure law of Moldova". *National Law Journal: Theory and Practice*, pp. 132-137. DOI: https://doi.org/10.33994/kndise.2020.65.09

KOVALEVA, O. (2022). "Ways to improve the information support of pre-trial investigation in modern realities". *Actual Problems of Domestic Jurisprudence*, no. 3, pp. 105–110. DOI: https://doi.org/10.32782/3922104

MYKHAYLENKO, V. (2022). "The need to modernize the provisions of the Criminal Procedure Code of Ukraine in the light of current conditions for the investigation of criminal offenses". *Lexinform* [online]. Available at: https://lexinform.com.ua/dumka-eksperta/neobhidnist-modernizatsiyi-polozhen-kpk-ukrayiny-v-svitli-aktualnyh-umov-rozsliduvannya-kryminalnyh-pravoporushen

STACH, N. (2020). "E-litigation: the experience of Europe". *Loyer Hunt* [online]. Available at: https:// https://loyer.com.ua/uk/elektronne-sudochynstvo-dosvid-yevropy/

VERKHOVNA RADA OF UKRAINE (2012, April 13). *Criminal Procedure Code of Ukraine*, no. 4651-VI [online]. Available at: https://zakon.rada.gov.ua/laws/show/4651-17#Text

ZHUCHENKO, O. (2019). "To the question of the preconditions for the development of electronic criminal proceedings in Ukraine". *Rule of Law*, no. 33, pp. 116–122 [online]. Available at: http://pd.onu.edu.ua/article/view/162022/165410. DOI: https://doi.org/10.18524/2411-2054.2019.33.162022

On making changes to the Criminal Procedure Code of Ukraine and the Law of Ukraine "On Electronic Communications" regarding increasing the effectiveness of pre-trial investigation "on hot tracks" and countering cyberattacks. 15 March 2022. No. 2137-IX [online]. Available at: https://zakon.rada.gov.ua/laws/show/2137-20#Text

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya

On the introduction of martial law in Ukraine. Decree of the President of Ukraine. 24 February 2022. No. 64/2022 [online]. Available at: https://www.president.gov.ua/documents/642022-41397

On the judiciary and the status of judges. Law of Ukraine. 18 August 2022. No. 1402-VIII [online]. Available at: https://zakon.rada.gov.ua/laws/show/1402-19#Text

Strategy for the Development of the Justice System and Constitutional Justice for 2021-2023. Decree of the President of Ukraine. 11 May 2021. No. 231/2021 [online]. Available at: https://www.president.gov.ua/documents/2312021-39137.

Recommended citation

HALAHAN, Oleksandr; KRYTSKA, Iryna; TUMANYANTS, Anush; DUBIVKA, Iryna (2022). "Digitalization of the criminal process: is simplification always for the better?". *IDP. Journal promoted by the Department of Law and Political Science*, no. 38. UOC [Accessed: dd/mm/yy]http://dx.doi.org/10.7238/idp.v0i38.408495

The texts published in this journal, unless otherwise indicated, are subject to a Creative Commons Attribution No Derivative Works 3.0 Spain licence. They may be copied, distributed and broadcast provided the the author, the journal and the institution that publishes them (IDP. Revista de Internet, Derecho y Política; UOC) are cited. Derivative works are not permitted. The full licence can be consulted on http://creativecommons.org/licenses/by-nd/3.0/es/deed.es.

About the authors

Oleksandr Halahan
National Academy of Internal Affairs
law54@ukr.net
ORCID: http://orcid.org/0000-0001-5105-0022

Candidate of legal sciences, Associate Professor, Professor at the Department of Criminal Procedure at National Academy of Internal Affairs. His subject of scientific research is the institution of motions in the criminal process as a guarantee to ensure the rights of persons involved in the field of criminal justice. Actively participates in the development of proposals related to the digitalization of legal relations of participants in criminal proceedings at the stage of pre-trial investigation.

Iryna Krytska
Yaroslav Mudryi National Law University
i.o.krytska@nlu.edu.ua
ORCID: http://orcid.org/0000-0003-3676-4582

Candidate of legal sciences, Senior Lecturer of Department of Criminal Procedure at Yaroslav Mudryi National Law University. Her main areas of research include ensuring the legality of evidentiary activities of the prosecution in criminal proceedings, theoretical and practical aspects of ensuring the legality of the formation of physical evidence in criminal proceedings, and digitization of the criminal process. She has formulated scientifically based proposals aimed at improving the current criminal procedural legislation.

Anush Tumanyants
Yaroslav Mudryi National Law University
anushjurist@gmail.com
ORCID: http://orcid.org/0000-0001-6403-8436

Candidate of legal sciences, Associate Professor at the Department of Criminal Procedure, Yaroslav Mudryi National Law University. The object of scientific research is the study of procedural features of ensuring the rights and legitimate

© 2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
© of this edition: 2023, Universitat Oberta de Catalunya
Universitat Oberta de Catalunya

interests of a person during investigative actions. Special attention in recent work has focused on the analysis of the international legal experience of ensuring the principle of inviolability of a person's home or other property, in particular with the use of modern technologies.

Iryna Dubivka
National Academy of Internal Affairs (Ukraine)
irinadubivka@ukr.net
ORCID: http://orcid.org/0000-0002-7189-3630

Candidate of legal sciences, Associate Professor at the Department of Criminal Procedure at the National Academy of Internal Affairs. She has both theoretical achievements in the field of criminal proceedings, in particular regarding the problems of a lawyer's activity at the stage of pretrial investigation, taking into account the current state of legislation and law enforcement practice, as well as practical achievements, having worked for several years in the investigative units of the National Police. Recently, she has actively engaged in researching the problems of improving criminal procedural activities in the languages of special legal regimes.

Universitat Oberta de Catalunya

2023, Oleksandr Halahan, Iryna Krytska, Anush Tumanyants, Iryna Dubivka
of this edition: 2023, Universitat Oberta de Catalunya