DOI https://doi.org/10.30525/978-9934-26-440-5-16

INTERNATIONAL STANDARDS OF WAR CRIMES INVESTIGATION WITH USAGE OF DIGITAL DATA AND TECHNOLOGIES

Shepitko V. Yu., Shepitko M. V.

INTRODUCTION

During the Russian aggression against Ukraine, criminologists and judicial experts face new tasks related to providing scientific recommendations and documenting, recording and proving the facts of war crimes, proposing and applying separate methods of investigation of the crime of aggression, the crime of genocide, crimes against humanity, as well as researching evidence of war crimes. There are questions about the need to use optical imaging systems, 3D scanners, drones, mobile DNA laboratories and the implementation of artificial intelligence in the activities of law enforcement agencies and expert institutions. The investigation of war and other crimes of an international nature is connected with the need to create and operate joint international investigative teams, obtain information in the war zone, the dangers of conducting investigative (search) actions during war, the presence of misinformation and countermeasures from the aggressor state.

The investigation of war crimes should be based on the basic investigation standards for documenting international crimes in Ukraine[1], «Standards of investigation of war crimes. General part» (methodical recommendations, April 28, 2023, Kyiv), prepared by the Office of the Prosecutor General together with leading national experts in international humanitarian law[2], as well as the «International Protocol on Documenting and Investigating Sexual Violence in Conflict. Core standards of good practice for documenting sexual violence as a crime under international law» (June 2014)[3].

In modern conditions, criminalistics and forensic sciences face new tasks that are related to the development of scientific recommendations in documenting, recording and proving the facts of the commission of war and other crimes of an international nature, using the capabilities of digital forensics. At the same time, the development of digital forensics takes place in three main directions: 1) the formation of a separate scientific field in

[1] Керівництво з базових стандартів розслідування для документування міжнародних злочинів в Україні. URL: https://globalrightscompliance.com/wp-content/uploads/2023/05/КЕРІВНИЦТВО-З-БАЗОВИХ-СТАНДАРТІВ-РОЗСЛІДУВАННЯ-ДЛЯ-ДОКУМЕНТУВАННЯ-МІЖНАРОДНИХ-ЗЛОЧИНІВ-В-УКРАЇНІ.pdf

[2] Стандарти розслідування воєнних злочинів. Загальна частина. URL: https://justgroup.com.ua/wp-content/uploads/2023/05/standart-rozsliduvannya_zagalna-chastyna.pdf

[3] Міжнародного протоколу із документування та розслідування сексуального насильства в умовах конфлікту. URL: https://www.wicc.net.ua/media/int_protokol.pdf

criminalistics (forensic sciences); 2) application of special knowledge when working with digital evidence; 3) conducting forensic examinations (in particular, computer and technical examination).

1. The use of digital data and technologies in the investigation of war crimes

Today, investigators can collect data on potential human rights abuses and other serious violations of international law, including international crimes, with the help of a large number of publicly available satellite images, videos and photos, including material uploaded to the Internet from smartphones and posts on social media platforms[4]. Public access sources include: a) photos, videos, other publications; b) content created by the user in social networks, such as Facebook, Instagram, Telegram, etc.; c) satellite image data[5]. The main sources of online OSINT (Open Source Intelligence) include: browsers (Firefox, Chrome, Safari, Opera, Edge, Internet Explorer, Brave, etc.); social networks (Facebook, Instagram, TikTok, LinkedIn, Twitter, Telegram, etc.); personal credentials (name, surname, nickname, e-mail address, phone number, etc.); maps (all publicly available map sources); documents (pdf, Docx, etc.); photo/video images; IP addresses; enterprise registers and state registers; transactions with virtual currencies (cryptocurrencies and their blockchains); Internet archives[6].

The use of digital data and technologies in the investigation of war crimes involves the use of The Berkeley Protocol on Digital Open Source Investigations. It is «the practical guide on the effective use of digital open source information in investigating violations of international criminal, human rights and humanitarian law»[7]. Also, this Protocol can be called a recommendation document, which was presented only in 2020 by the Center for Human Rights of the University of Berkeley in California and the Office of the UN High Commissioner for Human Rights.«Today, investigators can capture data about potential human rights violations and other serious breaches of international law, including international crimes, from a vast array of publicly available satellite imagery, videos and photographs, including

[4] Протокол Берклі з ведення розслідування з використанням відкритих цифрових даних. URL: https://www.law.berkeley.edu/wp-content/uploads/2022/03/Berkeley-Protocol-Ukrainian.pdf

[5] Асоціація жінок-юристок України. *Протокол Берклі щодо розслідування із використанням відкритих цифрових даних.* URL: https://jurfem.com.ua/protocol-berkli-schodo-rozsliduvannia-iz-vykorystannyam-zyfrovych-danych/

[6] Галустян О. А. Профайлінг та OSINT: сучасні технології виявлення колаборантів та колабораційної діяльності в умовах воєнного часу. *Актуальні питання використання методів і засобів OSINT у роботі підрозділів захисту національної державності:* зб. матеріалів круглого столу (м. Київ, 31 березня 2023 р.): у 2-х ч. Ч. 1. Київ: НА СБУ, 2023. С. 23-27.

[7] The Berkeley Protocol on Digital Open Source Investigations. URL: https://www.ohchr.org/sites/default/files/2022-04/OHCHR_BerkeleyProtocol.pdf

material uploaded to the Internet from smartphones and posts to social media platforms»[8].

The use of digital information (evidence) is of paramount importance in the context of Russia's full-scale war against Ukraine. There are peculiarities of using digital information in the investigation of war and other international crimes. In particular, according to O. Dufeniuk, the investigation of war crimes in the digital age has specific features, which are due to: 1) the capabilities of smartphone users and other devices with photo and video recording functions to document war crimes, broadcast events online, and disseminate information via the Internet and social networks etc.; 2) possibilities of monitoring, monitoring of various objects; 3) digitization of forensic and forensic expert activities; 4) transformation of the model of criminal proceedings from paper to electronic form[9].

The use of digital data is an important and new direction in the development of criminalistics and forensic sciences. Criminalistic (forensic) knowledge reflects certain trends of the globalized world. In fact, it is possible to state the emergence of a separate forensic direction – «digital forensics». Digital forensics is a new branch of criminalistics (forensic sciences) based on the use of innovative technologies.

Digital Forensics is a separate criminalistic (forensic) theory and a type of forensic examination, which sets as its task the study of digital evidence using criminalistic techniques and available methods for the purposes of pre-trial investigation and judicial proceedings[10]. Digital forensics is related to the process of collecting, obtaining, preserving, analyzing and presenting electronic (digital) evidence in pretrial and judicial proceedings.

The Office of the Prosecutor General, together with Ukrainian and international partners, created a special resource called «Warcrimes» to document war crimes and crimes against humanity committed during the full-scale war in Ukraine. Documented evidence will be used for criminal prosecution of persons involved in crimes in accordance with Ukrainian legislation, as well as in the International Criminal Court and in the special tribunal after its foundation[11]. The website of the Prosecutor General's Office offers an algorithm of actions for victims and witnesses to record war crimes with the possibility to send video and photo materials that confirm the commission of crimes.

An important role in collecting data on the facts of the crime of aggression, genocide, crimes against humanity and war crimes should be performed not only by law enforcement agencies, but also by non-governmental, public organizations. The help of such organizations in documenting (recording) war

[8] The Berkeley Protocol on Digital Open Source Investigations. URL: https://www.ohchr.org/sites/default/files/2022-04/OHCHR_BerkeleyProtocol.pdf

[9] Дуфенюк О. Розслідування воєнних злочинів в Україні: виклики, стандарти, інновації. *Baltic Journal of Legal and Social Sciences.* 2022. № 1. С. 54.

[10] Шепітько В., Шепітько М. Кримінальне право, криміналістика та судові науки: енциклопелія. Харків: Право, 2021. С. 129, 130.

[11] Офіс Генерального прокурора. URL: https://warcrimes.gov.ua

crimes can be essential. This assistance can become critically important not only for starting a pre-trial investigation in Ukraine, but also for providing the necessary testimony (data) for the work of international courts (first of all, the International Criminal Court). An example of such activity is the coalition "Ukraine. 5 AM", which was formed by 16 Ukrainian human rights organizations specifically to record war crimes, crimes against humanity, and other gross violations of human rights. Similar functions for recording war crimes committed in Ukraine abroad (information received from refugees and temporarily displaced persons) were undertaken by the "Sunflowers Project»[12].

The activity of non-governmental organizations provides ample opportunities for additional recording of war crimes and evidence of their commission. In particular, the Sunflowers Project is designed to supplement the activities of national bodies and international tribunals created to prosecute and consider war crimes, crimes against humanity, genocide, aggression and other serious violations of human rights related to Russia's invasion of Ukraine, as well as to support bodies involved in procedures for compensation of damages[13]. By providing an opportunity to submit an application for the commission of a relevant crime to a witness or a victim, the Sunflowers Project makes it possible to submit them without undue psychological influence online and safely save them until the transfer of evidence of such crimes to international and national institutions for the implementation of justice and the restoration of justice.

The question arises about the need to develop certain algorithms, rules, questionnaires for collecting, documenting and recording evidentiary information. It is also possible to talk about the need to develop criminalistic (forensic) methods for the investigation of international crimes, the formation of a system of scientific provisions and recommendations regarding the organization and implementation of investigations and prevention of certain types of crimes (development of typical systems (algorithms) of actions of authorized persons).

2. Use of mapping methods in the investigation of war crimes

Cesare Lombroso in his work «Anarchists» carried out a study of the «geography of political crimes», which made it possible to demonstrate on a map the progressive distribution of revolutions in Europe (1791-1880) with the search for the probable causes of such crimes (races, their hybridization, bad management). In particular, the outstanding C. Lombroso found a regularity that the number of uprisings increases from «north to south along

[12] Шепітько М. В. Про роль неурядових організацій в протидії кримінальним правопорушенням в умовах війни. *Матеріали VIII (XXI) Львівського форуму кримінальної юстиції: Українська кримінальна юстиція в умовах війни* (Львів, 9 червня 2022). Львів: ЛьвДУВС. 2022. С. 259.

[13] Проєкт «Соняшники». URL: https://www.projectsunflowers.org/uk/

with the temperature»[14]. Recently, in the special literature, appeals to the geography of crime and various types of mapping of criminal offenses are recorded. It is interesting that this research method is used not only by the founders of the method – specialists in geography, but also by specialists in criminal law, criminology, criminalistics and forensic sciences.

For example, geographer F. Kiptach draws attention to the fact that «in Ukraine, there have been large territorial contrasts in the activity of socially dangerous acts (crimes) committed by the population. A «belt» of active crime can be distinguished, which runs in a strip from the southwest to the east of Ukraine. An extremely and very high frequency of detected and officially registered socially dangerous criminal acts per 100,000 population, including minors, was calculated in the industrial and most urbanized Zaporizhzhia, Luhansk, Donetsk, and Dnipropetrovsk regions, as well as the Autonomous Republic of Crimea and the city of Sevastopol[15]. V. Hlybovets comes to the conclusion that «the main factors that determine geographic differences in crime are socio-economic phenomena and processes»[16].

Thus, as early as 2011-2018, geographers drew conclusions about the geographical features of manifestations of an increased level of crime and the number of committed criminal offenses in certain regions, associating it with socio-economic processes. It is interesting that with the beginning of the large-scale Russian invasion of Ukraine, these regions became the front line and the target of the Russian invasion. It should be noted that historical and legal studies of criminal offenses in Ukraine also provide an opportunity to find natural/imposed historical connections of national criminal legislation with the criminal (penal) legislation of other states, the influence of international legal acts and historical processes. Historical and legal problems of the development of both individual criminal offenses and entire institutions of the special part of criminal law are typical for dissertation and monographic studies. There are attempts to build a «historical map of crimes, misdemeanors and offenses against justice»[17].

Countering the large-scale Russian aggression against Ukraine posed a difficult task for representatives of law enforcement agencies and non-governmental organizations in recording and documenting war crimes, crimes against humanity, genocide and the crime of aggression. Since February 24, 2022, the Office of the Prosecutor General has registered criminal offenses – 111,352 violations of the laws and customs of war (Article 438 of the Criminal Code of Ukraine); 87 – planning, preparation or initiation and waging of an

[14] Lombroso C. L'uomo delinquente. Torino. Bocca. 1896. Vol.I-II.l. URL: https://web.uniroma1.it/archiviostoriapsicologia/sites/default/files/download/Lombroso, C. (1896). L'uomo delinquente. Torino. Bocca. Vol.I-II.pdf

[15] Кіптач Ф. Географія злочинності в Україні. Вісник Львівського університету. Серія: Географія. 2011. Вип. 39. С. 193.

[16] Глибовець В. Географія кримінальних правопорушень України. Вісник Київського національного університету імені Тараса Шевченка. Серія: Географія. 2018. № 70. С. 97.

[17] Шепітько М. В. Злочини у сфері правосуддя: еволюція поглядів та наукові підходи до формування засобів протидії: монографія. Харків: Право, 2018. С. 100-106.

aggressive war (Article 437 of the Criminal Code of Ukraine); 66 – propaganda of war (Article 436 of the Criminal Code of Ukraine). 681 suspects-representatives of the military and political leadership of the Russian Federation were recorded in the «main case» regarding the aggression of the Russian Federation[18].

The Cambridge Dictionary defines «mapping» as «the activity or process of making a map; the activity or process of creating a picture or diagram that represents something; the activity of describing where particular genes are found on a chromosome (biology); the activity of discovering where in the brain particular tasks are performed (biology)».[19]. S. Nikolic, who represent IPO Headquarters, demonstrates that «The crime analyst will collect and analyze crime statistics, produce reports, investigate long-term problems, and present response strategies, use crime mapping technologies, etc.… Crime mapping is a subdiscipline of geography, which focuses on incident mapping, that is, it allows crime analysts to identify crime hotspots. Mapping the crime tells us not only about the place where the crime took place, but also where the perpetrator, but also the victim, lives, works, and performs other activities. There are three types of criminal analysis that can occur through crime mapping: Tactical Crime Analysis – in the short term, in order to stop the actions that are currently happening; Strategic Crime Analysis – long term, in order to identify areas with a high crime rate, with the aim of reducing it; Analysis of Administrative Crime – considers the deployment of police in places that are important»[20].

Since the start of the war, Bellingcat investigators have created an online map based on the TimeMap Forensic Architecture platform using digital forensics and OSINT methods to document evidence of war crimes "when shells or missiles hit civilian targets, when attacks destroyed civilian infrastructure, when there are wounded civilians or immobile bodies of civilians»[21]. Such a map demonstrates the date, the event of the war crime, its consequences, the source of information, and fixes the place of its commission on the map of Ukraine. An example of such mapping is also the joint project of the Anti-Corruption Headquarters and Slidstvo.Info, which forms the register of Russian military personnel involved in the commission of war crimes in Ukraine, the specifics of the investigation of individual cases, the punishment applied in individual criminal proceedings, the collected information on collaborators, as well as the map itself of established military criminals and assigning them to the military unit with the application of this information with reference to the geographical area where they are located[22].

[18] Сайт Офісу Генерального прокурора. ULR: https://www.gp.gov.ua/

[19] Mapping. Cambridge Dictionary. URL: https://dictionary.cambridge.org/dictionary/english/mapping

[20] Nikolic S. Crime Scene Analysis, and Mapping. Interpolice. URL: https://interpolice.org/amp/crime-scene-analysis-and-mapping

[21] Bellingcat. URL: ukraine.bellingcat.com/?range=2023-11-28&range=2023-11-29

[22] Russian War Criminals. URL: http//: rwc.shtab.net/map

Mapping of criminal offenses makes it possible to record (document) their commission, preserve evidentiary information and the source of such information. Mapping as a visual tool makes it possible to analyze information both about one, rather large-scale criminal offense, and about their totality related to a certain community. Mapping makes it possible to analyze both the state of crime and the actions, consequences, goals and reasons for committing criminal offenses. A valuable tool for such activity is the activity of groups of investigators and human rights defenders, non-governmental organizations, which undertake to record this information with the aim of bringing guilty war criminals to criminal responsibility.

3. The use of artificial intelligence in the war crimes investigation

It is no secret that certain types of weapons used in Ukraine during the Russian large-scale invasion have artificial intelligence systems that allow them to strike civilian and military targets, carry out self-training and make independent decisions on the battlefield[23]. Artificial intelligence and digital technologies speed up the process of management and decision-making. In the military sphere, this makes it possible to save human resources and deliver more accurate strikes to the parties to the conflict. At the same time, this raises the question of legal regulation and liability of artificial intelligence (hereinafter – AI) for the damage caused.

Ukraine is only in initial attempts to regulate the use of AI. Thus, by the decree of the CMU dated December 2, 2020, the Concept of the Development of Artificial Intelligence in Ukraine was approved, which states that AI is an organized set of information technologies, with the use of which it is possible to perform complex complex tasks by using a system of scientific research methods and information processing algorithms. received or independently created during work, as well as create and use own knowledge bases, decision-making models, algorithms for working with information and determine ways to achieve set tasks.

In this Concept of the development of AI in Ukraine in the field of justice, the following tasks should be ensured: 1) further development of already existing technologies in the field of justice (the Unified Judicial Information and Telecommunication System, the Electronic Court, the Unified Register of Pretrial Investigations, etc.); 2) implementation of advisory programs based on AI, which will open access to legal advice to broad segments of the population; 3) prevention of socially dangerous phenomena by analyzing available data with the help of AI; 4) determination of the necessary resocialization measures for convicts by analyzing available data using AI technologies; 5) issuing court decisions in cases of minor complexity (by mutual consent of the parties) based on the results of the analysis carried out

[23] Горбулін В. Штучний інтелект на полі бою російсько-української війни. Ukrimform. 31 бер. 2022. URL: https://www.ukrinform.ua/rubric-ato/3444808-stucnij-intelekt-na-poli-bou-rosijskoukrainskoi-vijni.html

using AI technologies, the state of compliance with legislation and judicial practice.

Even a superficial acquaintance with this Concept makes it clear that Ukraine is neither technologically nor from the point of view of protection of human and citizen rights ready to make judicial and other administrative decisions using AI. Similarly, doubts are raised about the feasibility of providing AI advice and unlimited crime prevention.

The resolution of the European Parliament «AI in criminal law and its use in the police and judicial authorities for criminal matters» indicates the fear of improper use of AI systems. The European Parliament highlights that «many algorithmic identification technologies currently in use disproportionately misidentify and misclassify and therefore harm individuals based on race, people belonging to certain ethnic communities, LGBTI people, children and the elderly, and women… Significant efforts should be made to avoid automated discrimination and bias, and they called for safeguards against the misuse of AI technologies by law enforcement and judicial authorities to also be regulated equally across the Union… Members called for a precautionary approach to all AI applications in law enforcement and emphasized that in judicial and law enforcement agencies, a decision that has legal or similar force must always be made by a person who can be held accountable for the decision... Parliament called for a permanent ban on the use of automated analysis and/or recognition in public places of other human characteristics, such as gait, fingerprints, DNA, voice and other biometric and behavioral signals. It also called for a ban on the use of private facial recognition databases (such as the Clearview AI system)… Members called for a moratorium on the deployment of law enforcement facial recognition systems for identification purposes, unless they are used only to identify crime victims, until technical standards are deemed to which fully respect fundamental rights»[24].

Despite the presence of fundamentally different approaches to regulating the areas of application of AI in Ukraine and the EU, it should be noted that AI has a serious level of use in Ukraine, which allows both the identification of war criminals[25] and victims of war crimes[26]. The use of artificial intelligence in Ukraine accelerates the process of regulating this area, establishing legal limits of its use (including prevention and investigation of crimes) and its responsibility.

Taking into account the European integration processes, Ukraine's movement towards European and international standards, it should be borne

[24] Artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters 2020/2016(INI). European Parliament. URL: https://oeil.secure.europarl.europa.eu/oeil/popups/printficheglobal.pdf?id=710029&l=en

[25] Wittenberg A. Sztuczna inteligencja walczy w Ukrainie. AI pomaga ratować, zabijać i budzi kontrowersje. Nowa Europa Wschodnia. 06.07.2023. URL: https://www.new.org.pl/2976,wielki_brat_czuwa_na_wojnie.html

[26] Клейтон Дж. Як штучний інтелект допомагає ідентифікувати загиблих в Україні. BBC. 14 квітня 2022. URL: https://www.bbc.com/ukrainian/features-61105661

in mind that AI in the EU is becoming limited. The adoption of the AI Act, which will regulate this area, also seems real. It is interesting that in this project it is planned to «ban the use of biometric identification systems in the EU both for real-time use and for ex-post use (except in cases of serious crimes and pre-trial authorization for ex-post use). It also plans to ban all biometric categorization systems using sensitive characteristics (eg, gender, race, ethnicity, citizenship status, religion, political orientation); intelligent police systems (based on profiling, location or past criminal behaviour); emotion recognition systems (used in law enforcement agencies, border guards, workplaces and educational institutions); and AI systems that use indiscriminate collection of biometric data from social networks or CCTV footage to create facial recognition databases»[27].

At the same time, in certain non-urgent cases, AI systems can also be used in these situations, but always under human control. Such a cautious approach to the use of AI in the EU should be an example of responsible implementation of information and digital technologies, which are able not only to help positive social processes, but also to help commit criminal offenses (including war crimes).

The regulation of the use of AI in criminal proceedings and the establishment of criminal liability for the use of AI for criminal purposes also look promising. The European Parliament has already formed a position, which could be reflected in the Criminal Code and the Criminal Code of Ukraine, that «autonomous decision-making should not exempt people from responsibility and that people should bear ultimate responsibility for decision-making processes, so that the person responsible for making a decision»[28]. That is why, in our opinion, this will enable the responsible use of AI in Ukraine, taking into account the future regulation of this area at the level of legislation.

4. The usage of digital data and technologies in forensic and expert provision of justice

During the war, there is a need for forensic expert provision of justice at an efficient and high-quality level. There is a need to conduct specific forensic investigations: identification of the bodies of the dead (DNA examination), examination of objects recovered from demined territories that were subjected to artillery fire and bombardment, resolution of issues related to the calculation of material damage and losses, related associated with large-scale

[27] Artificial Intelligence act. European Parliament. URL: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI(2021)698792_EN.pdf

[28] European Parliament resolution of 20 January 2021 on artificial intelligence: questions of interpretation and application of international law in so far as the EU is affected in the areas of civil and military uses and of state authority outside the scope of criminal justice (2020/2013(INI)). European Parliament. URL: https://www.europarl.europa.eu/doceo/document/TA-9-2021-0009_EN.html

destruction of infrastructure and civilian objects[29]. At this time, forensic expert studies of digital information, conducting computer-technical (examination of computer equipment and software products), telecommunications, video, sound recording and other forensic examinations are important. In particular, the types of forensic computer-technical examination are: software-computer, information-computer, hardware-computer, computer-network examination.

Forensic expert activity is carried out by an expert as a knowledgeable person who endowed with special knowledge. At the investigation stage, a forensic scientist examines the evidence (research materials) and draws a conclusion (forensic report)[30]. According to Art. 69 of the Criminal Procedure Code of Ukraine an expert in criminal proceedings is a person who possesses scientific, technical or other special knowledge, has the right in accordance with the Law of Ukraine «On Forensic Expertise» to conduct an expert opinion and who is entrusted with conducting research on objects, phenomena and processes containing information about the circumstances of the commission of a criminal offense, and give a conclusion on issues that arise during criminal proceedings and relate to the field of her knowledge.

In 2022, the Criminalistics Department of the Yaroslav Muddy National Law University conducted an interview of forensic experts from state specialized institutions and other specialists (experts) from the relevant fields of knowledge in order to determine ways to optimize forensic expert activity. 172 forensic experts took part in the interview[31].

According to the results of the generalization, it was established that in modern conditions, the conduct of forensic examinations is connected with innovative approaches and the use of information technologies. In particular, 53.3% of the interviewed experts use the expert's Automated Workplace (AWP) in their practice.

During the interview of forensic experts, it was also clarified how the interviewees are determined with the research methods during the forensic examination. At the same time, the majority of experts indicated that they use the expert methodology, which is posted in the electronic register – the Register of methods of conducting forensic examinations – indicated by 51.2% of forensic experts.

CONCLUSIONS

The investigation of war crimes is connected with the work of joint (international) investigative teams, the dangers of conducting investigative (search) actions, the need to obtain information from the occupied territories, the presence of disinformation and countermeasures by the aggressor country.

---

[29] Клюєв О. Наука під час війни. *Теорія та практика судової експертизи і криміналістики.* 2022. Вип. 1 (26). С. 6, 7.

[30] Шепітько В., Шепітько М. Кримінальне право, криміналістика та судові науки: енциклопедія. Харків: Право, 2021. С. 155.

[31] Шепітько В. Судова експертиза та судово-експертна діяльність: погляд крізь призму думок експертів. *Теорія та практика судової експертизи і криміналістики.* 2023. Вип. 1(30). С. 12-22.

The pre-trial investigation of war crimes during the Russian-Ukrainian war takes place in the absence of safe conditions for recording and collecting evidentiary information.

The investigation of war crimes and other crimes of an international nature involves the use of certain algorithms and technologies for the implementation of investigative activities, the use of the most modern criminalistic techniques and the latest technologies (including online mapping and artificial intelligence systems), the introduction of standards of proof and the standardization of the investigation of this category of crimes. During the investigation, the latest digital technologies are used, remote forms of pre-trial investigation are offered for use, there are opportunities to conduct procedural actions remotely and via video conferencing.

During the investigation of war crimes, approaches regarding the possibilities of working with digital evidence (digital data or electronic traces) acquire significant importance. Digital forensics is related to the process of collecting, obtaining, preserving, analyzing and presenting electronic (digital) evidence in pretrial and judicial proceedings.

The role of «The Berkeley Protocol on Digital Open Source Investigations» and the acquisition of information from open sources (OSINT) regarding the capture of digital evidence, as well as the provisions of the International Protocol on Documenting and Investigating Sexual Violence in Conflict, are defined.

The research of digital data and technologies involves recourse to special knowledge and conducting forensic examinations (computer and technical (expertise of computer equipment and software products), telecommunications, video, sound recording and other forensic examinations). Types of forensic computer-technical examination are: software-computer, information-computer, hardware-computer, computer-network examinations.

SUMMARY

The article is devoted to the problem of international standards formation of war crimes investigation with usage of digital data and technologies. During the full-scale Russian invasion to Ukraine criminalistics and forensic sciences face new tasks that related with the development of scientific recommendations in documenting, recording and proving the facts of the commission of war and other crimes of an international nature, using the capabilities of digital forensics. Because of this authors paid attention to the procedure of the investigation of war crimes, connected with the work of national law enforcement bodies and joint international investigative teams that helps to find, classify and collect evidence this period.

Authors marked that digital forensics also related with the process of collecting, obtaining, preserving, analyzing and presenting digital evidence in international and national criminal proceedings. «The Berkeley Protocol on Digital Open Source Investigations» and other connected international and national protocols have special role in investigation of war crimes, because of

they could give war crimes investigative standards. The usage of special knowledge is important. Because of this digital data and technologies must be checked by forensic expert (scientists) with the usage of special techniques and methods.

References

1. Керівництво з базових стандартів розслідування для документування міжнародних злочинів в Україні. URL: https://globalrightscompliance.com/wp-content/uploads/2023/05/КЕРІВНИЦТВО-З-БАЗОВИХ-СТАНДАРТІВ-РОЗСЛІДУВАННЯ-ДЛЯ-ДОКУМЕНТУВАННЯ-МІЖНАРОДНИХ-ЗЛОЧИНІВ-В-УКРАЇНІ.pdf
2. Стандарти розслідування воєнних злочинів. Загальна частина. URL: https://justgroup.com.ua/wp-content/uploads/2023/05/standart-rozsliduvannya_zagalna-chastyna.pdf
3. Міжнародного протоколу із документування та розслідування сексуального насильства в умовах конфлікту. URL: https://www.wicc.net.ua/media/int_protokol.pdf
4. Протокол Берклі з ведення розслідування з використанням відкритих цифрових даних. URL: https://www.law.berkeley.edu/wp-content/uploads/2022/03/Berkeley-Protocol-Ukrainian.pdf
5. Асоціація жінок-юристок України. Протокол Берклі щодо розслідування із використанням відкритих цифрових даних. URL: https://jurfem.com.ua/protocol-berkli-schodo-rozsliduvannia-iz-vykorystannyam-zyfrovych-danych/
6. Галустян О. А. Профайлінг та OSINT: сучасні технології виявлення колаборантів та колабораційної діяльності в умовах воєнного часу. Актуальні питання використання методів і засобів OSINT у роботі підрозділів захисту національної державності: зб. матеріалів круглого столу (м. Київ, 31 березня 2023 р.): у 2-х ч. Ч. 1. Київ: НА СБУ, 2023. С. 23-27.
7. The Berkeley Protocol on Digital Open Source Investigations. URL: https://www.ohchr.org/sites/default/files/2022-04/OHCHR_BerkeleyProtocol.pdf
8. Дуфенюк О. Розслідування воєнних злочинів в Україні: виклики, стандарти, інновації. Baltic Journal of Legal and Social Sciences. 2022. № 1. С. 54.
9. Шепітько В., Шепітько М. Кримінальне право, криміналістика та судові науки: енциклопелія. Харків: Право, 2021. С. 129, 130.
10. Офіс Генерального прокурора. URL: https://warcrimes.gov.ua
11. Шепітько М. В. Про роль неурядових організацій в протидії кримінальним правопорушенням в умовах війни. Матеріали VIII (XXI) Львівського форуму кримінальної юстиції: Українська кримінальна юстиція в умовах війни (Львів, 9 червня 2022). Львів: ЛьвДУВС. 2022. С. 259.
12. Проєкт «Соняшники». URL: https://www.projectsunflowers.org/uk/

13. Lombroso C. L'uomo delinquente. Torino. Bocca. 1896. Vol.I-II. 286-292. URL: https://web.uniroma1.it/archiviostoriapsicologia/sites/default/files/download/Lombroso, C. (1896). L'uomo delinquente. Torino. Bocca. Vol.I-II.pdf
14. Кіптач Ф. Географія злочинності в Україні. Вісник Львівського університету. Серія: Географія. 2011. Вип. 39. С. 193.
15. Глибовець В. Географія кримінальних правопорушень України. Вісник Київського національного університету імені Тараса Шевченка. Серія: Географія. 2018. № 70. С. 97.
16. Шепітько М. В. Злочини у сфері правосуддя: еволюція поглядів та наукові підходи до формування засобів протидії: монографія. Харків: Право, 2018. С. 100-106.
17. Сайт Офісу Генерального прокурора. ULR: https://www.gp.gov.ua/
18. Mapping. Cambridge Dictionary. URL: https://dictionary.cambridge.org/dictionary/english/mapping
19. Nikolic S. Crime Scene Analysis, and Mapping. Interpolice. URL: https://interpolice.org/amp/crime-scene-analysis-and-mapping
20. Bellingcat. URL: ukraine.bellingcat.com/?range=2023-11-28&range=2023-11-29
21. Russian War Criminals. URL: http//: rwc.shtab.net/map
22. Горбулін В. Штучний інтелект на полі бою російсько-української війни. Ukrimform. 31 бер. 2022. URL: https://www.ukrinform.ua/rubric-ato/3444808-stucnij-intelekt-na-poli-bou-rosijskoukrainskoi-vijni.html
23. Artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters 2020/2016(INI). European Parliament. URL: https://oeil.secure.europarl.europa.eu/oeil/popups/printficheglobal.pdf?id=710029&l=en
24. Wittenberg A. Sztuczna inteligencja walczy w Ukrainie. AI pomaga ratować, zabijać i budzi kontrowersje. Nowa Europa Wschodnia. 06.07.2023. URL: https://www.new.org.pl/2976,wielki_brat_czuwa_na_wojnie.html
25. Клейтон Дж. Як штучний інтелект допомагає ідентифікувати загиблих в Україні. BBC. 14 квітня 2022. URL: https://www.bbc.com/ukrainian/features-61105661
26. Artificial Intelligence act. European Parliament. URL: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI(2021)698792_EN.pdf
27. European Parliament resolution of 20 January 2021 on artificial intelligence: questions of interpretation and application of international law in so far as the EU is affected in the areas of civil and military uses and of state authority outside the scope of criminal justice (2020/2013(INI)). European Parliament. URL: https://www.europarl.europa.eu/doceo/document/TA-9-2021-0009_EN.html
28. Клюєв О. Наука під час війни. Теорія та практика судової експертизи і криміналістики. 2022. Вип. 1 (26). С. 6, 7.
29. Шепітько В., Шепітько М. Кримінальне право, криміналістика та судові науки: енциклопедія. Харків: Право, 2021. С. 155.

30. Шепітько В. Судова експертиза та судово-експертна діяльність: погляд крізь призму думок експертів. Теорія та практика судової експертизи і криміналістики. 2023. Вип. 1(30). С. 12-22.

Information about the authors:
Shepitko Valeriy Yuriiovych,
Doctor of Law, Professor,
Professor of Criminalistics Department,
Yaroslav Mudriy National Law University;
Head of the Laboratory,
Academician Stashis Scientific Research
Institute for the Study of Crime Problems
49, Pushkinska str., Kharkiv, 61002, Ukraine
https://orcid.org/0000-0002-0719-2151

Shepitko Mykhaylo Valeriiovych,
Doctor of Law, Professor,
Professor of Criminal Law Department,
Yaroslav Mudriy National Law University;
Leading Researcher,
Academician Stashis Scientific Research
Institute for the Study of Crime Problems
49, Pushkinska str., Kharkiv, 61002, Ukraine
https://orcid.org/0000-0002-7164-8037