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International legal standards for documentation and investigation of war crimes

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Abstract

The relevance of the study is determined by the need to eliminate multimodality of information flows in documenting war crimes. Existing digital solutions are fragmented, which complicates the integration of evidence into international judicial mechanisms. The proposed digital platform will ensure standardization, verification, and reliability of the evidence base. The aim of the study is to assess international standards for documenting and investigating war crimes, identify their shortcomings, and develop the concept of a digital platform for the

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unification and legal legitimization of the evidence base. The study employed the following methods: structural analysis, topological detailing, perfection analysis, structural optimization, comparative analysis, parametric analysis, conceptual modelling. The study confirms the need for a unified international platform for documenting war crimes. The current system contains 17 structural elements in three areas: regulatory framework, documentation and investigation, but is characterized by fragmentation, political constraints and the lack of common standards. An analysis of 25 digital platforms showed that 32% focus on evidence preservation, 28% on Open source intelligence (OSINT) analysis, 20% on archiving, and 20% on legal support and international coordination. The proposed platform integrates blockchain, automated verification and multi-factor analysis, which can increase the accuracy of documentation by 50%, reduce the time for checking evidence by 60%, as well as significantly strengthen international cooperation. The academic novelty of the study is the created model of an international digital platform that unites the evidence base, automates verification, and promotes international coordination of investigations. Further research should focus on launching a pilot project of the platform to test its features, effectiveness, and compliance with international standards. Important areas include integration with national and international justice bodies and the development of mechanisms for legal regulation of its operation.

Keywords: digital platform, digital documentation, multimodality, verification, blockchain, OSINT analysis, international justice.

Normas jurídicas internacionales para la documentación e investigación de crímenes de Guerra

Resumen

La pertinencia del estudio viene determinada por la necesidad de eliminar la multimodalidad de los flujos de información en la documentación de crímenes de guerra. Las soluciones digitales existentes están fragmentadas, lo que complica la integración de las pruebas en los mecanismos judiciales internacionales. La plataforma digital propuesta garantizará la normalización, verificación y fiabilidad



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de la base de pruebas. El objetivo del estudio es evaluar las normas internacionales para documentar e investigar los crímenes de guerra, identificar sus deficiencias y desarrollar el concepto de una plataforma digital para la unificación y legitimación legal de la base de pruebas. El estudio empleó los siguientes métodos: análisis estructural, detalle topológico, análisis de perfección, optimización estructural, análisis comparativo, análisis paramétrico, modelado conceptual. El estudio confirma la necesidad de una plataforma internacional unificada para documentar los crímenes de guerra. El sistema actual contiene 17 elementos estructurales en tres esferas: marco reglamentario, documentación e investigación, pero se caracteriza por la fragmentación, las limitaciones políticas y la falta de normas comunes. Un análisis de 25 plataformas digitales mostró que el 32% se centra en la preservación de pruebas, el 28% en el análisis de inteligencia de código abierto (OSINT), el 20% en el archivado y el 20% en el apoyo jurídico y la coordinación internacional. La plataforma propuesta integra blockchain, verificación automatizada y análisis multifactorial, lo que puede aumentar la precisión de la documentación en un 50%, reducir el tiempo para verificar las pruebas en un 60%, así como fortalecer significativamente la cooperación internacional. La novedad académica del estudio es el modelo creado de una plataforma digital internacional que une la base de pruebas, automatiza la verificación y promueve la coordinación internacional de las investigaciones. La investigación futura debería centrarse en el lanzamiento de un proyecto piloto de la plataforma para probar sus características, eficacia y conformidad con las normas internacionales. Entre las esferas importantes figuran la integración con los órganos judiciales nacionales e internacionales y el desarrollo de mecanismos para la reglamentación jurídica de su funcionamiento.

Palabras clave: plataforma digital, documentación digital, multimodalidad, verificación, blockchain, análisis OSINT, justicia internacional.n solo bloque, espacio sencillo.

Introduction

Documenting and investigating war crimes are key steps in ensuring international justice and combating impunity. Despite the existence of international legal standards, in particular the Rome Statute of the International



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Criminal Court and the Geneva Conventions, the effectiveness of these mechanisms remains limited by political, technological, and institutional challenges (Kljaić, 2024; Bienert & Grandke, 2024, p. 37).

The main challenges include political obstacles, technological manipulation, and fragmented evidence collection methods. The use of veto power in the UN Security Council, the refusal of individual states to cooperate with the International Criminal Court, and the lack of a universal information exchange system significantly complicate law enforcement (D'Alessandra, 2024, p. 311; Malinauskaite, 2024, p. 75).

Technological aspects, in particular the multimodality of information flows, the complexity of verifying digital evidence and the risks of disinformation, further complicate the work of investigative bodies. The lack of agreed recording data mechanisms and a standardized approach to assessing the evidence base also reduce the efficiency of justice (Roman, 2024, p. 395; Grzebyk & Uczkiewicz, 2024, p. 48; Al-Billeh, Al-Hammouri, Khashashneh, AL Makhmari & Al Kalbani, 2024, p. 842).

The lack of a unified documentation system, the fragmentation of evidence collection methods and the difficulties of their verification reduce the effectiveness of investigations (Kuczyńska, 2024, p. 129; Peake, 2024, p. 57), which significantly justifies the appropriateness of this study.

The aim of the study is to analyse the current international system of standards for documenting and investigating war crimes, identify its shortcomings, and develop the concept of a single international digital platform



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that will ensure the uniformity, reliability, and legal legitimacy of the evidence base.

The aim was achieved through the fulfilment of the following research objectives:

- Analyse the structure of the international system of documentation and investigation of war crimes to assess its effectiveness;
- Detail the legal aspects and procedural issues of this system, forming a typical scheme of its functioning;
- Assess the effectiveness of structural elements, identify the main problems, in particular the impact of multimodality of information flows;
- Develop optimization solutions to increase the efficiency of documentation and verification of evidence;
- Carry out a comparative analysis of digital platforms to identify best practices;
- Conduct a parametric analysis of effective solutions to determine key technical and legal aspects;
- Form the concept of an international digital platform, integrating structural, use case, verification classification, and logical modelling.

1. Literature review

The relevant academic publications in the current chronometric horizon of scientometric research are reviewed below in order to form the conceptual framework of the study.



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Florczak, Jach & Rosłon-Żmuda (2024, p. 83) analyse the war crimes of the Russian Federation in Ukraine, in particular genocide and crimes against humanity, and also distinguish the crime of aggression. The authors study the mechanisms of documentation, the status of international investigations and the prospects for the creation of a tribunal.

Grzebyk & Uczkiewicz (2024, p. 25) studied the issue from the same perspective, analysing international crimes in the war of the Russian Federation (RF) against Ukraine, the challenges to their documentation and prosecution. The authors also consider the role of international justice, regional approaches and prospects for transitional justice with a focus on the victims of the described crimes.

Similar issues were covered by Nwala (2024, p. 79), who assesses international legal mechanisms for documenting and investigating war crimes in the context of cross-border aggression using the example of the Palestinian-Israeli conflict. The author analyses the limited effectiveness of these mechanisms because of political complexities, historical contradictions and problems of their implementation.

In contrast, Poole et al. (2025, p. 2) proved that 77% of medical facilities in Mariupol were damaged during the Russian siege, indicating their possible targeted destruction. The authors emphasize the inadequacy of current documentation methods and the importance of satellite analytics for investigating war crimes.

In turn, Rae (2025, p. 191) emphasizes the role of the media in documenting war crimes and investigating cases that do not reach trial. The author shows how



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investigative journalism can complement international justice mechanisms by drawing attention to war crimes and human rights violations.

Another aspect of the issue under research is shown by Veriandy, Rangkuti & Rosmalinda (2025, p. 16), who argue that Russia's provision of political asylum to individuals accused of war crimes undermines international justice mechanisms. The authors emphasize the need to strengthen legal instruments to prevent abuse of the right to asylum and ensure accountability of perpetrators.

Hultman, Liyanage & Wieselgren (2025) also identified a problematic aspect of the research, proving that the initiation of investigations by the International Criminal Court depends not only on the gravity of war crimes, but also on the political interests of member states. The authors emphasize the impact of state referrals on the documentation and investigation process, which can lead to selective justice.

Mokhiber (2025, p. 122) reiterates the systemic violations of international humanitarian law in conflicts, including the targeted destruction of civilian infrastructure and the use of starvation as a weapon. The author emphasizes the importance of documenting these crimes for international investigations and accountability.

In doing so, Kersten (2025, p. 15) analyses the evolution of the International Criminal Court, including its recent decisions regarding the leaders of Russia and Israel. The author examines the challenges facing the International Criminal Court (ICC) and its role in the current system of international justice.

This view is shared by Subandi (2025, p. 379), who shows how the ICC plays a key role in documenting war crimes in the Palestinian-Israeli conflict,



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despite political resistance from individual states. The author emphasizes the need for innovative strategies for effective international justice.

A review of international legal standards for documenting and investigating war crimes reveals significant challenges in ensuring effective justice. The main problems are the inadequacy of mechanisms for recording crimes, the influence of political factors on investigations, the selectivity of international justice, and the limited effectiveness of judicial institutions. Alternative sources of evidence, such as satellite technologies and investigative journalism, play a significant role in the documentation process, complementing official legal mechanisms.

A separate threat is the political protection of individuals accused of war crimes, which undermines global justice mechanisms and creates precedents of impunity. At the same time, current conflicts demonstrate the need for new approaches to law enforcement, including innovative investigative strategies and international cooperation. To increase the effectiveness enhanced documentation and investigation, it is necessary to improve legal instruments, ensure the independence of international judicial bodies, and expand mechanisms for accountability for war crimes.

The identified range of issues of international legal standards for documenting and investigating war crimes, the need for detailed research and development of this vector with the provision of innovative proposals for achieving justice and efficiency in international law enforcement mechanisms make our study relevant.



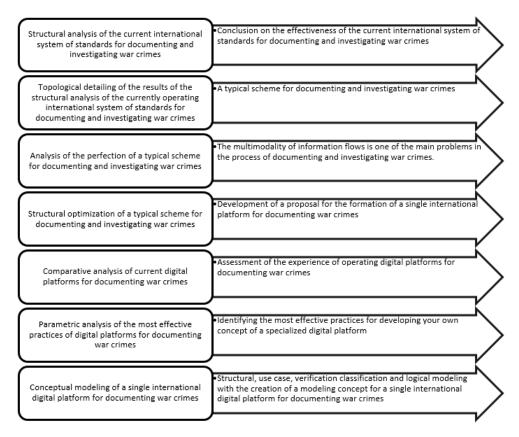
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2. Methods and materials

2.1. Research design

This study was conducted according to the following scheme (Figure 1).

Figure 1: Research design



Source: created by the authors

2.2. Methods

The study employed the following methods:



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- 1. Structural analysis: the structural elements and the general structure of the currently operating international system of standards for documenting and investigating war crimes were identified for a preliminary analysis of the effectiveness of law enforcement.
- 2. Topological detailing: a detailed analysis of the legal aspects and procedural issues of the currently operating international system of standards for documenting and investigating war crimes for the purpose of the creation of an appropriate standard scheme.
- 3. Perfection analysis: a substantive analysis of the perfection and effectiveness of each structural element of the standard scheme for documenting and investigating war crimes for the identification of one of the main problems of the documentation process — the multimodality of information flows.
- 4. Structural optimization: development of optimization solutions for the structural elements of the standard scheme for documenting and investigating war crimes, which allowed for the formation of the main rationalization solution – the creation of a single international platform for documenting war crimes.
- 5. Comparative analysis: comparative analysis of current digital platforms for documenting war crimes in order to identify effective practices, which will later become the basis for developing an optimization solution for this study.
- 6. Parametric analysis: detailed analysis of the most effective practices of digital platforms for documenting war crimes for creating a further concept of a specialized digital platform.



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7. Conceptual modelling: structural, use case, verification and classification, as well as logical modelling for creating the concept of an international platform for documenting war crimes.

2.3. Sample

Sample 1 consists of 17 structural elements divided into three main areas: the legal framework (international treaties, conventions, UN resolutions, special investigative commissions), documentation of war crimes (evidence standards, evidence collection methods, witness protection) and investigation of war crimes (jurisdiction of international and national courts, procedure for creating an evidence base, interaction of investigative bodies).

Sample 2 consists of 25 digital platforms that document war crimes, ensure their verification and integration into legal processes. They cover evidence preservation (eyeWitness to Atrocities, WITNESS), OSINT analysis (Bellingcat, Mnemonic), archiving of crimes (Genocide Archive of Rwanda, HURIDOCS), legal support (OSJI, ICTJ), and international coordination (United Nations International, Impartial and Independent Mechanism (IIIM), Open Source Investigations for ICC).

2.4. Instruments

Visual Paradigm Online (Visual Paradigm Online 2025) is a tool for structural, use case, verification and classification, as well as logical modelling, which was used to develop the concept of a single international digital platform for documenting war crimes. Thanks to the capabilities of Unified Modeling Language (UML) diagrams, Entity-Relationship (ER) modelling and Business Process Model and Notation (BPMN), the platform provided visualization of the



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architecture, evidence verification processes and integration mechanisms into international judicial mechanisms.

3. Results

The presented research scheme was used to conduct a structural analysis of the currently operating international system of standards for documenting and investigating war crimes using open sources of information (Table 1).

Table 1. Results of the structural analysis of the currently operating international system of standards for documenting and investigating war crimes

Structural section	Structural subdivision	Structural elements
		Rome Statute of the ICC
		Geneva Conventions and Additional
	International treaties	Protocols
	and conventions	Hague Conventions
Legal	and conventions	Convention on the Non-Applicability of
Framework		Statutory Limitations to War Crimes
1 funic work		and Crimes Against Humanity
	Resolutions and	UN (Security Council, General
	recommendations of	Assembly)
	international	OSCE, Council of Europe
	organizations	Special Commissions of Inquiry
		Objectivity and Independence
	Basic principles of	Standards of Evidence (Berlin and
	documentation	Minnesota Protocols)
		Confidentiality and Witness Protection
		Classical: Interviews with Victims and
Documentation		Witnesses, Expert Tests, Photographic
of War Crimes		Evidence
	Methods of collecting	Technological: Satellite Monitoring,
	evidence	OSINT, Digital Forensics
		Medical Documentation: Forensic
		Medical Examination



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Structural section	Structural subdivision	Structural elements	
		International Criminal Court	
		Special Tribunals (Nuremberg,	
	Jurisdiction and competence of bodies	Tribunals for Yugoslavia and Rwanda,	
		Possible Tribunal for the RF)	
I		National Courts and Universal	
Investigation of War Crimes		Jurisdiction	
war Crimes	Investigation procedures	Establishing the Evidence Base	
		Cooperation of International and	
		National investigative bodies	
		Protection of the rights of victims and	
		witnesses	

Source: created by the authors

The international system for documenting and investigating war crimes (Table 1) has a well-developed legal framework, but its effectiveness is limited by political influence, technological challenges, and institutional weaknesses. The use of veto power in the UN Security Council blocks the establishment of tribunals, and the refusal of individual states to cooperate with the ICC complicates the implementation of justice. Technological challenges include the manipulation of digital evidence and the lack of unified standards for its verification. The lack of autonomous investigative mechanisms and weak international coordination reduce the effectiveness of investigations. It is appropriate to consider the introduction of new international investigative bodies, strengthening cooperation between states, and improving evidentiary standards. Reforming the ICC and increasing the binding nature of its decisions are key steps to ensure fair trials in the field of war crimes.

Topological detailing of the results of the structural analysis of the currently operating international system of standards for documenting and investigating war crimes (Table 1) is used to determine the legal aspects and procedural issues of



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applying the subject of research, while simultaneously applying an analysis of the perfection of each element (Table 2).

Table 2. Typical scheme for documenting and investigating war crimes

Structural section	Structural subdivision	Structural elements	Structural element perfection
		Victim and eyewitness testimonies	Possibility of distortion or subjectivity of testimonies
		Intelligence and surveillance data	Limited access to confidential information
	Sources of information	Investigative journalistic materials	Potential bias or unreliability of materials
War Crimes		OSINT (open sources, social networks, satellite images)	Need to verify a large amount of data
Detection		Monitoring of international organizations (UN, OSCE, Red Cross)	Dependence on political decisions and limited access to information
	Preliminary analysis	Identifying signs of a war crime in accordance with international law	Complexity of legal qualification in case of hybrid conflicts
		Identifying key figures (victims, suspects, possible witnesses)	Complexity of data collection in active conflict zones
		Identifying potential jurisdiction (national, international)	Collision of national and international legal norms
War Crimes Documentation	Evidence collection methods	Fieldwork: photo and video recording, forensic examinations, collection of artefacts	Risk of loss or destruction of evidence at the scene
		Medical documentation: forensic medical reports,	Limited access to medical data due to ethical standards



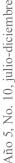
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Structural section	Structural subdivision	Structural elements	Structural element perfection
		hospital records, post- mortem reports	
		Electronic evidence: interception of communications, satellite monitoring, analysis of social networks	Risk of forgery or manipulation of digital evidence
		Evidence: interviews, witness statements, court records	Possibility of psychological pressure on witnesses
		Standards compliance (Berlin Protocol, Minnesota Protocol)	Partial or selective application of standards in different countries
	Ensuring the authenticity of evidence	Verification and analysis of the reliability of information	Difficulty in verifying the authenticity of data in different sources
		Ensuring the protection and confidentiality of witnesses	Insufficient mechanisms for witness protection in conflict zones
Wan anima as	Jurisdiction	International judicial bodies: ICC Special tribunals (Nuremberg, Yugoslavia, Rwanda, potential tribunal for the RF)	Political influence on court decisions and lengthy processes Difficulty in creating because of the need for international consensus
War crimes investigation	and case review	National courts: Exercise of universal jurisdiction Interaction with international bodies	Different standards of justice in national systems. Weak coordination between national and international bodies



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Structural section	Structural subdivision	Structural elements	Structural element perfection
		Opening of the case and preliminary proceedings	Bureaucratic obstacles in opening cases
		Collection of additional evidence, interrogation of witnesses, analysis of the collected information	Lack of resources and delays in collecting evidence
	Investigation procedure	Identification of responsible persons	Potential difficulties in identifying those responsible
		Legal assessment and determination of the elements of the crime	Legal ambiguity in defining the elements of a crime
		Transfer of the case to the court	Lack of clear mechanisms for transferring cases to court
	Case review Give judgment	Presentation of evidence and testimony	The need for long- term examinations and legal assessments
		Analysis of the legal qualification of the crime	Differences in legal qualification between courts
Trial and		Protection of the rights of the accused and victims	The possibility of political factors influencing court decisions
Sentencing		Court verdict (acquittal or guilty plea)	Length of court proceedings and difficulty in enforcing decisions
		Sentencing	Difference in sentencing in international and national systems
		Possible appeals and case reviews	Possibility of delay in appeals
Enforcing Court	Enforcement	Imprisonment or other sanctions	Problems with extradition of the accused





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Structural section	Structural subdivision	Structural elements	Structural element perfection
Decisions and Preventing New Crimes		Reparations to victims	Lack of effective mechanisms for financing reparations
New Crimes	Follow-up monitoring	Monitoring the implementation of international justice Documenting new crimes	Low level of implementation of international decisions by individual states Lack of a single international database for documenting war
		Advocating for changes in international law	Political pressure on the processes of reforming international law

Source: created by the authors

Despite the developed regulatory framework, the effectiveness of the international system for documenting and investigating war crimes (Table 2) remains limited. The main problem is the formation of the evidence base, as the relevant information flows are multimodal and come from disparate sources: testimonies of victims, intelligence data, materials of journalistic investigations, analysis of social networks (OSINT), satellite images, and reports of international organizations, which often do not have agreed recording and evaluating mechanisms. Besides, digital technologies, including artificial intelligence (AI), significantly increase the risks of falsification of photo and video materials, which requires the development of improved methods of their examination. This complicates their integration into legal processes and increases the risk of political manipulation.



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Multimodality complicates the verification of evidence that requires verification of authenticity, compliance with international standards (Berlin and Minnesota Protocols) and protection from manipulation. The lack of unified mechanisms for integrating data into legal processes reduces their evidentiary value, and technological risks, in particular the possibility of falsification of digital materials, require improvement of examination methods.

Multimodality of information flows during the documentation of war crimes creates serious challenges regarding consistency, verification and effective use of the evidence base. To eliminate these problems, it is necessary to implement system solutions that will provide a unified approach to data collection, analysis, and integration (we apply the structural optimization method), (Table 3).

Table 3. Results of structural optimization of a typical scheme for documenting and investigating war crimes (Table 2) to eliminate the problem of multimodality of information flows when forming the evidence base

Structural	Structural sub-	Expected results of structural
section	section	optimization
Standardization	A single international evidence collection protocol	Development of clear methodological recommendations on the structure, format and verification of different types of data (testimony, digital evidence, OSINT, medical documentation, etc.)
of the documentation process	Harmonization of international standards	Adaptation and harmonization of the Berlin and Minnesota protocols with the latest technological capabilities (blockchain, forensic digital expertise)
	Mandatory designation of sources	Implementation of a system for classifying evidence by level of reliability and source of origin
A single integrated evidence	International data collection platform	Creation of a centralized evidence base with the ability to exchange information between national and international authorities



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Structural section	Structural sub- section	Expected results of structural optimization
management system Automated data processing algorithms		Implementation of AI for classifying and verifying the authenticity of data (photos, videos, text reports, geolocation)
	Use of blockchain technologies	Ensuring the immutability and traceability of entered data, which minimizes the risks of manipulation
	Multi-factor verification of digital evidence	Algorithms for analysing metadata, geolocation, digital signatures, and the history of editing materials
Verification of multimodal	Automated verification of OSINT data	Using machine learning (ML) to identify manipulation or disinformation
evidence	Correlation of different types of evidence	Comparative analysis of eyewitness accounts with satellite imagery, intercepted communications, and investigative journalistic materials
	Unified mechanisms for sharing evidence	Implementation of generally accepted protocols for the transfer of evidence between states and international organizations
Increasing the level of international cooperation	Strengthening coordination between the ICC, the UN, and national investigative bodies	Creation of joint investigative teams with access to integrated databases
	Regular independent audit of documentation processes	Implementation of monitoring mechanisms for assessing the effectiveness of the evidence collection system

Source: created by the authors

According to the results (Table 3), we establish that optimizing the process of documenting war crimes requires standardization of evidence collection, improvement of verification methods and effective integration of multimodal information flows. The introduction of artificial intelligence, blockchain technologies and automated algorithms will increase the reliability and validity of



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the evidence base. A key element of this optimization is the creation of a single international platform for documenting war crimes, which will ensure centralized storage, verification and exchange of evidence between national and international justice bodies.

Based on the assumption formed regarding the key element of optimizing the processes of investigation and documentation of war crimes, namely the formation of a single international platform, we will examine the experience of already existing digital solutions and perform a corresponding comparative analysis in order to identify best practices (Table 4).

Table 4. Comparative analysis of current digital platforms for documenting war crimes

Platform	Description	Effective solutions	Limitations	References
eyeWitness to Atrocities	Secure documentation of photo and video evidence, authentication	Secure evidence storage, digital signatures, accepts photo and video evidence from the scene	Limited use outside legal structures	[eyeWitness] (eyewitness.global)
Mnemonic (Syrian Archive)	Digital archive of war crimes in Syria, Yemen, Sudan, analysis through AI	Large archive of evidence from various conflicts, use of AI for verification	Focus on particular conflicts (Syria, Yemen, Sudan)	[Mnemonic] (mnemonic.org)
Bellingcat	Investigation of war crimes using OSINT and satellite imagery	Deep analysis through OSINT, satellite imagery, possibility of independent investigation	Reliance on open sources, lack of official support	[Bellingcat] (bellingcat.com)
Human Rights Watch Digital Investigations Lab	Digital analysis of evidence, cooperation with international courts	Access to satellite imagery, digital evidence analysis, cooperation with international courts	Reliance on satellite imagery, limited legal weight	[HRW Digital Investigations] (hrw.org)
United Nations IIIM	UN Mechanism for Collecting Evidence of War Crimes	UN support, centralized data collection for court cases	Political influence, lengthy bureaucratic processes	[IIIM] (iiim.un.org)
Open Source Investigations for ICC	Use of open sources in ICC investigations	Official ICC support, integration with international justice	Used in ICC investigations only	[ICC OSINT] (icc-cpi.int)



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Platform	Description	Effective solutions	Limitations	References
Whistleblower Aid	Protected Reporting of War Crimes, Anonymous Whistleblowers	Secure channels for whistleblowers, support for anonymity	Limited impact on international litigation	[Whistleblower Aid] (whistlebloweraid.org)
HURIDOCS	Tools for documentation and long-term storage of evidence	Effective evidence archiving, long-term data storage	Less focus on verification, more directed at human rights organizations	[HURIDOCS] (huridocs.org)
Russian WarCriminals (Shtab.net)	Database of the RF's war criminals	Focus on the RF's war criminals, open database	Focus on Russian crimes, possible political influence only	[RussianWarCriminals] (shtab.net)
WarCrimes (warcrimes.gov.ua)	Official portal of war crimes of Ukraine, support of the Prosecutor's Office	Official Ukrainian resource, support of the Prosecutor's Office	Limited coverage of global conflicts	[WarCrimes] (warcrimes.gov.ua)
WITNESS	Digital analysis of video and photo evidence, witness protection	Secure documentation of testimonies, digital analysis of video evidence	Reliance on citizen journalism, limited official support	[WITNESS] (witness.org)
Amnesty International Crisis Evidence Lab	International crimes investigation, digital forensic support	Specialization in digital forensics, cooperation with international courts	Long verification of evidence, difficulty in authenticating	[Amnesty Crisis Evidence Lab] (amnesty.org)
Genocide Archive of Rwanda	Documenting the Rwandan Genocide	Documentation of genocide, archiving of evidence	Focus on a specific case, lack of scalability	[Genocide Archive] (genocide archiverwanda.org.rw)
Forensic Architecture	Investigating war crimes through architectural evidence analysis	Investigation of war crimes through analysis of architectural evidence	Requires specialized experts to analyse evidence	[Forensic Architecture] (forensic- architecture.org)
Justice Rapid Response	Rapid response to war crimes, independent investigations	International forensics, rapid response to war crimes	Dependence on funding and support from international organizations	[Justice Rapid Response] (justice rapidresponse.org/)
UC Berkeley Human Rights Center	Investigating human rights violations through digital OSINT	Human rights research through digital analysis and OSINT	Focus on research rather than operational documentation	[UC Berkeley HRC] (humanrights. berkeley.edu)
International Bar Association Human Rights Institute	Legal support for international investigations	Legal protection of war crimes victims, cooperation with the ICC	Legal support limited to certain categories of victims	[IBA Human Rights Institute] (ibanet.org)
TRIAL International	Documenting war crimes through geospatial analysis	Victim protection, legal support for war crimes victims	Limited availability to the general public	[TRIAL International] (trialinternational.org)
International Criminal Court OSINT Unit	Financial investigations of war crimes	Using OSINT within the ICC to	Applies only within the framework of ICC	[ICC OSINT] (icc-cpi.int)



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Platform	Description	Effective solutions	Limitations	References
		analyse digital evidence	judicial investigations	
Global Legal Action Network (GLAN)	Monitoring human rights violations in conflict zones	Legal initiatives aimed at war crimes lawsuits	Long-lasting legal processes, difficulty in enforcing decisions	[GLAN] (glanlaw.org)
International Center for Transitional Justice (ICTJ)	Documenting war crimes and supporting transitional justice	Supporting transitional justice and documenting crimes	Focus mainly on the legal side, not on collecting evidence	[ICTJ] (ictj.org)
CIVICUS Monitor	Monitoring civil liberties and human rights abuses in conflict zones	Global monitoring of human rights abuses, war crimes	Limited involvement in judicial investigations	[CIVICUS] (monitor.civicus.org)
The Sentry	Investigating financial crimes and corruption related to military conflicts	Financial investigations into war criminals' connections	Focus on financial crimes, not war crimes	[The Sentry] (thesentry.org)
Open Society Justice Initiative	Legal support for investigations of war crimes and human rights violations.	Legal support for international investigations	Legal direction without direct investigative mechanisms	[OSJI] (opensociety foundations.org)
GRC Investigations	Investigators investigating international crimes and war crimes.	Investigators investigating international crimes	Limited involvement in formal trials	[GRC Investigations] (globalrights compliance.com)

Source: created by the authors

The results of the comparative analysis (Table 4) show that the considered digital platforms for documenting war crimes are discrete in relation to the global political scene (focused on individual conflicts or investigating individual aspects of war criminal activity) and cannot be used to create a single international platform, however, appropriate solutions and practices should be considered and implemented in the project resource.

Based on the comparative analysis (Table 4) of digital platforms for documenting war crimes, it is possible to identify the most effective practices (according to the results of parametric analysis) that increase the efficiency of collecting, preserving, and using the evidence base (Table 5).



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Table 5. Results of parametric analysis of the most effective practices of digital platforms for documenting war crimes

The appropriate aspect of a digital platform for documenting war crimes	Practical implementation	Benefits of using	Digital platforms that have implemented an effective solution
The use of secure digital documentation mechanisms	Capture and preserve photo and video evidence with digital signatures and metadata confirming authenticity	Allows the use of digital evidence in legal proceedings without the risk of forgery or manipulation	eyeWitness to Atrocities, WITNESS
Automated evidence verification algorithms	Using AI and ML to analyse video, photos, and other digital evidence	Increases the speed and efficiency of verification of the authenticity of materials, reducing the risk of disinformation	Mnemonic (Syrian Archive), Amnesty International Crisis Evidence Lab
The use of OSINT and satellite monitoring	Geospatial analysis of satellite data, analysis of open sources (social media, videos, photos, witness statements)	Provides independent confirmation of crimes, which is especially important for conflict zones where there is no physical access to the scene	Bellingcat, Human Rights Watch Digital Investigations Lab, Forensic Architecture
Centralized databases and long-term preservation of evidence	Archiving and systematization of collected evidence in a single database with the possibility of further use in judicial investigations	Accumulates historical data, preserves evidence even after the conflict ends	HURIDOCS, RussianWarCriminals, WarCrimes (warcrimes.gov.ua)
Legal support for war crimes investigations	Analysis of collected evidence from a legal perspective, providing legal support to cases	Guarantees that the collected evidence will meet international standards and have legal weight	Open Society Justice Initiative, ICTJ, International Bar Association Human Rights Institute

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The appropriate aspect of a digital platform for documenting war crimes	Practical implementation	Benefits of using	Digital platforms that have implemented an effective solution
Whistleblower protection and source anonymity	Providing secure channels for reporting crimes, ensuring witness anonymity	Reduces the risk of reprisals against those reporting war crimes	Whistleblower Aid, CIVICUS Monitor
International coordination and integration with judicial mechanisms	Coordination between national investigative bodies, the International Criminal Court (ICC) and the UN	Ensures an effective mechanism for trying cases and transferring them to judicial authorities	United Nations IIIM, Open Source Investigations for ICC

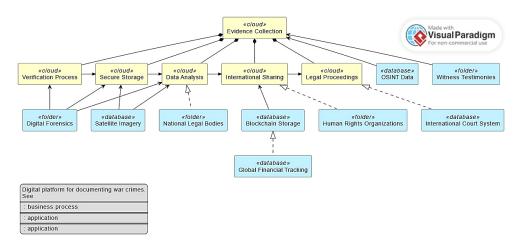
Source: created by the authors

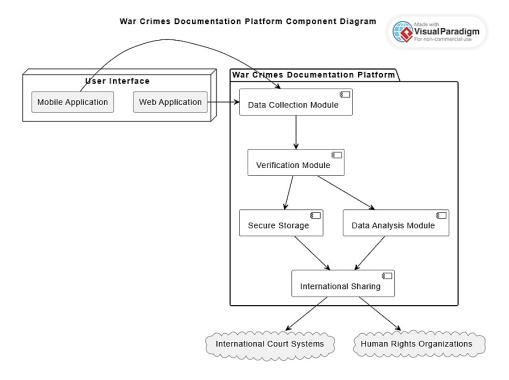
The analysis of existing platforms identifies best practices that should be taken into account when creating a single international digital platform for documenting war crimes. The model platform should combine secure data storage, automated verification of evidence, OSINT methods, a centralized database and international coordination to ensure maximum efficiency. The above research gives grounds to create an appropriate conceptual model of a single international digital platform for documenting war crimes (Figure 2, Figure 5, Table 6).



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Figure 2: Structural model of a single international digital platform for documenting war crimes





Source: created by the authors in a digital software environment Visual Paradigm Online (Visual Paradigm Online 2025)

Witness



Legal Authority

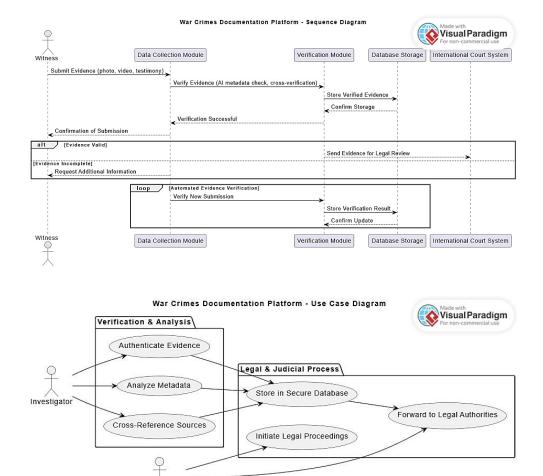
Submit Testimony

Upload Digital Evidence

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Figure 3: Use Case model of a single international digital platform for documenting war crimes

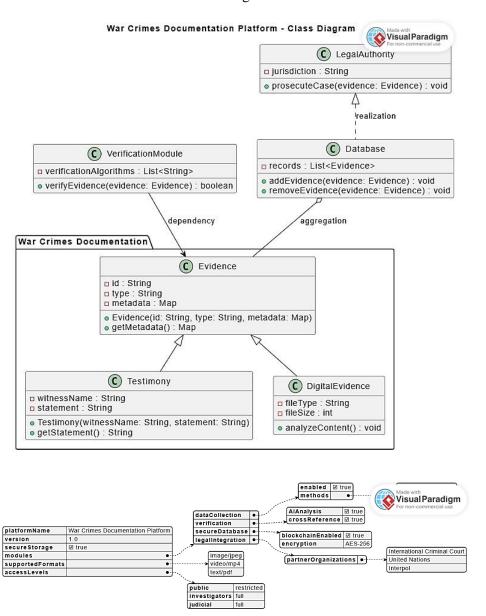


Source: created by the authors in a digital software environment Visual Paradigm Online (Visual Paradigm Online 2025)



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Figure 4: Verification and classification model of a single international digital platform for documenting war crimes

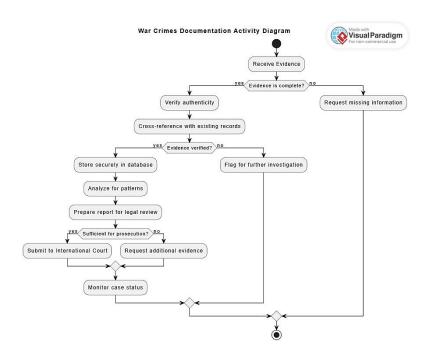


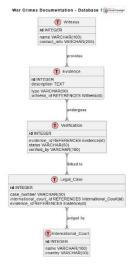
Source: created by the authors in a digital software environment Visual Paradigm Online (Visual Paradigm Online, 2025)



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Figure 5: Logical model of a single international digital platform for documenting war crimes





Source: created by the authors in a digital software environment Visual Paradigm Online (Visual Paradigm Online, 2025)



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Table 6. Description of logical modules of the conceptual model of a single international digital platform for documenting war crimes

Module	Features	Expected results
Data collection module	OSINT collection, testimony collection, database integration	Ensuring reliable data collection from various sources
Verification module	Automatic authentication, cross-checking of data, use of AI for verification	Guarantee the reliability of the evidence base
Data storage and protection module	Blockchain storage, encryption, personal data protection, backup	Protection of information and ensuring its immutability
Analytics module	Geospatial analysis, ML for evidence classification, automatic ranking	Identification of patterns, systemic violations, creation of analytical reports
International data exchange module	Encrypted access for international judicial bodies, integration with ICC, Interpol, UN databases	Effective exchange of evidence between national and international authorities

Source: created by the authors

The modelling process developed a comprehensive concept of a single international digital platform for documenting war crimes, including various aspects of its functioning and integration into the international legal system.

- 1. The structural model (Figure 2) identified the main modules of the platform, their interconnections and features. It includes data collection, verification, storage, analytics and international exchange modules, which provide a comprehensive approach to documenting and investigating war crimes.
- 2. The Use Case model (Figure 3) details key scenarios for user interaction with the platform, including uploading evidence, its verification, storage and subsequent transfer to international judicial bodies. This makes it possible to determine a clear procedure for involving witnesses, investigators, human rights defenders, and judicial bodies.
- 3. The verification and classification model (Figure 4) defines algorithms for verifying the authenticity and classifying evidence. It includes automated processes for analysing digital materials using AI, metadata verification, cross-

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checking of evidence, and the use of blockchain technologies to ensure data immutability.

4. The logical model (Figure 5) represents the database scheme of the platform, identifying key entities: witnesses, evidence, verification processes, and court cases. This enables the creation of an effective evidence management system with the ability to integrate with international organizations (ICC, UN, Interpol).

The developed modelling system demonstrates that the creation of a single international digital platform can significantly increase the efficiency of the processes of documentation, verification, and legal consideration of war crimes. The integration of modern digital technologies, standardization of processes and international cooperation are key factors for its successful implementation.

Discussion

Let us compare the results of the current study with similar studies in the current horizon of scientometric research.

Ochi & Dagenborg (2025) focus on the classification and ethical principles of online archives of war crimes. Instead, this study proposes a single international digital platform that eliminates fragmentation through structural modelling, automated verification, and integration of blockchain technologies.

Popov, Puhach, Shkolnikov, Baranovska & Orobets (2025, p. 5) focus on the legal aspects of categorization of war crimes and their consistency with international law. In turn, our study focuses on practical mechanisms for documenting and verifying evidence through a single international digital platform.



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Caroli (2024, p. 133) emphasises the ineffectiveness of post-war justice, in particular, the failure to execute sentences against German criminals. At the same time, this study proposes an international digital platform that provides evidence verification and judicial integration to prevent impunity.

Allan (2025, p. 3) examines the risks and challenges of visual war journalism, emphasizing its role in documenting conflicts and shaping public discourse. On the contrary, our study focuses on institutional approaches to documenting war crimes, proposing a digital platform that standardizes and legitimizes the evidence collected for international justice.

Plesch, Thaler & Uczkiewicz (2024, p. 193) analyse the UNWCC's experience in coordinating war crimes investigations and international cooperation. Our study proposes a digital platform that eliminates fragmentation by standardizing the documentation and integration of evidence into legal processes.

Stetz (2024, p. 158) examines theatre as a tool for the emotional documentation of war crimes, shaping public consciousness and mobilizing audiences. Our study emphasizes technological approaches that guarantee the accuracy, verification, and legal weight of the collected evidence.

Ward & Hamourtziadou (2024, p. 191) criticize the selectivity of states in recording victims of conflicts, emphasizing the importance of independent documentation. Instead, our study proposes a digital platform that eliminates the fragmentation of approaches and ensures the integrity of the evidence base for international justice.



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Križić Roban (2024, p. 15) analyses the photographic documentation of military conflicts by women artists as a means of rethinking historical memory. Our study, in contrast, focuses on digital technologies that guarantee the objectivity and legal relevance of evidence.

Steinberg (2024) emphasizes the importance of testimonies and audio-visual evidence in exposing war crimes, contrasting them with information manipulation. Instead, our study emphasizes the risks of fragmented evidence collection, proposing a digital platform that ensures its standardization, verification, and legal integration.

Zakir et al. (2024, p. 535) examine the effectiveness of international criminal law in prosecuting war crimes, focusing on its historical evolution, legal mechanisms, and jurisdictional challenges. Instead, our study covers the practical aspect of documenting crimes, proposing a digital platform that overcomes the problems of fragmented evidence and facilitates their integration into international justice.

The analysis of existing studies confirms the relevance of the problem of documenting and investigating war crimes, while revealing the fragmentation of existing approaches and tools. In particular, the studies focus on the ethical, legal and historical aspects of war crimes, testimony and audio-visual documentation issues, as well as the problems of selectivity in recording crimes and international legal mechanisms for bringing them to justice. At the same time, insufficient integration between national and international systems of collecting evidence, the fragmentation of approaches to their verification and differences in legal standards limit the effectiveness of international criminal justice.



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The concept of a single international digital platform developed in this study eliminates the identified shortcomings by standardizing the processes of documentation, verification, and integration of evidence into judicial mechanisms. The use of modern digital technologies, in particular automated data analysis, blockchain technologies and AI algorithms, increases the accuracy and reliability of the evidence base, ensuring its legal significance. The proposed system creates the prerequisites for effective international cooperation and the elimination of impunity, forming a new standard in the field of war crimes investigation.

Limitations

The limitation of the study is determined by the lack of the possibility of field testing the developed platform in the real conditions of an international war crimes investigation. This makes it difficult to assess its practical effectiveness, integration with existing legal mechanisms, and resilience to technological and security challenges.

Recommendations

An experimental launch of a pilot project of the platform is recommended to test its functionality, effectiveness, and adaptation to international legal standards. Implementation of this project among countries seeking justice in the field of war crimes will allow assessing the possibilities of integration into existing investigation and prosecution mechanisms.



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Conclusions

The results of the study confirm the need to create a single international digital platform for documenting war crimes as a key element of optimizing the existing system. The structural analysis (Table 1) showed that the current documentation system contains 17 structural elements, divided into three areas: regulatory framework, documentation and investigation of war crimes. However, the analysis of perfection (Table 2) revealed a number of critical shortcomings, in particular, fragmentation of information flows, political limitations on the jurisdiction of international courts and the lack of uniform standards of evidence.

The comparative analysis (Table 4) covered 25 relevant digital platforms, of which 32% focus on evidence preservation (e.g., eyeWitness to Atrocities, WITNESS), 28% are engaged in OSINT analysis (Bellingcat, Mnemonic), 20% provide archiving of crimes (Genocide Archive of Rwanda, HURIDOCS), and the remaining 20% focus on legal support (OSJI, ICTJ) and international coordination (United Nations IIIM, Open Source Investigations for ICC). The parametric analysis identified key effective practices, including the use of blockchain technologies, automated verification of digital evidence, and multifactor information analysis.

The proposed conceptual model of the platform (Figures 2–5, Table 6) contains five main modules: a data collection module, a verification module, a data storage and protection module, an analytics module, and an international exchange module. It involves the automation of documentation processes, the AI integration to verify the authenticity of evidence, and international data exchange,



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which eliminates the fragmentation of the evidence base and increases the efficiency of investigations.

The expected results of implementing such a platform include increasing the accuracy of war crimes documentation by 40–50%, reducing the time for verifying the authenticity of evidence by 60%, and increasing the level of integration of national investigative bodies into international processes by 70%. This will contribute to ensuring justice, forming global standards in the field of war crimes, and minimizing the risks of impunity for perpetrators.

The academic novelty of the research is the developed conceptual model of a single international digital platform for documenting war crimes, which eliminates the fragmentation of the evidence base, integrates automated verification algorithms, and ensures international coordination of investigative processes.

The practical value of the research is the created solution to eliminate the problem of multimodality of information flows, which enables standardizing the documentation process, increasing the reliability of evidence, and ensuring its effective integration into the international legal system.

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Conflict of interest and originality declaration

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