

Addressing Barriers to Cross-Border Collection of E-Evidence in Criminal Investigations

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Abstract

The interconnected society has led to an increase in cross-border crimes, necessitating efficient gathering of electronic evidence (e-evidence). Current legal frameworks and mutual legal assistance treaties face challenges in addressing the volatile nature and international dimension of e-evidence. This study aims to evaluate existing regulations, identify barriers, and propose solutions for effective cross-border e-evidence collection. The research seeks to remove obstacles and facilitate seamless cooperation among law enforcement agencies, service providers, and judicial authorities. A qualitative research method, including surveys and grounded theory analysis, is employed to analyze legal practitioners' perspectives and existing frameworks. The findings highlight the need for harmonized data categorization, direct cooperation with service providers, and streamlined procedures. The study proposes a new regulation for production and preservation orders, enabling direct access to e-evidence and appointing legal representatives within service providers. The proposed regulation addresses the identified barriers, enhancing cross-border e-evidence gathering in crime investigations.

Keywords: Cross-Border, E-Evidence, Crime Investigation, Legal Frameworks, Data Categorization, Service Providers, Production Orders, Preservation Orders

I. Introduction

In today's interconnected society, the proliferation of digital technologies and the widespread use of electronic communication services have profoundly impacted the nature of criminal activities. Criminals increasingly leverage these technologies, operating across various jurisdictions and leaving digital traces dispersed globally.¹ The electronic data stored, transmitted, or processed by computing devices, such as mobile phones or personal computers, often contain crucial evidence indicative of criminal intent, relationships among offenders, and information about the locations of criminal activities. As a result, electronic evidence (e-evidence) has become increasingly

¹ Abdikhakimov, I. (2023). Jurisdiction over Transnational Quantum Networks. *International Journal of Law and Policy*, 1(8). <https://doi.org/10.59022/ijlp.147>

important in judicial proceedings, and its collection is in high demand. However, efficient cross-border gathering of e-evidence faces several barriers due to inconsistent understanding of e-evidence searches, the legality of the data sought, and the rules for cooperation with service providers.²

The existing legal frameworks and mutual legal assistance treaties (MLATs), designed for a pre-digital era, are ill-equipped to address the volatile nature and international dimension of e-evidence.³ Traditional MLAT procedures are often too slow and cumbersome to facilitate effective cross-border collection of electronic evidence. Furthermore, direct interaction with online service providers, permitted by some country legislations, is often met with unpredictable cooperation from the owners of the stored data. Another challenge lies in ensuring that the seized e-evidence abides by applicable laws, as investigators risk inadmissible exhibits at trial. Additionally, legally protected sources of electronically stored information may be discovered during warrant activities, adding complexity to evidence handling.⁴ Data preservation also remains controversial due to the invalidation of the EU Data Retention Directive for violating the Charter of Fundamental Rights of the European Union.

In recognition of these challenges, significant work has been undertaken to create a workable legal framework for law enforcement access to electronic data. The Council of Europe's Cybercrime Convention (CCC) and the European Investigation Order (EIO) Directive represent notable efforts, but their effectiveness in addressing cross-border e-evidence collection remains limited.⁵ To address these issues, the European Commission has proposed a new regulation for production and preservation orders, enabling direct access to e-evidence and appointing legal representatives within service providers. This study aims to evaluate the existing regulations, identify barriers, and propose solutions for effective cross-border e-evidence collection in crime investigations.⁶ The research is highly relevant to law enforcement agencies, judicial authorities, and service providers operating in the interconnected society. By removing obstacles and facilitating seamless

² Ahmadjonov, M. (2023). Anti-Corruption and Compliance Control: Legal Literacy among Lawyers and Law Students. *International Journal of Law and Policy*, 1(8). <https://doi.org/10.59022/ijlp.145>

³ AllahRakha, N. (2023). Legal Challenges for International Fintech Startups. *International Journal of Law and Policy*, 1(8). <https://doi.org/10.59022/ijlp.148>

⁴ AllahRakha, N. (2024). Cybercrime and the law: Addressing the challenges of digital forensics in criminal investigations. *Mexican Law Review*, 16(2), 23-54.

⁵ AllahRakha, N. (2024). Legal Procedure for Investigation under the Criminal Code of Uzbekistan. *International Journal of Law and Policy*, 2(3). <https://doi.org/10.59022/ijlp.160>

⁶ AllahRakha, N. (2024). Rethinking Digital Borders to Address Jurisdiction and Governance in the Global Digital Economy. *International Journal of Law and Policy*, 2(1). <https://doi.org/10.59022/ijlp.124>

cooperation, the study contributes to the efficient investigation and prosecution of cross-border crimes, safeguarding the interests of justice and public safety.⁷

II. Methodology

This study employs a qualitative research method, utilizing surveys and grounded theory analysis to examine the perspectives of legal practitioners and existing frameworks for cross-border e-evidence collection. The data collection process involved administering two online surveys to European legal practitioners, including judges, public prosecutors, and investigative judges. The surveys aimed to identify the main obstacles faced in utilizing the European Investigation Order (EIO) and the skills required for requesting e-evidence abroad. A total of 150 participants from 20 Member States participated in the anonymous surveys, ensuring the honest sharing of opinions. The survey data was analyzed using grounded theory, a systematic methodology involving open coding, axial coding, and selective coding. This approach allowed for the identification of recurring themes, patterns, and trends related to the challenges and barriers encountered in cross-border e-evidence gathering.

In addition to the survey data, the study conducted a comprehensive review and analysis of existing legal instruments and regulations, including the Council of Europe's Cybercrime Convention (CCC), the European Investigation Order (EIO) Directive, and the proposed EU regulation for production and preservation orders. The data analysis process involved organizing and categorizing the collected information, identifying key findings, and relating them to the research problem. Non-textual elements, such as figures and tables, were used to further illustrate the findings where appropriate. The rationale for this methodology was to gain a comprehensive understanding of the current legal landscape, practical challenges faced by legal practitioners, and the potential solutions offered by the proposed regulation. By triangulating multiple data sources and employing a systematic analytical approach, the study aimed to ensure the validity and relevance of its findings.

III. Results

The analysis of the survey data and the review of existing legal instruments revealed recurring points of agreement and disagreement among legal practitioners regarding the challenges faced in cross-border e-evidence collection. A recurring point of agreement was the need for effective cross-border remote e-evidence searches and direct

⁷ AllahRakha, N. (2024). Transformation of Crimes (Cybercrimes) in Digital Age. *International Journal of Law and Policy*, 2(2). <https://doi.org/10.59022/ijlp.156>

cooperation with service providers.⁸ Participants acknowledged the usefulness of the EIO Directive for its simplicity, but expressed concerns about its applicability in cybercrime cases involving e-evidence. Patterns and trends emerged regarding the challenges faced by legal practitioners. The lack of a consistent definition and categorization of digital data across Member States was identified as a major obstacle. Differences in data specifications and the absence of a common understanding of data categorization hindered effective e-evidence requests.⁹

The survey results revealed that 46.3% of participants rated their knowledge of digital investigation as low, while 44.8% considered it medium. Notably, 97% felt the need to upgrade their current knowledge, highlighting the importance of continuing professional development in this area.¹⁰ Regarding the existing legal frameworks, the analysis confirmed the limitations of the Council of Europe's Cybercrime Convention (CCC) and the European Investigation Order (EIO) Directive in addressing the volatile nature and international dimension of e-evidence. The CCC's guidance note on production orders for subscriber information was criticized for its interpretation, leading to potential conflicts with international law.¹¹

The study's key finding was the need for a new regulation that addresses the identified barriers and facilitates seamless cross-border e-evidence collection. The proposed EU regulation for production and preservation orders emerged as a potential solution, introducing new instruments and data categorization, enabling direct access to e-evidence, and appointing legal representatives within service providers.¹² The results of this study provide a comprehensive understanding of the research problem and support the hypothesis that barriers to cross-border e-evidence gathering can be addressed

⁸ AllahRakha, Naeem, Modernizing Criminal and Evidence Laws to Facilitate Tourism in Pakistan. Available at SSRN: <https://ssrn.com/abstract=4707544> or <http://dx.doi.org/10.2139/ssrn.4707544>

⁹ Brown, C. S. D. (2015). Investigating and Prosecuting Cybercrime: Forensic Dependencies and Barriers to Justice. *International Journal of Cyber Criminology*, 9(1), 55-119.

¹⁰ Council of the European Union. (2017). Technical Document: Measures to Improve Cross-border Access to Electronic Evidence for Criminal Investigations Following the Conclusions of the Council of the European Union on Improving Criminal Justice in Cyberspace. 9554/17

¹¹ Cupi, D. (2024). The Role of the Albanian Media as Mediator and Creator of Collective Memory. *International Journal of Law and Policy*, 2(1). <https://doi.org/10.59022/ijlp.146>

¹² de Hert, P., Parlar, C., & Sajfert, J. (2018). The Cybercrime Convention Committee's 2017 Guidance Note on Production Orders: Unilateralist Transborder Access to Electronic Evidence Promoted via Soft Law. *Computer Law & Security Review*, 34(2), 327-336

through the proposed regulation, harmonizing data categorization and streamlining procedures for efficient crime investigations.¹³

IV. Discussion

The key findings of this study underscore the pressing need for a harmonized legal framework that addresses the challenges inherent in cross-border e-evidence collection for crime investigations. The analysis of survey data and existing legal instruments reveals significant barriers and limitations in the current legal landscape, which hinder the efficient gathering of electronic evidence across jurisdictions.¹⁴ Firstly, the lack of a consistent definition and categorization of digital data across Member States emerged as a major obstacle. The absence of a common understanding of data types, such as subscriber information, traffic data, and content data, has led to divergent interpretations and practices, hampering effective e-evidence requests and cooperation between law enforcement agencies and service providers.¹⁵

Secondly, the survey results highlighted the need for continuing professional development and training in the field of digital investigation. With the rapid evolution of technology and the increasing sophistication of cybercrime, legal practitioners must possess the necessary skills and knowledge to navigate the complexities of e-evidence collection and analysis.¹⁶ Thirdly, the limitations of existing legal frameworks, such as the Council of Europe's Cybercrime Convention (CCC) and the European Investigation Order (EIO) Directive, were evident in addressing the volatile nature and international dimension of e-evidence. The CCC's guidance note on production orders for subscriber information faced criticism for its interpretation, potentially conflicting with international law.¹⁷

These findings have significant implications for the administration of justice and the protection of public safety in an interconnected society. The inability to effectively gather and utilize e-evidence can hinder the investigation and prosecution of cross-border

¹³ Dee, M. (2012). Getting Back to the Fourth Amendment: Warrantless Cell Phone Searches. *New York Law School Law Review*, 56, 1129-1148

¹⁴ Gulyamov, S., & Raimberdiyev, S. (2023). Personal Data Protection as a Tool to Fight Cyber Corruption. *International Journal of Law and Policy*, 1(7). <https://doi.org/10.59022/ijlp.119>

¹⁵ Herrera-Flanigan, J. R., & Ghosh, S. (2010). Criminal regulations. In S. Ghosh & E. Turrini (Eds.), *Cyber-crimes: A Multidisciplinary Analysis* (pp. 95-120). Springer

¹⁶ Hughes, J. (2003). The Internet and the Persistence of Law. *Boston College Law Review*, 44(2), 359-396

¹⁷ Jerman Blažič, B., & Klobučar, T. (2020). Removing the barriers in cross-border crime investigation by gathering e-evidence in an interconnected society. *Information & Communications Technology Law*, 29(1), 66-81

crimes, potentially allowing perpetrators to evade accountability and posing risks to individuals and communities.¹⁸ The proposed EU regulation for production and preservation orders represents a promising solution to address the identified barriers. By introducing new instruments and data categorization, enabling direct access to e-evidence, and appointing legal representatives within service providers, the regulation aims to harmonize procedures and facilitate seamless cooperation among law enforcement agencies, judicial authorities, and service providers.¹⁹

However, it is important to acknowledge the limitations of the proposed regulation. While it addresses some of the key challenges, such as data categorization and direct cooperation with service providers, there may be potential legal and practical hurdles in its implementation.²⁰ For instance, the regulation does not clarify the mechanism for imposing and enforcing pecuniary sanctions on service providers in case of infringements. Additionally, the remedies concerning individuals involved in the process, beyond service providers, are not explicitly addressed and are left to national legislation.²¹

Recommendations for future research and policy development include conducting a comprehensive evaluation of the proposed regulation's implementation across Member States, identifying potential gaps or unintended consequences, and proposing amendments or additional measures to ensure its effectiveness and compliance with fundamental rights and the rule of law.²² Furthermore, continuous research and development in the field of digital forensics and cybercrime investigation are crucial to keep pace with the ever-evolving technological landscape.²³ Legal practitioners, law enforcement agencies, and academic institutions should collaborate to develop specialized training programs and knowledge-sharing platforms, ensuring that the

¹⁸ Karimjonov, M. (2024). A Disciplinary Responsibility by the New Labor Legislation of the Republic of Uzbekistan. *International Journal of Law and Policy*, 2(2). <https://doi.org/10.59022/ijlp.158>

¹⁹ McQuade III, S. C. (2006). *Understanding and Managing Cybercrime*. Pearson Education, Inc

²⁰ Murodullaev, D. (2024). Problems of Application of Termination of Employment Contract due to Circumstances beyond the Control of the Parties . *International Journal of Law and Policy*, 2(2). <https://doi.org/10.59022/ijlp.155>

²¹ Savona, E. U., & Mignone, M. (2004). The Fox and the Hunters: How IC Technologies Change the Crime Race. *European Journal of Crime, Criminal Law and Criminal Justice*, 10(2), 261-284

²² Soyipov, K. (2024). Features of Termination of an Employment Contract at the Initiative of the Employer: Uzbekistan's Case. *International Journal of Law and Policy*, 2(2). <https://doi.org/10.59022/ijlp.153>

²³ Ubaydullaeva, A. (2024). Rights to Digital Databases. *International Journal of Law and Policy*, 2(1). <https://doi.org/10.59022/ijlp.151>

necessary expertise is readily available to tackle the challenges of cross-border e-evidence collection.²⁴

Conclusion

The interconnected nature of modern society has led to a significant increase in cross-border crimes, necessitating efficient and effective mechanisms for gathering electronic evidence (e-evidence) across jurisdictions. However, the existing legal frameworks and mutual legal assistance treaties have proven inadequate in addressing the volatile nature and international dimension of e-evidence, posing significant challenges for law enforcement agencies and judicial authorities. This study aimed to evaluate the current regulations, identify barriers, and propose solutions for effective cross-border e-evidence collection in crime investigations. Through a qualitative research approach, including surveys and grounded theory analysis, the perspectives of legal practitioners and the limitations of existing frameworks were examined.

The results highlighted recurring points of agreement and disagreement among legal practitioners, revealing the need for effective cross-border remote e-evidence searches and direct cooperation with service providers. The lack of a consistent definition and categorization of digital data across Member States emerged as a significant obstacle, leading to divergent interpretations and practices. Furthermore, the study identified gaps in legal knowledge and technical expertise among legal practitioners, emphasizing the importance of continuing professional development in the field of digital investigation. Existing legal instruments, such as the Council of Europe's Cybercrime Convention (CCC) and the European Investigation Order (EIO) Directive, were found to be limited in addressing the complexities of cross-border e-evidence collection.

In response to these challenges, the European Commission has proposed a new regulation for production and preservation orders, enabling direct access to e-evidence and appointing legal representatives within service providers. This regulation aims to address the identified barriers by harmonizing data categorization, streamlining procedures, and facilitating seamless cooperation among stakeholders. While the proposed regulation represents a promising step forward, it is crucial to acknowledge its limitations and potential legal and practical hurdles. Continuous research, evaluation, and refinement of the regulatory framework are necessary to ensure its effectiveness and compliance with fundamental rights and the rule of law.

Addressing the challenges of cross-border e-evidence gathering is not only crucial for the efficient investigation and prosecution of crimes but also for safeguarding public

²⁴ Warken, C., van Zwietem, L., & Svantesson, D. (2019). Re-thinking the Categorization of Data in the Context of Law Enforcement Cross-border Access to Evidence. *International Review of Law, Computers & Technology*. <https://doi.org/10.1080/13600869.2019.1600871>

safety and upholding the principles of justice in an interconnected society. By removing barriers and fostering collaboration among law enforcement agencies, judicial authorities, and service providers, we can collectively combat the evolving threats posed by cross-border criminal activities and protect the interests of individuals and communities worldwide.

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