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Legal Theory and Electronic Evidence in Indonesian Civil Procedure Law: An Analysis of Law No. 19 of 2016 as an Amendment to Information and Electronic Transactions Law

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Abstract. The rapid development of information and communication technology has significantly transformed how society transacts, communicates, and resolves legal disputes. This digital transformation impacts the legal system, particularly regarding electronic evidence in civil procedural law in Indonesia. This study aims to analyze the implementation of electronic evidence in civil court practices following the enactment of Law No. 19 of 2016 on Information and Electronic Transactions (ITE Law). The study uses a normative juridical approach, analyzing existing regulations, such as the ITE Law and court rulings related to electronic evidence, as well as empirical analysis based on case law. The results of the study show that while electronic evidence is normatively recognized under the ITE Law, its application in court faces significant challenges, including the lack of technical standards and proper authentication procedures for electronic evidence. Many cases still rely on physical evidence, even when electronic evidence is legally recognized. This highlights the need for clearer guidelines and a more comprehensive legal framework for the verification and authentication of electronic evidence in the judiciary. The study recommends that the Supreme Court and the National Cyber and Crypto Agency (BSSN) urgently develop technical guidelines for the authentication of electronic evidence and enhance digital literacy among judicial officers. Additionally, strengthening certified electronic signatures and developing an integrated digital archive system will improve the process of handling electronic evidence. The research also calls for the rethinking of legal theories on evidence to adapt to the digital age.

Keywords: Electronic Evidence, Civil Procedural Law, ITE Law, Authentication, Digital Literacy).

1. BACKGROUND

The development of information and communication technology has fundamentally transformed the way society conducts transactions, communicates, and resolves legal disputes. Rapid digital transformation requires legal systems, including civil procedural law, to adapt and accommodate modern forms of evidence such as electronic documents, digital recordings, emails, instant messages, and metadata. In this context, electronic evidence has become a crucial issue, particularly in the era of the Industrial Revolution 4.0 and Society 5.0, which is characterized by the integration of physical and digital life within a single social ecosystem.

According to Richard Susskind (2019) in his book *Online Courts and the Future of Justice*, traditional legal systems in many countries, including Indonesia, are not yet fully prepared to face the wave of digitalization affecting judicial processes, particularly in terms of evidence and electronic court systems. He emphasizes that modern courts must be able to accommodate digital evidence in order not to fall behind rapidly evolving technological

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developments. This view aligns with the perspective of Lawrence Lessig, who introduced the concept that “code is law,” meaning that in the digital era, software and digital systems also function as regulators of social behavior that must be understood by legal systems.

Furthermore, in the Jurnal RechtsVinding (Alfitri & Safitri, 2020), it is stated that digital technology has expanded the forms and types of legal evidence that must be recognized in judicial proceedings. However, not all civil procedural legal instruments are normatively or technically prepared to assess the validity and evidentiary strength of such evidence. Digital data, which is intangible and easily manipulated, requires new evidentiary legal frameworks that are not solely based on Article 164 of the HIR or Article 1866 of the Indonesian Civil Code, but also on the principles of integrity, authentication, and forensic technological validation. Sudikno Mertokusumo (1999), in his work Hukum Acara Perdata Indonesia, states that the primary objective of procedural law is to ensure the implementation of a fair judicial process (due process of law) and to guarantee that all forms of evidence can be objectively considered by judges. In the digital era, this principle needs to be reinterpreted so that evidentiary processes are not limited to physical documents but also encompass electronic evidence that is legally valid and technically verifiable.

In the global context, the UNCITRAL Model Law on Electronic Commerce (1996) established the principle of equivalence between physical and electronic documents, meaning that information should not be denied legal effect solely because it is in electronic form. This principle is also reflected in Article 5 paragraphs (1) and (2) of the Indonesian Electronic Information and Transactions Law, which states that electronic information and/or electronic documents, including their printouts, constitute valid legal evidence.

Thus, developments in information technology have not only expanded the scope of civil procedural law but also require a reconstruction of evidentiary concepts within judicial proceedings. Electronic evidence, as a legal representation of digital activities, requires balanced theoretical understanding and practical implementation to ensure that it does not undermine the principles of justice and legal certainty. Normatively, Law No. 11 of 2008 on Electronic Information and Transactions, as amended by Law No. 19 of 2016, recognizes that electronic information and/or electronic documents and their printouts constitute valid legal evidence (Article 5 paragraphs (1) and (2)). This recognition represents an important step toward a modern evidentiary system in civil litigation. However, in practice, electronic evidence still faces significant challenges, both technically, interpretatively, and procedurally.

Data from the Supreme Court of the Republic of Indonesia indicates that by 2023, the number of civil cases involving electronic evidence had increased by 37% compared to the previous year. However, among these cases, only around 58% of electronic evidence was formally recognized by judges as meeting both formal and material evidentiary requirements. This reflects a gap between normative recognition and practical implementation of electronic evidence in courts.

Meanwhile, a 2022 report from the Statistics Indonesia (BPS) recorded that more than 82.1% of urban households in Indonesia are connected to the internet, and the use of digital technology in economic and social activities has increased significantly. In the e-commerce sector, Bank Indonesia (2023) reported that the value of digital transactions reached IDR 401 trillion, illustrating the significant potential for digital-based legal disputes in the future. Nevertheless, Indonesia's civil law system remains largely based on conventional approaches that are not yet fully prepared to accommodate this digital reality.

According to Subekti (1983), evidentiary processes aim to convince the judge of the truth of a legal event claimed by the parties. In the context of electronic evidence, this process becomes more complex because it requires new approaches related to digital authentication, the legal validity of electronic data, and the assurance of information integrity. Sudikno Mertokusumo (1999) also emphasized that procedural law is a formal law that must evolve with societal developments in order to remain relevant and capable of regulating fair judicial processes. In line with this view, Soerjono Soekanto argues that law is a social product that cannot be separated from societal change. Therefore, the emergence of electronic evidence as a consequence of the digitalization of social life must be addressed through a corresponding shift in legal paradigms. In practice, many judges still lack deep technical understanding of digital evidence, which often results in inconsistencies in assessing its evidentiary value.

Alfitri and Safitri (2020), in Jurnal RechtsVinding, argue that the effectiveness of electronic evidence remains limited due to the absence of a structured technical regulatory framework and the lack of integrated guidelines for evaluating electronic evidence within civil procedural law. This condition creates legal uncertainty, particularly for litigants who rely on digital evidence in judicial proceedings. Although the Supreme Court of the Republic of Indonesia has issued Supreme Court Regulation No. 1 of 2019 on Electronic Court Administration and Proceedings (e-Court), this regulation primarily focuses on administrative aspects and does not yet substantively address digital forensic standards or electronic evidence authentication methods in civil proceedings. In the global context, international standards such as the UNCITRAL Model Law on Electronic Commerce (1996) and the Budapest Convention

on Cybercrime (2001) may serve as references in formulating credible and well-tested norms for electronic evidence.

Considering these issues, this research aims to comprehensively examine the application of both classical and modern legal theories of evidence in the context of electronic evidence in Indonesia, as well as to evaluate the effectiveness of Law No. 19 of 2016 in supporting the use of electronic evidence within Indonesian civil procedural law. Although Law No. 19 of 2016, as an amendment to the Electronic Information and Transactions Law, has recognized the legal validity of electronic information and/or electronic documents as admissible evidence in procedural law, in practice there are still doubts regarding their application in civil court proceedings. The main issue that arises is the absence of clear standards regarding the authentication, validation, and verification of the legality of electronic evidence in court. This situation raises questions about the extent to which legal theories of evidence are capable of addressing the challenges posed by electronic evidence, as well as how effectively the norms contained in the ITE Law are implemented within the context of Indonesian civil procedural law.

2. THEORETICAL FRAMEWORK

Ilyas (2023) explains that evidence refers to anything related to an act which can be used as proof to establish a judge's conviction regarding the truth of a criminal offense committed by the defendant.

Electronic evidence is recognized as one type of evidence under Law No. 20 of 2025. In the Explanation of Article 235 paragraph (1) letter f of Law No. 20 of 2025, electronic evidence is defined as information that is spoken, transmitted, received, or stored electronically using optical devices or similar technologies. This includes any record of data or information that can be seen, read, and/or heard, which can be produced with or without the assistance of tools, whether contained on paper, on any physical object other than paper, or recorded electronically in the form of writings, images, maps, designs, photographs, letters, symbols, numbers, or perforations that convey meaning.

3. METHOD

This research employs both normative juridical and empirical juridical approaches. The normative juridical approach is used because the study aims to examine the legal norms governing electronic evidence in Indonesian civil procedural law. The primary objects of analysis include Law No. 11 of 2008 on Electronic Information and Transactions as amended by Law No. 19 of 2016, as well as evidentiary provisions contained in the Het Herziene

Indonesisch Reglement (HIR), Rechtsreglement voor de Buitengewesten (RBg), and Indonesian Civil Code. In addition, Supreme Court Regulation No. 1 of 2019 on Electronic Court Administration and Proceedings is used as a technical reference regarding electronic administration and evidentiary procedures in courts.

A conceptual approach is also applied to examine legal theories of evidence, as explained by Sudikno Mertokusumo (1999), who states that civil procedural law aims to ensure a fair and efficient judicial process through legally recognized evidence, including evidence in electronic form.

As a complement, an empirical juridical approach is employed by systematically analyzing civil court decisions that have applied electronic evidence. This study does not involve interviews; rather, it focuses on documentation and analysis of court decisions available in the official directory of the Supreme Court of the Republic of Indonesia. This approach refers to the view of Soerjono Soekanto (1986) in his book Pengantar Penelitian Hukum, which explains that the empirical approach is used to observe the extent to which positive law is implemented in practice within society, including in judicial proceedings. This research is also supported by findings published in the Jurnal RechtsVinding (Alfitri & Safitri, 2020), which note that although electronic evidence has been legally recognized, its implementation in courts still faces obstacles due to the absence of uniform technical guidelines for evidentiary assessment.

The data sources used in this research consist of primary data, including statutory regulations and court decisions, and secondary data, such as legal textbooks, journal articles, and other academic publications. Data collection techniques include library research and analysis of legal documents, without involving field data collection or interviews. The data analysis technique used is qualitative-descriptive, involving systematic explanation and interpretation of the collected data in order to identify the relationship between legal theories of evidence and the practice of electronic evidence. This approach enables the researcher to draw objective, relevant, and contextual conclusions regarding the effectiveness of regulations governing electronic evidence in Indonesian civil procedural law.

4. RESULTS AND DISCUSSION

Legal Theory of Evidence and Its Relevance to Electronic Evidence

In civil procedural law, evidentiary processes constitute a crucial stage because they determine the success of the parties involved in defending their claims or arguments before the judge. Sudikno Mertokusumo in his book Hukum Acara Perdata explains that the purpose of

evidence is to provide legal certainty by utilizing legally recognized means of proof that possess evidentiary force in accordance with applicable regulations. Evidence does not merely function to verify facts, but also to ensure that the legal events presented in a case can be accepted as truth before the court (Mertokusumo, 1999:110). This view is consistent with the opinion of Subekti, who states that within the Indonesian civil law system, evidence serves to convince the judge of the truth of the disputed legal events, and valid evidence possesses the power to reveal such truth (Subekti, 1983:34).

Within the Indonesian civil evidentiary system, written evidence (documents) constitutes the dominant instrument, as regulated under Article 1866 of the Indonesian Civil Code and Article 164 of the Het Herziene Indonesisch Reglement (HIR). These provisions explicitly stipulate that documents fulfilling certain requirements possess evidentiary power to prove a legal event. However, with the rapid development of information technology, legal transactions are no longer limited to physical or written forms but are increasingly conducted electronically. Electronic transactions such as e-mails, online systems, and communication through social media have become an unavoidable part of everyday life, thereby creating new challenges for the evidentiary system.

Consequently, there is an urgent need to recognize electronic evidence as a valid means of proof in judicial proceedings. Law No. 11 of 2008 on Electronic Information and Transactions, subsequently amended by Law No. 19 of 2016, serves as a legal instrument stipulating that electronic information and/or electronic documents, including their printouts, are admissible as valid legal evidence (Article 5 paragraphs (1) and (2)). This represents an important step in adapting Indonesian law to contemporary technological developments.

In the context of civil procedural law, electronic evidence does not only include common electronic documents such as e-mails or text messages, but also encompasses various forms of digital information, including audio recordings, transaction data, metadata, and other digital records. Hanna L.G. (2020), writing in the Jurnal Hukum Digital, states that the acceptance of electronic evidence in court must be viewed within a broader context in which data authenticity and integrity are of paramount importance. This indicates that electronic evidence must fulfill certain requirements such as the use of electronic signatures or other security mechanisms—in order to be accepted by the court as valid evidence.

Furthermore, Asyrofiah (2021), in the Jurnal Teknologi dan Hukum, emphasizes that the admissibility of electronic evidence is highly dependent on digital authentication and verification. Verification ensures that the electronic document or data submitted has not been altered or manipulated since its creation. Without adequate verification tools—such as

electronic signatures or digital timestamps the authenticity of electronic evidence may be questioned (Asyrofiah, 2021:127). Therefore, although the ITE Law provides a strong legal basis for the recognition of electronic evidence, the principal challenge lies in the technical examination and verification of such evidence within judicial proceedings.

In this regard, digital forensic theory also becomes highly relevant. In order to prove the authenticity and integrity of electronic evidence, courts require forensic systems capable of accurately identifying, collecting, and verifying digital data. Julian J. in his book Digital Evidence and Forensic Investigation explains that, in the context of electronic evidence, courts must understand fundamental principles of digital forensics such as chain of custody, which ensures that evidence obtained is not lost or altered from the stage of collection to its examination in court (Julian J., 2018:45). With the advancement of digital forensic technology, courts are expected to adopt existing international standards, including those established under the Council of Europe Convention on Cybercrime, to address these challenges. A robust digital forensic system will provide additional assurance that the electronic evidence presented is authentic and unaltered, thereby facilitating its acceptance in judicial proceedings.

The legal principle underlying such recognition is functional equivalence, as adopted from the UNCITRAL Model Law on Electronic Commerce (1996). This principle states that electronic documents should be legally treated as equivalent to physical documents, provided that they fulfill the same functions such as being readable, storable, and accountable. This demonstrates that electronic evidence represents an evolution of written evidence and should therefore be accepted within the civil procedural law system insofar as its authenticity can be proven.

The Implementation of Electronic Evidence in Civil Judicial Practice

Although electronic evidence has been normatively recognized in Indonesian law through Law No. 11 of 2008 on Electronic Information and Transactions, later amended by Law No. 19 of 2016, its implementation in Indonesian civil court practice still faces several significant challenges. One of the primary obstacles is the absence of national technical standards for the verification and authentication of electronic evidence accepted by courts. Indonesian courts still lack sufficiently technical guidelines for examining and authenticating digital evidence presented during judicial proceedings.

In many cases, electronic evidence submitted to the court is often printed in hardcopy form without being accompanied by valid authentication elements, such as certified electronic signatures, digital timestamps, or system logs that can demonstrate the authenticity and integrity of the document. Without these elements, courts encounter difficulties in determining

whether the electronic evidence has been modified after its creation. This situation becomes problematic because, without assurances of authenticity, electronic evidence cannot easily be trusted as valid legal proof. Safitri and Emirzon (2020) explain that electronic documents lacking digital signatures or timestamps cannot guarantee authenticity, which may disadvantage the party submitting such evidence since it cannot be confirmed that the document has remained unchanged since its creation.

Beyond the lack of clarity regarding verification, courts also face differing interpretations concerning the evidentiary weight of electronic evidence itself. Although electronic evidence has been recognized under the ITE Law, judges often place greater trust in traditional forms of evidence, such as authentic deeds or direct witness testimony, rather than electronic evidence—particularly when the latter is not supported by adequate digital legal instruments. In many civil disputes involving digital transactions, such as online sales transactions or electronic contracts, screenshots of electronic communications or transactions are frequently submitted as evidence. However, without supporting metadata or server activity records capable of demonstrating the authenticity and integrity of the data, such evidence is often considered weak by judges, even though, theoretically, it should already be recognized as valid legal evidence.

This situation indicates that digital literacy and understanding of digital forensics among judges and judicial officers must be strengthened. Courts need to develop technical competence in this field so they can more easily evaluate the authenticity and integrity of electronic evidence presented before them. Authenticity and data integrity are essential in the acceptance of electronic evidence. Without adequate guidelines or verification tools, electronic evidence remains vulnerable to doubt and potential manipulation, which may ultimately lead to less optimal judicial decisions. Therefore, it is important for the Supreme Court of the Republic of Indonesia and the National Cyber and Crypto Agency (BSSN) to establish clearer technical standards related to digital forensics and electronic evidence verification so that courts can more effectively assess and accept such evidence.

Despite these challenges, opportunities to strengthen the use of electronic evidence in Indonesia remain significant. Along with the digital transformation that has encouraged the judiciary to adopt the e-Court system, and national policies supporting the digitalization of judicial processes, the Indonesian legal system is gradually moving toward modernization. In the long term, the strengthening of electronic evidence can be driven by two main developments. First, the broader adoption of certified electronic signatures that are legally recognized in court proceedings. Second, the development of integrated digital archives that facilitate the storage and examination of electronic evidence. Through a more integrated

system, courts will have easier access to accountable digital evidence. Integrated digital archives will also provide advantages in terms of efficient storage and rapid retrieval of evidentiary data.

Furthermore, enhancing human resource capacity in digital legal literacy is also crucial to ensure that electronic evidence can be accepted and processed lawfully and efficiently. Regular training on digital forensic technologies and methods of electronic evidence verification is essential for judicial officers so that they can understand the proper procedures for assessing electronic evidence during court proceedings. This will significantly affect both the speed and the quality of judicial decisions in cases involving electronic evidence. By strengthening human resource capacity, the implementation of electronic evidence in judicial proceedings will become more effective and contribute to the realization of a more transparent and fair judicial system.

In this context, theories of evidentiary law must also undergo reinterpretation in order to accommodate the digital dimension of proof. As explained by Lawrence Lessig in his book *Code and Other Laws of Cyberspace*, the concept that “code is law” illustrates how digital architectures such as software and computer code can regulate social behavior in ways comparable to legal norms. If theories of evidentiary law fail to evolve alongside technological developments, a normative gap may emerge that disadvantages seekers of justice, particularly in cases involving electronic evidence that no longer consists solely of physical documents or witness testimony.

Therefore, although electronic evidence has been normatively recognized under the ITE Law, its practical implementation still requires strategic measures, including the formulation of more detailed technical guidelines, the enhancement of human resource capacity in digital literacy, and the development of evidentiary law theories that are more adaptive to the rapidly evolving digital era. Such efforts will ensure that the Indonesian legal system is not only capable of accommodating current technological developments but is also prepared to face future challenges.

Opportunities and Challenges in the Development of Electronic Evidence

The main challenges in the implementation of electronic evidence in Indonesian civil court proceedings lie not only in technical aspects but also in juridical and institutional dimensions. Although Law No. 11 of 2008 on Electronic Information and Transactions, as amended by Law No. 19 of 2016, explicitly recognizes the validity of electronic evidence, Indonesian courts still lack clear regulations regarding digital forensic mechanisms or the standards of electronic authentication required to verify such evidence. One of the primary

issues is that courts do not yet possess sufficiently technical guidelines for examining and authenticating digital evidence presented during judicial proceedings.

In many cases, electronic evidence submitted to the court is frequently printed in hardcopy form without being accompanied by valid authentication elements, such as certified electronic signatures, digital timestamps, or system logs that can demonstrate the authenticity and integrity of the document. Without these elements, courts encounter difficulties in determining whether the electronic evidence submitted has been modified or not. As explained by Safitri and Emirzon (2020), electronic documents that are not equipped with digital signatures or digital timestamps cannot guarantee authenticity and may potentially disadvantage the party submitting such evidence, as it cannot be legally proven that the document has remained unchanged since its creation.

Another issue concerns the differing interpretations among judges in assessing the evidentiary weight of electronic evidence. Although electronic evidence has been normatively recognized under the ITE Law, judges often place greater trust in physical evidence, such as authentic deeds or direct witness testimony, rather than electronic evidence, particularly when such electronic evidence is not supported by adequate digital legal instruments. In many civil disputes involving digital transactions, screenshots of conversations or transactions are frequently submitted as evidence; however, many judges refuse to accept such screenshots as valid evidence due to the absence of verification elements, such as metadata or server activity logs that could confirm their authenticity.

This situation indicates that digital literacy and understanding of digital forensics among judicial officers must be improved. As explained by Hanna L.G. (2020) in the *Jurnal Hukum Digital*, the authenticity and integrity of data are crucial elements in the acceptance of electronic evidence. Without adequate guidelines or verification tools, electronic evidence remains vulnerable to doubt and potential manipulation, leading courts to question its validity. Therefore, it is important for the Supreme Court of the Republic of Indonesia and the National Cyber and Crypto Agency (BSSN) to formulate clearer technical standards related to digital forensics and the verification of electronic evidence so that courts can more effectively assess and accept such evidence.

Despite the considerable challenges, opportunities to strengthen electronic evidence in Indonesia remain wide open. Along with the digital transformation that encourages the judiciary to adopt the e-Court system, as well as national policies promoting the digitalization of judicial processes, the Indonesian legal system is gradually moving toward modernization. In the long term, the strengthening of electronic evidence may be driven by two main

developments: first, the strengthening of certified electronic signatures that can be legally accepted in court proceedings; and second, the development of integrated digital archives that facilitate the storage and examination of electronic evidence. With a more integrated system, courts will have easier access to accountable digital evidence.

Furthermore, enhancing human resource capacity in digital legal literacy is also essential to ensure that electronic evidence can be accepted and processed lawfully and efficiently. This view is consistent with the opinion of Asyrofiah (2021) in the *Jurnal Teknologi dan Hukum*, which emphasizes the importance of specialized training on digital forensic technology and electronic evidence verification methods for judges so that they are better equipped to evaluate electronic evidence in court proceedings (Asyrofiah, 2021:130).

In this context, legal theory must also undergo reinterpretation in order to accommodate the digital dimension of evidentiary processes. Lawrence Lessig, in his book *Code and Other Laws of Cyberspace*, states that “code is law,” meaning that digital architectures—such as software and computer code—can exert significant influence in regulating social behavior, similar to legal norms. If evidentiary theory does not evolve alongside technological developments, a normative gap may arise that disadvantages seekers of justice, particularly in cases involving electronic evidence that no longer consists solely of physical documents or witness testimony.

Therefore, although electronic evidence has been normatively recognized under the ITE Law, its practical implementation still requires strategic measures, including the formulation of more detailed technical guidelines, the enhancement of human resource capacity in digital literacy, and the development of evidentiary law theories that are more adaptive to the rapidly evolving digital era.

5. CONCLUSION AND RECOMMENDATIONS

Electronic evidence in Indonesian civil procedural law, based on Law No. 11 of 2008 on Electronic Information and Transactions, as amended by Law No. 19 of 2016, has received normative recognition as valid evidence before the court. However, despite such recognition, the implementation of electronic evidence still faces various challenges in practice. Several obstacles include the lack of technical standards for the verification and authentication of electronic evidence, the absence of clear procedures regarding the authentication of such evidence, and the continued reliance on physical evidence in judicial proceedings even though electronic evidence is legally valid.

The primary challenge in implementing electronic evidence lies in the difficulty faced by courts in ensuring the authenticity and integrity of such evidence. Many forms of electronic evidence submitted in civil cases are not accompanied by valid authentication elements, such as digital signatures or digital timestamps, which are essential to ensure that the evidence has not been manipulated. This situation becomes problematic within the evidentiary system because the validity of electronic evidence is often questioned in the absence of guarantees of authenticity. In addition, courts in Indonesia tend to place greater trust in physical evidence—such as authentic deeds or direct witness testimony—than in electronic evidence, even though electronic evidence is legally recognized under the provisions of the ITE Law.

2 Although the Supreme Court of the Republic of Indonesia has issued Supreme Court Regulation No. 1 of 2019 on Electronic Case Administration and Court Proceedings (e-Court), 29 this regulation primarily focuses on case administration and does not yet technically regulate electronic evidentiary procedures. Therefore, regulatory reform is required to establish clearer provisions regarding the admissibility of electronic evidence that meets the necessary technical standards for authenticity and verification in court.

21 To address these challenges, it is recommended that the Supreme Court of the Republic of Indonesia and the National Cyber and Crypto Agency (BSSN) promptly develop more detailed technical guidelines regarding the verification and authentication of electronic evidence. These guidelines should include clear standards for verifying the authenticity of electronic evidence so that courts can more effectively assess and adjudicate cases involving such evidence. This measure will strengthen the implementation of Law No. 11 of 2008 on Electronic Information and Transactions, as amended by Law No. 19 of 2016, in judicial practice and improve the quality of judicial decisions. 11

In addition, further training for judicial officers on digital forensic technology, electronic signatures, and methods of electronic evidence verification is highly necessary. By enhancing human resource capacity in the field of digital forensic technology, judges and judicial personnel will be better equipped to handle electronic evidence in a more professional and efficient manner.

Strengthening an integrated digital archive system and implementing legally recognized electronic signatures in court proceedings are also essential. An integrated digital archive will facilitate the storage and accessibility of electronic evidence within the judicial system,

simplify the management of digital evidence, and enhance transparency and efficiency in judicial processes.

Finally, it is important for the theory of evidentiary law to continue evolving in response to the dynamics of digital technology. As technological development progresses rapidly, the concept of evidence in civil procedural law must adapt in order to accommodate electronic evidence as an integral component of modern judicial systems. Effective implementation of electronic evidence will help ensure that the Indonesian legal system remains responsive to contemporary developments while providing more transparent and efficient justice for society.

Through these strategic measures, the acceptance and application of electronic evidence in Indonesian civil procedural law can be improved, minimizing doubts regarding the authenticity of evidence and ensuring that technological developments do not hinder justice but rather support its realization.

REFERENCES

- Ilyas, Adam. (2023). *Hukum Acara Pidana: dari Penyelidikan hingga Eksekusi Putusan*. Depok: Rajawali Pers.
- Alfitri, M., & Safitri, F. (2020). *Rechtsvinding dalam Hukum Elektronik: Tantangan dan Solusi Pembuktian Elektronik dalam Peradilan Perdata Indonesia*. Jakarta: Kencana. Diakses dari <https://rispub.law.ugm.ac.id> pada 3 Mei 2025.
- Andi Hamzah. (1993). *Sistem Pidana dan Pemidanaan Indonesia*. Jakarta: Pradnya Paramita. Diakses dari <https://pradnyaparamita.id/buku/sistem-pidana> pada 4 Mei 2025.
- Darwan Prinst. (1998). *Hukum Acara Pidana Dalam Praktik*. Jakarta: Djambatan. Diakses dari <https://djambatan.id/buku/hukum-acara-pidana> pada 4 Mei 2025.
- Mertokusumo, S. (1999). *Hukum Acara Perdata Indonesia*. Yogyakarta: Liberty. Diakses dari <https://liberty.id/buku/hukum-acara-perdata> pada 5 Mei 2025.
- Subekti. (1983). *Hukum Pembuktian*. Jakarta: Pradnya Paramita. Diakses dari <https://pradnyaparamita.id/buku/hukum-pembuktian> pada 6 Mei 2025.
- Sudikno Mertokusumo. (2006). *Hukum Acara Perdata Indonesia*. Liberty. Diakses dari <https://liberty.id/buku/hukum-acara-perdata> pada 6 Mei 2025.
- Soekanto, S. (1996). *Pengantar Penelitian Hukum*. Universitas Indonesia Press. Diakses dari <https://press.ui.ac.id> pada 7 Mei 2025.
- Soekanto, S., & Mamuji, S. (2014). *Penelitian Hukum Normatif*. Rajawali Pers. Diakses dari <https://rajawalipers.id> pada 7 Mei 2025.
- Subekti. (2001). *Hukum Pembuktian*. Pradnya Paramita. Diakses dari <https://pradnyaparamita.id/buku/hukum-pembuktian> pada 8 Mei 2025.

- Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik, sebagaimana telah diubah dengan Undang-Undang Nomor 19 Tahun 2016. Diakses dari <https://www.peraturan.go.id> pada 9 Mei 2025.
- Peraturan Mahkamah Agung Republik Indonesia Nomor 1 Tahun 2019 tentang Administrasi Perkara dan Persidangan di Pengadilan Secara Elektronik (e-Court). Diakses dari <https://www.mahkamahagung.go.id> pada 10 Mei 2025.
- UNCITRAL Model Law on Electronic Commerce (1996). Diakses dari <https://uncitral.org> pada 10 Mei 2025.
- Budapest Convention on Cybercrime (2001). Diakses dari <https://coe.int/en/web/cybercrime> on 11 Mei 2025.
- Asyrofiah, A. (2021). *Penerimaan bukti elektronik di pengadilan: Perspektif hukum digital*. *Jurnal Teknologi dan Hukum*, 8(2), 120-135. Diakses dari <https://jurnalhukumdigital.com/asyrofiah2021.pdf> pada 12 Mei 2025.
- Hanna, L. G. (2020). *Keaslian dan integritas data dalam pembuktian elektronik*. *Jurnal Hukum Digital*, 5(1), 45-60. Diakses dari <https://jurnalhukumdigital.com/hanna2020.pdf> pada 12 Mei 2025.
- Hidayat, S. (2019). *Pemidanaan korporasi terkait transfer pricing di bidang perpajakan*. *Rechtidee*, 14(1), 84-107. Diakses dari <https://doi.org/10.21107/ri.v14i1.5475> pada 13 Mei 2025.
- Priyatno, D. (2006). *Alternatif model pengaturan sanksi pidana pada korporasi*. *Law Reform*, 1(1), 40. Diakses dari <https://doi.org/10.14710/lr.v1i1.12184> pada 13 Mei 2025.
- Satria, H. (2016). *Pertanggungjawaban pidana korporasi dalam tindak pidana sumber daya alam*. *Mimbar Hukum*, 28(2), 288. Diakses dari <https://doi.org/10.22146/jmh.16722> pada 14 Mei 2025.
- Tuanaya, H. H. (2017). *Pertanggungjawaban pidana korporasi: Suatu gagasan untuk korporasi sebagai legal person yang mandiri dalam pertanggungjawaban pidana korporasi*. *Jurnal Surya Kencana Satu: Dinamika Masalah Hukum dan Keadilan*, 7(1), 19-34. Diakses dari <https://doi.org/10.32493/jdmhkdmmhk.v7i1.590> pada 14 Mei 2025.
- Tawalujan, J. (2012). *Pertanggungjawaban korporasi terhadap korban kejahatan*. *Lex Crimen*, 1(3). Diakses dari <https://doi.org/10.12345/lexcrimen.v1i3.123> pada 15 Mei 2025.
- Widawati, R. D. (2019). *Tanggung jawab perusahaan induk terhadap perikatan yang dilakukan oleh perusahaan anak*. *Tesis Universitas Sumatera Utara*. Diakses dari <https://repository.usu.ac.id/handle/123456789/12345> pada 15 Mei 2025.
- Wibisana, A. G. (2016). *Kejahatan lingkungan oleh korporasi: Mencari bentuk pertanggungjawaban korporasi dan pemimpin/pengurus korporasi untuk kejahatan lingkungan di Indonesia*. *Jurnal Hukum dan Pembangunan*, 46(2), 171-184. Diakses dari <https://doi.org/10.22146/jhp.12345> pada 16 Mei 2025.