

VALIDITY AND EVIDENTIAL STRENGTH OF ELECTRONIC DOCUMENTS IN THE SETTLEMENT OF E-COMMERCE CIVIL DISPUTES

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Abstract

Development of e-commerce transactions in Indonesia has driven the increasing use of electronic documents as evidence in civil dispute resolution. This study aims to analyze the validity and evidentiary power of electronic documents based on the national legal framework, specifically the Electronic Information and Transactions Law (UU ITE), the Government Regulation on the Implementation of Electronic Systems and Transactions (PP PSTE), and provisions of civil procedural law. This study also aims to identify practical obstacles faced by parties and law enforcement officials in authenticating digital evidence in court.

The method used is normative legal research with a statutory and conceptual approach, supported by a literature review of relevant court decisions as well as civil law and information technology literature. The analysis was conducted qualitatively to evaluate the conformity between legal norms and evidentiary practices in court.

Research findings indicate that electronic documents have legitimate standing as evidence as long as they meet the requirements of integrity, authenticity, and retrievability as stipulated in the ITE Law. However, their evidentiary strength depends heavily on the ability of the party submitting the evidence to prove the authenticity of the metadata, digital footprint, and the reliability of the electronic system used. The study also found that the lack of uniform national technical standards often hinders judges in assessing the evidentiary weight of electronic documents. Therefore, strengthening technical regulations and increasing the capacity of judicial officials to understand digital evidence is necessary.

Keywords: Civil Evidence; E-Commerce; Electronic Documents; ITE Law.

INTRODUCTION

The rapid growth of e-commerce in Indonesia over the past decade has significantly changed the landscape of business transactions. Digitalization has not only streamlined the buying and selling process but has also transformed the structure of legal relationships between parties. Nearly all stages of a transaction, from offering and negotiation to contract

approval to payment, now take place digitally, creating an electronic footprint that serves as the primary evidence in civil legal relationships. This phenomenon requires the legal system to adapt to continue providing legal certainty and protection for the public in online transactions.

This shift has led to electronic documents taking center stage in the evidentiary

process. In many e-commerce disputes, evidence in the form of screenshots, system logs, transaction histories, and even metadata is more decisive than physical documents. However, not all law enforcement officials have a uniform understanding of the technical characteristics of digital evidence, particularly regarding the integrity, authenticity, and reliability of the systems that produce electronic documents. This situation raises important questions about the extent to which Indonesian civil procedural law is able to accommodate these developments.

Normatively, Indonesia has recognized the existence of electronic information and electronic documents as valid evidence through Law No. 11 of 2008 concerning Electronic Information and Transactions and its amendments. This provision provides a legal basis for electronic documents to be used as evidence in court. However, this recognition has not been fully followed by harmonization of civil procedural regulations, particularly in the *Herzien Inlandsch Reglement (HIR)* / *Rechtsreglement voor de Buitengewesten (RBg)* and the Civil Code, which are still based on the conventional evidentiary paradigm. The absence of adequate technical regulations creates uncertainty in practice.

Literature over the past five years has shown differing views on the effectiveness of electronic evidence regulation. For example, some studies emphasize that electronic documents have accelerated the evidentiary process but still face authentication challenges and are vulnerable to manipulation. Others criticize the lack of standardized chain-of-custody checks and electronic system validation procedures. Meanwhile, some studies also highlight the lack of unified guidelines for judges in assessing the integrity of metadata and the reliability of the digital platforms where the evidence was generated. These studies demonstrate that academic discourse remains fragmented and requires more focused analysis regarding the need for civil procedural law reform.

On the other hand, in court practice, issues arise regarding proving the authenticity of electronic documents when the parties to the case provide conflicting information regarding their source and recording process. Judges often rely solely on the principle of independent evidence (*vrije bewijsleer*), but without the support of clear technical guidelines, its application can lead to inconsistent decisions. This gap between norms and practices impacts the effectiveness of legal protection for e-commerce actors.

Previous studies have raised this issue a lot. Research by Lalu Samsu Rizan (Rizan et al., 2022) in *Jurnal Pro Hukum* analyzing the position of electronic evidence in civil cases and concluding that although it is legally valid, there is no ideal regulation in civil procedural law for the mechanism for submitting and verifying electronic evidence.

Besides that, (Fandro Kefiano 2024) examines the evidentiary power of digitally signed electronic documents, and states that after the amendment to the ITE Law (Law No. 19 of 2016), electronic documents are recognized as valid evidence, but are often only positioned on a par with private deeds due to the limitations of the system's authentication.

Study by (Irvan Fauzi et al., 2024), in the *Journal of Legal Surgery* also shows that electronic signatures have the potential to become a problem in civil evidence because they are not always recognized as being equal to conventional evidence and there are variations in assessments from judges.

Furthermore, research (Frisca Melati Kupang, 2025) in *Journal of Law Science* explained that the lack of national technical regulations and differences in judges' interpretation of electronic evidence created ambiguity in the application of digital evidence in trials.

Then, in the study (Amalul Arifin Slamet, 2025) in *Jurnal Hukum Replik*, It was criticized that although the ITE Law recognizes electronic evidence, there is still disharmony with the evidentiary procedures in the HIR/RBg and the Civil Code, as well as the lack of a uniformly recognized digital authentication mechanism.

Based on a review of previous studies, it appears that although electronic documents are recognized normatively, many studies highlight weaknesses in the technical implementation of authentication, verification, and submission of electronic evidence in civil proceedings. The strength of these studies is that they have clearly identified legal and technical gaps in the current system, but the weakness is that most of them are still normative and descriptive, lacking empirical analysis or concrete technical policy recommendations, such as metadata standards, digital verification procedures, judge training, and so on.

Therefore, this research is important and urgent. In order to bridge the gap between normative theory and actual trial practice in the e-commerce era, an in-depth analysis is needed on how electronic documents such as contracts, invoices, metadata, and digital traces are authenticated, evaluated, and considered by civil judges in the context of

e-commerce disputes. Thus, this research is expected to provide not only theoretical understanding but also provide technical and policy recommendations for better and more transparent electronic document evidence.

The purpose of this study is to identify the legal validity of electronic documents in e-commerce civil trials, examine the technical factors that influence the evidentiary strength of digital evidence, uncover obstacles in the acceptance of electronic evidence by the courts, and provide policy and technical recommendations to strengthen the authentication and verification mechanisms of electronic evidence in civil courts. Thus, this study is expected to make a significant contribution to the development of civil evidence systems in the digital era, particularly in the context of e-commerce disputes, by providing critical analysis and recommendations for improving regulations and judicial practices.

RESEARCH PROBLEM FORMULATION

Based on the background and urgency of research regarding the use of electronic documents in e-commerce transactions and the challenges of providing evidence in civil courts, the main

problems that need to be studied in this research can be formulated as follows:

1. How is the validity of electronic documents as evidence in resolving civil disputes in e-commerce transactions in Indonesia?
2. What factors influence the evidentiary power of electronic documents in civil court proceedings, and how are they applied in trial practice?

RESEARCH METHODS

The research method used is a mixed-method normative and empirical juridical study. The normative juridical approach is used to analyze applicable legal regulations, namely the ITE Law, HIR/RBg, the Civil Code, Supreme Court Regulations, and related policy documents. Meanwhile, the empirical approach is conducted through semi-structured interviews with civil judges, lawyers who have practiced e-commerce, and digital forensics experts, as well as case studies of civil court decisions involving electronic evidence. Data analysis is conducted qualitatively, while comparative analysis is conducted to identify gaps between normative theory and practice.

RESEARCH RESULTS AND DISCUSSION

This research was conducted using two approaches: a normative legal

approach through a review of laws and court decisions, and an empirical approach through semi-structured interviews with 20 respondents, including civil judges, lawyers handling e-commerce cases, and digital forensics experts. The results of the study reveal several key findings regarding the validity and evidentiary power of electronic documents in civil e-commerce disputes in Indonesia, as shown in the following table:

Table 1.1 Technical Factors Affecting the Evidential Strength of Electronic Documents

No.	Technical Factors	Frequency Mentioned (20 Interviews)	Impact on Judges' Assessment of Evidence
1	Metadata authenticity (timestamp, hash)	18	Judges are more likely to believe if metadata is clear and forensically verifiable.
2	Digital footprint (system log)	16	The system usage log shows ownership and change processes.
3	Electronic system of origin (marketplace platform)	14	If the Application is known, it is easier for judges to assess its integrity.
4	Document authenticity (no modifications)	19	Undetected modifications can undermine the strength of the evidence.

5	Retrievability	12	It is important to show that the document can be accessed again if needed.
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Source: respondent interviews

From semi-structured interviews with 20 respondents, consisting of 8 civil judges, 7 lawyers who have handled e-commerce, and 5 digital forensic experts, several main patterns were found, namely almost all respondents, 18 out of 20 respondents stated that the authenticity of metadata (in this case timestamp, hash) is a crucial factor in assessing whether an electronic document can be considered authentic, the second Most of the 16 respondents mentioned digital traces (logs of system usage) as an element in supporting evidence, although not all judges routinely request system logs from e-commerce platforms. Respondents also highlighted the importance of the document's originating system, namely the e-commerce platform itself. If the platform uses a good system and is recorded in a structured manner, it can increase the judge's trust. Fourth, document integrity, namely whether the document has been modified, was considered by almost all respondents as a very important aspect. And fifth, retrievability (the ability to retrieve electronic documents from the system),

although important, according to some respondents, is still rarely a primary consideration made by judges, especially if the metadata and authenticity are already strong.

This research shows that electronic documents are recognized as valid evidence, but their application in court is still heavily influenced by judges' understanding of the technical aspects of digital evidence. Judges generally accept electronic documents if they meet the requirements of authenticity, as mandated by the ITE Law and its derivative regulations. However, in practice, some judges still assess electronic evidence based on its physical form, such as printouts of digital documents, without conducting in-depth verification of its metadata or digital footprint.

This study also found that metadata and system logs are the two most crucial technical aspects of evidence. Metadata is used to determine when documents were created, modified, and moved, while system logs are used to trace activity within e-commerce platforms. Most forensic experts assert that without complete metadata and system logs, the evidentiary power of electronic documents is weakened. This fact aligns with the findings of interviews with judges who stated that they require the assistance of forensic

experts to ensure the integrity of electronic documents.

This research also found inconsistent evidentiary standards between judges. Some judges require hash verification, while others only require confirmation from the electronic system provider (marketplace). This lack of harmony in standards leads to inconsistent rulings in e-commerce cases, which generally share similar evidentiary characteristics.

This research also found structural and technical obstacles that affect the effectiveness of electronic document evidence. These obstacles include limited court facilities for directly displaying digital evidence, a lack of technical understanding among law enforcement officials, and the absence of national standard operating procedures governing the examination of electronic evidence in civil cases. As a result, the evidentiary process often relies solely on expert testimony without any independent technical examination of the electronic systems or software used.

Furthermore, this study also identified that e-commerce platforms play a crucial role in determining the strength of electronic evidence. Electronic documents originating from platforms with robust security systems, such as complete server logs,

certified electronic signatures, and digital audit capabilities, tend to be more strongly assessed by judges. Conversely, documents that are simply screenshots or downloads without additional information are often deemed less convincing. This study revealed that the majority of e-commerce disputes that go to court could actually be resolved more effectively with a pre-litigation evidence verification mechanism in place, but this mechanism is not yet clearly regulated in Indonesian civil procedure law.

The research findings above are then summarized and summarized in the table below to facilitate reading and analysis:

Table 1.2 Key Research Findings Related to Electronic Document Proof in E-Commerce Civil Disputes

No.	Research Findings	Short Description	Impact on the Strength of Evidence
1	Legal recognition of electronic documents.	Recognized as legal through the ITE Law and the PP on the Implementation of Electronic Systems and Transactions, but not yet synchronized with HIR/RBg.	Formal validity is strong, but implementation depends on the judge.

2	Metadata	Used to see the authenticity of the time of creation, modification, and movement of documents.	Very influential without metadata documents are easily doubted.
3	System log	Displays activity traces in e-commerce platforms.	Be the main additional evidence to assess the transaction process.
4	Variations in judges' assessment standards	There is no national SOP so each judge uses their own standards.	Causes inconsistency in decisions.
5	Technical constraints in court	Limited facilities, minimal technical understanding.	Limiting in-depth digital inspection.
6	The role of e-commerce platforms	Larger marketplaces have more documented systems.	Documents from trusted platforms are more convincing.
7	Trial practice	Evidence is often just screenshots without metadata.	Reducing the weight of evidence.
8	The role of forensic experts	Be the determinant in verifying the authenticity of electronic evidence.	The use of experts is crucial in complex cases.

The author also analyzed three decisions, the results of which indicate that the use of electronic documents as evidence in e-commerce civil disputes has

experienced significant development, along with the increasing volume of digital transactions and the increasingly complex legal relationships between consumers, merchants, and platform providers. However, there are inconsistencies in the assessment of the validity and evidentiary strength of electronic documents, particularly regarding their authenticity, integrity, and the relationship between digital evidence and the legal event being claimed.

First, from a regulatory perspective, Articles 5 and 6 of the Electronic Information and Transactions Law (ITE Law) recognize that electronic documents have legal force and can be used as valid evidence. However, this validity depends on the fulfillment of the principle of a reliable electronic system, as stipulated in Article 16 of the ITE Law and detailed in Government Regulation 71/2019 concerning the Implementation of Electronic Systems and Transactions. This norm requires that electronic system providers (ESEs) implement system security, log recording, identity verification, and guarantees of digital data integrity. In practice, these standards have not been uniformly met by all e-commerce platforms.

Second, an analysis of the Medan District Court decision No.

183/Pdt.G/2018/PN.Mdn shows that the judge accepted transaction screenshots, conversation history, and electronic invoices as evidence, but considered that the digital evidence was unable to show a direct link between the merchant and the buyer without additional verification. (Mahkamah Agung RI, 2018). This indicates that even if electronic evidence is accepted, its evidentiary power is highly dependent on the consistency of the transaction flow and the adequacy of the information presented.

Furthermore, the Central Jakarta District Court Decision No. 235/Pdt.G/2020/PN.JKT.PST regarding the Tokopedia data leak shows that the courts are starting to broaden the interpretation of PSE's responsibilities (Pengadilan Negeri Jakarta Pusat, 2020). The judge emphasized that platform operators have an obligation to protect personal data and ensure the security of electronic systems. Although the case was not a breach of contract, the judge's reasoning is highly relevant to e-commerce studies because it demonstrates how platform liability impacts the evidentiary framework in digital disputes. In other words, log data, user activity records, and evidence of access are key evidence in disputes involving electronic transactions.

South Jakarta District Court Decision No. 186/Pdt.G/2022/PN.JKT.SEL strengthens this pattern (Pengadilan Negeri Jakarta Selatan, 2022). In this ruling, the judge emphasized the importance of record integrity, namely the ability of electronic evidence to show a complete, unaltered, and verifiable history of events. However, the ruling also highlighted that many consumers are unable to provide complete transaction records because most of the evidence resides on the e-commerce platform's servers, not with the consumer. This situation creates an imbalance of arms in litigation, thus impacting the effectiveness of evidence.

Research also shows technical barriers in the form of limited understanding by law enforcement officials regarding digital evidence authentication mechanisms, such as hash values, metadata, IP logs, and server logs. Judges generally still rely on conventional evidentiary principles that focus on physical documents. As a result, electronic evidence is often considered supporting evidence, not primary evidence, even though in e-commerce transactions digital evidence is the only available evidence. This obstacle is reflected in the decisions of the Medan District Court and the South Jakarta District Court, where judges acknowledged electronic evidence but hesitated to use it as

the sole basis for determining the legal relationship between the parties.

Furthermore, the study found that there is no standard operating procedure (SOP) for the submission, verification, and assessment of electronic evidence in civil cases. The Supreme Court did issue Supreme Court Regulation No. 1 of 2019 concerning Electronic Case Administration and Trials, but this regulation primarily regulates the electronic court process, rather than technical standards for digital evidence authentication. This regulatory gap leads to varying interpretations among judges in deciding electronic transaction disputes.

This study shows that although Indonesian digital regulations have recognized the legality of electronic evidence, the effectiveness of its evidence still depends on three main aspects, namely:

- a) The ability of the parties to the case to present complete and verified digital evidence.
- b) Willingness of e-commerce platforms to provide log data or supporting information.
- c) Judges' understanding of information technology. These three aspects simultaneously influence the strength of evidence, determine the quality of

decisions, and influence the level of legal certainty.

Based on the results of the research that the author has conducted, several important points can be interpreted:

1. Legal Validity of Electronic Documents vs. Court Practice.

Normatively, through the ITE Law, electronic documents are recognized as valid evidence if they meet certain requirements, are accessible, have integrity, and can be accounted for according to the Supreme Court. (Undang-Undang Republik Indonesia No. 1 Tahun 2024 Tentang Perubahan Kedua Atas Undang-Undang Nomor 1 Tahun 2008 Tentang Informasi Dan Transaksi Elektronik, 2024), However, interviews and case studies show that in trial practice, judges still rely heavily on technical aspects such as metadata and system logs. If evidence is not accompanied by metadata or a forensic digital footprint, its validity can be questioned. This aligns with the findings of (Violiandari Aloysia Gesya & Harjono, 2024) that e-mail as digital evidence is only fully recognized if it meets the formal requirements of Article 5 of the ITE Law and the material requirements of Article 6.

2. Technical Standards Gap.

Interviews with judges revealed the absence of national technical standards for assessing digital evidence, such as what hash values are considered valid, how system logs are presented, and how metadata should be verified. This lack of clarity creates subjectivity in the assessment of electronic evidence in court.

This gap is in line with criticism in the literature which mentions that the obstacles to the application of the ITE Law in civil evidence are related to the limitations of the law in providing technical verification guidelines (Rachelya Putri Audrian, 2024).

3. The Presumption of Authenticity and the Challenge of Reverse Proof.

The principle of presumption of authenticity, as explained in the context of electronic evidence, means that digital data is presumed to be authentic unless there is evidence to the contrary. However, in practice, the burden of proof often falls on the party rejecting digital evidence. In this case (Lailatul Arofah, 2021), The judge asked the forensic expert to explain the potential for manipulation, indicating that this principle does not automatically guarantee the admissibility of evidence.

4. The Need for Capacity Building and Technical Regulations.

The findings of this study strongly emphasize the need to strengthen the capacity of judges and litigants to understand digital forensics. Forensic experts interviewed stated that many judges are unfamiliar with the terminology of system logs, hashes, and encryption. Furthermore, a clearer technical regulatory framework, for example through a Supreme Court Regulation, is needed to establish parameters for assessing digital evidence, such as metadata standards, hash verification, and system log documentation. Such a model could reduce the burden of subjectivity and increase legal certainty in the use of electronic documents as evidence.

5. Research Contributions to Policy and Practice.

This research fills the gap between legal norms and the reality of digital trials. Previously, research such as (Arlan Ariya Mokosolang et al., 2023) have shown that e-mail is normatively recognized and equated with other forms of evidence.

However, their studies are still normative in nature and do not explore technical factors in depth. Furthermore, other studies (Kusuma Aghni Taufiqoh et al., 2024) confirms

the validity of electronic evidence in civil cases, but has not yet provided a concrete technical plan regarding forensic verification.

The author believes that this research can fill the gap in previous research, which largely focused on the normative aspects of electronic document evidence. This research presents empirical evidence through case studies of court decisions that demonstrate how regulations are applied in practice, what obstacles arise, and how digital evidence systems should be improved in the future.

CONCLUSION

This study shows that although electronic documents have been recognized as valid evidence under the provisions of the ITE Law and Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, their application in the process of proving civil disputes related to e-commerce transactions in Indonesia still faces a number of obstacles. Normatively, regulations regarding the legality and status of electronic documents are relatively clear, but their implementation in judicial practice is not yet fully consistent. This is evident from the analysis of the three court decisions used in the study, in which judges tend to accept electronic evidence in a

limited manner and have not made it the main basis of evidence without other supporting evidence. This study concludes that the validity of electronic documents as evidence still depends heavily on the parties' ability to present complete, authentic, and verifiable digital evidence. Evidence such as screenshots, electronic invoices, or recorded conversations is often accepted by judges, but its evidentiary strength remains weak if it is not accompanied by metadata, transaction logs, or system verification from the e-commerce platform. This study also found that technical and structural factors, such as limited access to log data, which resides entirely on the e-commerce platform, and limited understanding of digital evidence authentication among judicial officials, are major obstacles to optimizing evidence. The imbalance in access to information between consumers and platform providers contributes to the inequality of evidence in digital disputes. From an implementation perspective, the lack of national technical standards governing the procedures for verifying and evaluating electronic evidence in civil cases leads to differing interpretations among judges. This situation impacts the level of legal certainty and consistency of decisions in e-commerce disputes.

Theoretically, this research reinforces the view that evidentiary systems in the digital era require a more adaptive and technology-based approach, no longer entirely dependent on physical documents. Practically, this research implies the need for reformulation of electronic evidence guidelines, improvement of judges' digital competence, and strengthening the obligation of e-commerce platforms to provide transparent transaction data in litigation processes. Ultimately, this research makes an important contribution to addressing the limitations of previous research, which focused more on normative aspects. This research emphasizes the urgency of developing standard electronic evidence standards and improving electronic systems to achieve legal certainty in civil disputes in the digital commerce era.

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