



## Cyber Notary and Legal Certainty: Reconstructing the Role of Notaries in Digital Transactions in Indonesia

Muhammad Rizki Probo Nugroho <sup>a,1,\*</sup>

<sup>a</sup> Magister Kenotariatan Fakultas Hukum Universitas Surabaya, Indonesia

<sup>1</sup> 124225019@student.ubaya.ac.id

\* corresponding author

### ARTICLE INFO

#### Article history

Received: 04 January 2026

Revised: 26 January 2026

Accepted: 30 January 2026

#### Keywords

Notary;  
Cyber Notary;  
Authentic Act;  
Electronic Act;  
Legal Certainty

### ABSTRACT

*The integration of information technology into notarial practice commonly referred to as cyber notary has encountered fundamental challenges within the Indonesian legal system, particularly due to normative tensions between the Law on Notarial Office, which requires physical presence, and the Law on Electronic Information and Transactions, which embraces digital flexibility. This study examines the extent of legal certainty afforded to digital deeds and seeks to reconstruct the role of notaries in ensuring the validity and authenticity of electronic transactions. This research employs a normative juridical method, utilizing statutory and conceptual approaches to critically reassess the function of notaries within Indonesia's evolving digital transaction framework. The findings reveal that the absence of specific and technical regulatory instruments has resulted in a degradation of evidentiary strength, whereby digital deeds that should possess the status of authentic instruments are effectively equated with private deeds. Such regulatory gaps generate legal uncertainty that may impede the development of the digital economy. Accordingly, this study underscores the urgent need for a clear and integrated regulatory framework to optimize the notarial function in the digital era. It concludes that the traditional concept of physical appearance must be reconceptualized to encompass verified virtual interactions supported by stringent digital security standards. As a policy recommendation, the study advocates for regulatory harmonization through the adoption of integrated verification systems that strengthen the notary's role in guaranteeing identity validity and the genuine intent of the parties in digital transactions.*

This is an open access article under the [CC-BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/) license.



## 1. Introduction

Technological advancement has increasingly compelled notarial institutions traditionally grounded in the principle of physical document presence to adapt to the efficiency demands of cyberspace.<sup>1</sup> However, the integration of technology into notarial practice raises fundamental legal concerns regarding the continued existence and authority of authentic deeds within contemporary legal disputes.<sup>2</sup> Within the Indonesian legal framework, a normative tension arises between the formal requirement of physical presence as a prerequisite for material legality under the Law on the Office of Notary (Undang-Undang Jabatan Notaris - UUNJ) and the Law on Electronic Information and Transactions (Undang-Undang Informasi dan Transaksi Elektronik - ITE Law), which expressly recognizes the legal validity of digital documents.<sup>3</sup> This tension transcends mere administrative discrepancies and generates a fundamental ambiguity concerning the probative force of authentic deeds when physical presence is substituted by electronic interaction. Such ambiguity becomes critical when the absence of face-to-face meetings potentially reduces the notary's role to that of a mere verifier, rather than a guarantor of the parties' free and informed consent.

Notarial services are therefore increasingly required to adapt to the dynamics of digitalization. This development has given rise to the concept of cyber notary, defined as the execution of notarial duties through the utilization of information technology, including electronic signatures and online identity verification mechanisms.<sup>4</sup> The enactment of the ITE Law aims to enhance the efficiency and effectiveness of public services through technological advancement.<sup>5</sup> Nevertheless, empirical realities indicate that the regulatory framework governing cyber notary practices in Indonesia remains inadequate. Notarial deeds produced through cyber notary mechanisms do not yet possess evidentiary strength equivalent to conventional deeds, as they fail to fully satisfy the statutory requirements of authenticity under prevailing legal provisions.<sup>6</sup> Other studies further reveal that the implementation of cyber notary systems entails significant legal and technical risks, particularly with respect to data verification, electronic signatures, and safeguards against

---

<sup>1</sup> Ekaterina Rusakova and Tatyana Chernysheva, "The Development Of Digital Notary Production As A New Opportunity For Transparency Of The Judicial Process And Civil Turnover In African Countries: Using The Example Of Nigeria," *Russian Law Journal* 12, no. 1 (2024): 829–37.

<sup>2</sup> Wiji Achmat Efendi and Rusdianto Sesung, "Transformation of the Notary's Role in Electronic Deed Regulations Based on Digital Technology," *Journal of Law, Politic and Humanities* 5, no. 5 (2025): 3764–72, <https://doi.org/10.38035/jlph.v5i5.1946>.

<sup>3</sup> Ikhsan Lubis et al., "Penetration Of International Economic Law In The Development Of The Cyber Notary Concept In Indonesia," *Al-Risalah: Forum Kajian Hukum Dan Sosial Kemasyarakatan* 22, no. 1 (2022): 125–38, <https://doi.org/10.30631/alrisalah.v22i1.868>.

<sup>4</sup> Ika Yuli Agustin and Ghansham Anand, "Proposing Notaries' Deed Digitalization in Indonesia: A Legal Perspective," *Lentera Hukum* 8, no. 1 (2021): 49–72, <https://doi.org/10.19184/ejhl.v8i1.21375>.

<sup>5</sup> Ainun Najib, "Perlindungan Hukum Keamanan Data Cyber Notary Berdasarkan Undang-Undang Perlindungan Data Pribadi," *ACTA DIURNAL Jurnal Ilmu Hukum Kenotariatan* 7, no. 1 (2023): 43–59, <https://doi.org/10.23920/acta.v7i1.1680>.

<sup>6</sup> Wardani Rizkianti et al., "Cyber Notary Di Indonesia: Tantangan, Peluang Dan Kebutuhan Rekonstruksi Hukum," *Notaire* 8, no. 1 (2025): 123–140, <https://doi.org/10.20473/ntr.v8i1.67806>.

the misuse of digital documents.<sup>7</sup> In the absence of clear regulations and authoritative guidelines within the Indonesian legal system, technological adaptation in notarial practice risks generating uncertainty regarding the legal force of the resulting deeds.

From a comparative perspective, several civil law jurisdictions such as Ukraine, France, Romania, and Estonia have successfully transformed their notarial systems through the regulated adoption of cyber notary frameworks, supported by stringent rules on biometric identification and secure electronic signature authentication.<sup>8</sup> In contrast, Indonesia continues to experience a regulatory vacuum in this area. Although the concept of cyber notary has long been introduced in policy discourse, the existing regulatory framework remains fragmented and unsynchronized, resulting in technical stagnation.<sup>9</sup> This situation places Indonesian notaries in a structural dilemma: they are expected to adapt to the rapid growth of electronic transactions, yet remain constrained by a legal regime that has not formally recognized digital procedures as substitutes for conventional mechanisms.

To date, a substantial body of scholarship has addressed cyber notary issues. However, much of the existing literature merely explores the potential benefits of technological implementation or examines the general validity of electronic documents.<sup>10</sup> Lubis et al. focus primarily on the role of cyber notaries in legalizing electronic documents within the development of Indonesia's economic law (Lubis et al., 2023), while Farhan et al. emphasize the urgency and legal certainty of notarial authority in electronically legalizing transactions.<sup>11</sup> while Farhan et al. emphasize the urgency and legal certainty of notarial authority in electronically legalizing transactions.<sup>12</sup> Meanwhile, Rai et al. concentrate on technological integration aimed at enhancing data security and privacy within energy applications.<sup>13</sup> Studies that specifically analyze the juridical consequences of

---

<sup>7</sup> Indri Meiliawati Zulfikar, "Digitalisasi Akta Notaris Sebagai Tantangan Dan Peluang Dalam Menjaga Keutuhan Dokumen Hukum," *Lex Lectio: Jurnal Kajian Hukum* 3, no. 2 (2024), <https://doi.org/10.61715/jll.v3i2.94>.

<sup>8</sup> Oleksii Poliakov, "Administrative and Legal Framework for the Introduction of the Electronic Notarial System in Ukraine," *Visegrad Journal on Human Rights*, no. 4 (2024): 79–86, <https://doi.org/10.61345/1339-7915.2024.4.11>; Mihaela Agheniței, "Global Notarial Digitalization," *Acta Universitatis Danubius. Juridica* 18, no. 2 (2022): 149–67, <https://www.ceeol.com/search/article-detail?id=1180431>; Konglin Zhu et al., "Blockchain-Based Digital Asset Circulation: A Survey and Future Challenges," *Symmetry*, 2024, <https://doi.org/10.3390/sym16101287>.

<sup>9</sup> Ardiansyah Fahmi and Anas Luthfi, "Legal Study on the Validity of Electronic Notarial Deeds in Indonesia: Regulatory Analysis and Practical Implications," *Journal of Public Representative and Society Provision* 5, no. 2 (2025): 397–406, <https://doi.org/10.55885/jprsp.v5i2.544>.

<sup>10</sup> Neilpon Yulinar Marquez, Hono Sejati, and Mohamad Tohari, "Validity of Digital Signature Evidence as Valid Evidence in Civil Procedure Law," *UNES Law Review* 6, no. 4 (2024): 11442–48, <https://doi.org/10.31933/unesrev.v6i4.2163>.

<sup>11</sup> Ikhsan Lubis et al., "Cyber Notary as A Mean of Indonesian Economic Law Development," *Sriwijaya Law Review* 7, no. 1 (2023): 62–72, <https://doi.org/10.28946/slrev.Vol7.Iss1.1972.pp62-72>.

<sup>12</sup> Rafiq Zahra Farhan, Azmi Fendri, and Yussy Adelina Mannas, "The Legal Study on Notary Authority in Certifying Electronic Transactions (Cyber Notary)," *Andalas Notary Journal* 2, no. 1 (2025): 25–39, <https://anj.fhuk.unand.ac.id/index.php/anj/article/view/66>.

<sup>13</sup> Hari Mohan Rai et al., "Enhancing Data Security and Privacy in Energy Applications: Integrating IoT and Blockchain Technologies," *Heliyon*, 2024, <https://doi.org/10.1016/j.heliyon.2024.e38917>.

transforming the form of notarial deeds—particularly the degradation of their evidentiary value under Indonesian law when assessed against international standards—remain scarce. This study seeks to address this gap by evaluating the weaknesses of the current regulatory framework in accommodating cyber notary practices and reconstructing the concept of deed authenticity in a manner that responds to technological advancement without compromising security and the notarial principle of prudence.

This research is particularly significant given that stagnation in notarial law has direct implications for the acceleration of Indonesia's digital economy. Amid ongoing efforts to improve national competitiveness and attract foreign investment, legal uncertainty surrounding the validity of electronic deeds constitutes a critical technical barrier.<sup>14</sup> The absence of clear legal certainty increases the likelihood of deed annulment in judicial proceedings and may undermine public trust in the notarial institution.<sup>15</sup> If the disharmony between the UUJN and the demands of digital systems remains unaddressed, the preventive function of notaries in civil dispute resolution risks becoming increasingly weakened.<sup>16</sup> Accordingly, this study is urgently required to mitigate legal uncertainty in electronic transaction practices in Indonesia through a reconstruction of the notary's role.

Based on these considerations, this research goes beyond a descriptive account of notarial functions and instead addresses fundamental legal issues through an analytical and constructive approach. First, it examines the legal construction of cyber notary-based deeds to assess their compatibility with the UUJN and the potential equivalence between digital and conventional deeds. Second, it analyzes the scope of notarial authority and responsibility in verifying the identity and intent of parties within virtual environments as a means of preventing future repudiation. By addressing these core issues, this study offers a conceptual contribution through the reconstruction of the appearance (*menghadap*) doctrine in contemporary notarial law and proposes an integrative regulatory alternative aimed at ensuring legal certainty, particularly for users of cross-jurisdictional notarial services.

## 2. Legal Material and Methods

This study constitutes normative legal research, aimed at identifying coherence-based legal truth, namely assessing whether a legal rule is consistent with legal norms, whether prescriptive or prohibitive norms conform to underlying legal principles, and

---

<sup>14</sup> Benny Hutahayan et al., "Investment Decision, Legal Certainty and Its Determinant Factors: Evidence from the Indonesia Stock Exchange," *Cogent Business and Management* 11, no. 1 (2024), <https://doi.org/10.1080/23311975.2024.2332950>; Joko T. Suroso, Dani Durahman, and Indra Budi, "The Simplification of Licensing Procedure in Job Creation Law: The Effectiveness to Attract Foreign Investor," *Cogent Social Sciences* 10, no. 1 (2024), <https://doi.org/10.1080/23311886.2024.2414509>.

<sup>15</sup> Esse Herliyan, Endang Sutrisno, and I. Gede Pantja Astawa, "Digitalization Of Notary Services Towards Legal Certainty For The Parties In Making Deeds," *Veredas Do Direito* 22, no. 6 (2025), <https://doi.org/10.18623/rvd.v22.n6.3573>.

<sup>16</sup> Stefan Koos, "The Digitization of Notarial Tasks-A Comparative Overview and Outlook of 'Cyber Notary' In Indonesia and Germany," *The Indonesian Journal of Socio-Legal Studies* 2, no. 2 (2023): 1–26, <https://doi.org/10.54828/ijsls.2023v2n2.1>.

---

whether human actions (acts) align with normative standards rather than merely with positive legal provisions.<sup>17</sup> The research is descriptive in nature, presenting a systematic analysis of the strategic role of notaries in digital transactions in Indonesia and evaluating the degree of legal certainty provided within the existing legal framework. The methodological approach combines a formal juridical approach and a conceptual approach. The formal juridical approach examines statutory instruments governing notarial duties and authority, as well as regulations on electronic transactions. Meanwhile, the conceptual approach seeks to reconstruct the role of notaries in electronic transactions in Indonesia through a critical interpretation of prevailing regulations and legal doctrines.

The legal materials employed in this study consist of primary and secondary legal sources. Primary legal materials include binding statutory regulations, namely Law No. 2 of 2014 on the Amendment to Law No. 30 of 2004 concerning the Office of Notary (Undang-Undang Jabatan Notaris - UUJN) and Law No. 11 of 2008 on Electronic Information and Transactions (Undang-Undang Informasi dan Transaksi Elektronik - ITE Law). Secondary legal materials comprise scholarly sources, including textbooks and peer-reviewed legal journal articles relevant to the issues under examination, particularly those addressing the role of notaries in the drafting of contractual deeds to ensure legal certainty and legal protection within cyber notary practices. Data were processed and analyzed using a descriptive qualitative method through three analytical stages: data reduction, data presentation, and conclusion drawing. This analytical process enables the findings to be clearly articulated and systematically linked to the research hypotheses. The results of the analysis ultimately generate a new conceptual framework for understanding the role and authority of notaries in digital transactions in Indonesia, as well as the scope of legal protection afforded thereto.

### 3. Results and Discussion

#### 3.1. Normative Disharmony and Juridical Implications for the Evidentiary Force of Cyber Notary–Based Deeds

The implementation of cyber notary practices in Indonesia currently faces a critical regulatory conflict between the Law on the Office of Notary (UUJN) and the Law on Electronic Information and Transactions (ITE Law).<sup>18</sup> Article 16 paragraph (1) letter (m) of the UUJN mandates that notaries read deeds before the appearing parties in the context of physical presence. This requirement reflects the principle of prudence aimed at ensuring that the parties fully understand the contents of the deed. Conversely, Article 5 paragraph (1) of the ITE Law recognizes electronic information as legally admissible evidence, while Article 5 paragraph (4) explicitly excludes deeds that are required by law to be made in written form and authentic deeds. This regulatory dualism generates significant legal

---

<sup>17</sup> Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana, 2017).

<sup>18</sup> Lubis et al., “Penetration Of International Economic Law In The Development Of The Cyber Notary Concept In Indonesia.”

uncertainty, as technological progress enables more efficient virtual transactions, yet notarial regulations fail to formally recognize their validity.

From the perspective of Gustav Radbruch's theory of legal certainty, law is required to embody at least three fundamental values: justice, utility, and certainty.<sup>19</sup> The absence of specific regulation governing cyber notary practices in Indonesia reflects a degradation of the element of legal certainty.<sup>20</sup> The lack of technically integrated procedures within the UUJN places notaries in a structural dilemma.<sup>21</sup> Where a notarial deed is executed virtually without physical presence, such a deed violates the formal procedural requirements stipulated in Article 1868 of the Indonesian Civil Code (Kitab Undang-Undang Hukum Perdata - KUHPerdata). The violation of these formal requirements results in the loss of the deed's authenticity and weakens its evidentiary force, effectively reducing it to a private deed.

An analysis grounded in civil evidentiary theory demonstrates the existence of substantial risks for the parties involved.<sup>22</sup> Authentic deeds possess perfect evidentiary force in their formal, outward, and material aspects.<sup>23</sup> This means that the truth of such deeds is presumed and binding upon judges, unless rebutted by exceptionally strong counter-evidence. However, where cyber notary procedures are implemented without due regard to the principle of *lex specialis*, electronic deeds become vulnerable to judicial repudiation. In the absence of physical meetings, judges may conclude that the notary is unable to fully guarantee that the appearing parties acted freely and without coercion or undue influence at the time of executing the electronic deed.<sup>24</sup>

These regulatory weaknesses become more pronounced when examined in relation to the notary's function as a public official responsible for ensuring the accuracy of identity verification and the legal capacity of the parties. Through direct physical encounters, notaries are able to conduct visual validation and assess the demeanor of the appearing

---

<sup>19</sup> Martin Borowski, "Gustav Radbruch's Theory of Legal Obligation," in *Law and Philosophy Library*, vol. 146, 2024, 99–122, [https://doi.org/10.1007/978-3-031-54067-7\\_5](https://doi.org/10.1007/978-3-031-54067-7_5); Supeno Supeno and Herma Yanti, "Regulations Concerning International Arbitral Awards in Indonesia: An Approach to the Theory of Legal Values by Gustav Radbruch," *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 12, no. 2 (2022): 298–325, <https://doi.org/10.15642/ad.2022.12.2.298-325>.

<sup>20</sup> Abdul Rahman Toyi and Elmira Zachra Putri Hamidun, "Establishing Legal Certainty in the Digital Era: Challenges and Solutions," *Estudiante Law Journal* 7, no. 2 (2025): 444–460, <https://doi.org/10.33756/eslaj.v7i2.31630>.

<sup>21</sup> Fahmi and Luthfi, "Legal Study on the Validity of Electronic Notarial Deeds in Indonesia: Regulatory Analysis and Practical Implications."

<sup>22</sup> Yu Tao et al., "Ergonomic Risk Assessment of Construction Workers and Projects Based on Fuzzy Bayesian Network and DS Evidence Theory," *Journal of Construction Engineering and Management* 149, no. 6 (2023), <https://doi.org/10.1061/JCEMD4.COENG-12821>.

<sup>23</sup> Yuli Endah Wardantik, Khoidin Khoidin, and Wahyu Prawesthi, "Legal Liability For Notaries Due To The Issuance Of Authentic Deeds Resulting In State Losses," *Journal of Social Sciences and Humanities* 2, no. 1 (2023): 23–38, <https://doi.org/10.56943/jssh.v2i1.264>; Surya Sugiana, Putu Ayu Sriasih Wesna, and Anak Agung Istri Agung, "Position of the Premises in the Authentic Deed Made by the Notary," *Journal of Political And Legal Sovereignty* 2, no. 3 (2024): 288–94, <https://doi.org/10.38142/jpls.v2i3.243>.

<sup>24</sup> Putu Sekarwangi Saraswati and Nengah Susrama, "Cyber Notary Juridical Review In The Legal System In Indonesia," *Russian Law Journal* 11, no. 8s (2023): 581–88, <https://doi.org/10.52783/rlj.v11i8s.1378>.

parties. In contrast, Indonesia's current digital system lacks an integrated national digital identity infrastructure synchronized with population databases that is directly accessible to notaries and secure for notarial purposes.<sup>25</sup> Moreover, reliance on third-party virtual platform providers that do not apply encryption standards specifically designed for notarial services creates risks of data leakage and identity manipulation, which fundamentally contradict the principle of professional confidentiality inherent in the notarial office.

Another juridical implication concerns the ambiguity surrounding the locus of deed execution. In notarial practice, a notary's authority is territorially limited to the jurisdiction of their official appointment.<sup>26</sup> For example, in a virtual transaction where the notary is domiciled in Surabaya, Party A is located in Bandung, and Party B resides in Malaysia, uncertainty arises regarding the legal place of execution of the deed. The UUJN requires that the reading and signing of the deed be conducted at the notary's official seat. Forcing a digital interpretation of this requirement risks violating the principle of territoriality governing the notarial profession. In the absence of a new legal framework expressly equating virtual presence with physical appearance before a notary, any deed executed under such circumstances is procedurally defective.

The transition from handwritten signatures to certified electronic signatures (Tanda Tangan Elektronik - TTE) in notarial deeds similarly lacks an adequate legal foundation.<sup>27</sup> Although Government Regulation No. 71 of 2019 on the Implementation of Electronic Systems and Transactions regulates electronic signatures, their application to authentic notarial deeds remains constrained by the phrase "signing the deed," which has historically been interpreted as a physical act under the UUJN. This rigidity hampers the acceptance of modernization and overlooks the substantive purpose of deed execution, namely that the act of signing represents consent to the contents of the document.<sup>28</sup> Consequently, existing national law remains bound to physical formalities rather than the substantive objectives of notarization.

This condition further limits the role of notaries in the digital economy, reducing their function to merely legalizing electronic deeds that retain the status of private instruments. Notaries are unable to fully exercise their authority to produce authentic

---

<sup>25</sup> Panca O. Hadi Putra et al., "A Framework for Integrated E-Notary Services Based on Blockchain for Civil Law Notaries: The Case of Indonesia," *International Journal on Informatics Visualization* 9, no. 1 (2025): 153–62, <https://doi.org/10.62527/joiv.9.1.3170>; Henry Donald Lbn Toruan, "The Importance of Using Electronic Deeds to Facilitate The Service and Storage of Notary Archives," *Jurnal Penelitian Hukum De Jure* 22, no. 4 (2022): 483–98, <https://doi.org/10.30641/dejure.2022.v22.483-498>.

<sup>26</sup> Matheus Phelipe Mendes de Almeida, "New Technologies in the Context of Notary Offices: An Analysis of the Implementation of Electronic Notarial Acts through the e-Notariado Platform in Light of Territorial Jurisdiction Established by Law in Brazil," *Brazilian Journal of Law, Technology and Innovation* 3, no. 2 (2025): 192–208, <https://doi.org/10.59224/bjlti.v3i2.192-208>.

<sup>27</sup> Sumita Putri Ovie, Dwina Dahan Lovely, and Ridha Irfan, "Tinjauan Yuridis Keabsahan Pembuktian Tanda Tangan Elektronik (Digital Signature) Dengan Menggunakan Aplikasi Privy Dalam Perjanjian Berdasarkan KUHPdata," *Journal of Sharia and Law* 2, no. 4 (2023): 1157–1182.

<sup>28</sup> Sindy Nurihta Br. Ginting, Hasim Purba, and Tony Tony, "Potensi Tanda Tangan Digital (Digital Signature) Jika Dimuat Dalam Akta Notaris Demi Mewujudkan Kepastian Hukum," *Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–34, <https://doi.org/10.56370/jhlg.v6i4.2154>.

electronic deeds, thereby constraining their role as guarantors of legal certainty and relegating them to administrative witnesses without executorial force.<sup>29</sup> As a result, digital credit agreements notarized through electronic means are frequently rejected by banks and financial institutions due to perceived execution risks in the event of default.

These circumstances underscore the necessity of a conceptual reconstruction of the meaning of “presence.” Progressive legal theory asserts that law must serve societal needs rather than rigidly constrain them.<sup>30</sup> In this context, the concept of appearance “*menghadap*” should not be narrowly construed as mere physical presence, but rather as the convergence of intent and consent facilitated by secure and verifiable technological means. Nevertheless, such a shift in interpretation cannot be unilaterally undertaken by notaries; it must be grounded in clear and authoritative regulatory reform. Unauthorized innovation by notaries in the absence of formal legal justification may jeopardize the legitimacy of their official position.

The absence of comprehensive regulation governing cyber notary practices within the Indonesian legal system thus poses a significant risk of legal uncertainty. This concern is corroborated by the findings of Abdillah and Saputra, who conclude that technology-based deeds do not yet satisfy the requirements of authentic deeds, thereby affecting their evidentiary force and the legal protection afforded to the parties.<sup>31</sup> Accordingly, regulatory intervention is required not only to govern the technical aspects of technological utilization, but also to address substantive legal issues that ensure electronic deeds possess legal standing equivalent to conventional notarial deeds.

The urgency of regulating cyber notary practices is further amplified by the accelerating digitalization of public services. Farhan et al. emphasize the necessity of notarial authority in certifying electronic transactions in Indonesia through the use of technology within the notarial profession, including the requirement that electronic transactions conducted via electronic systems be supported by electronic certificates.<sup>32</sup> Adequate regulation would provide clear guidance for notaries in performing their professional duties in the digital era while ensuring equal legal certainty and protection for parties operating both within and beyond Indonesia’s territorial jurisdiction.

---

<sup>29</sup> Nurwanti Setiawan and Nynda Fatmawati Octarina, “Legal Uncertainty Over Notary Protocols in Law Number 43 of 2009,” *Journal of Law and Legal Reform* 3, no. 4 (2022): 543–66, <https://doi.org/10.15294/jllr.v3i4.58654>.

<sup>30</sup> Teja Sukmana, Zahrah Salsabillah Ashari, and Yadi Darmawan, “Responsive Law and Progressive Law: Examining the Legal Ideas of Philip Nonet, Philip Selznick, and Sadjipto Raharjo,” *Peradaban Journal of Law and Society* 2, no. 1 (2023): 92–105, <https://doi.org/10.59001/pjls.v2i1.82>; Syinta Amelia, “Progressive Legal Approach to Modern Community Law Enforcement in Indonesia,” *Pancasila and Law Review* 4, no. 1 (2023): 1–12, <https://doi.org/10.25041/plr.v4i1.2729>.

<sup>31</sup> Satrio Abdillah and Hamanda Hadi Saputra, “Urgensi Regulasi Cyber Notary Dalam Mendukung Kepastian Hukum Di Era Digital,” *Lex Stricta Jurnal Ilmu Hukum* 4, no. 1 (2025), <https://doi.org/10.46839/lexstricta.v4i1.1367>.

<sup>32</sup> Farhan, Fendri, and Mannas, “The Legal Study on Notary Authority in Certifying Electronic Transactions (Cyber Notary).”

### 3.2. Digital Reconstruction of Notarial Authority Based on Comparative Analysis and the Concept of Legal Certainty in Digital Governance

Notaries are public officials vested with the authority to produce authentic deeds endowed with perfect evidentiary force, functioning to ensure legal certainty and provide legal protection for parties involved in contractual relationships.<sup>33</sup> Notarial deeds constitute a crucial instrument in private law relations, as they serve a preventive function in minimizing potential disputes in the future. In this context, the role of the notary is not merely administrative but also substantive, namely ensuring that the deed complies with legal validity requirements and embodies the principle of justice for the parties concerned.<sup>34</sup> In practice, the services provided by notaries have evolved to meet societal needs that extend beyond deed drafting, positioning notaries as mediators or witnesses to transactions carried out by the parties.<sup>35</sup>

Within notarial practice, notaries operate as public officials authorized to produce authentic deeds that possess perfect evidentiary value before the law. Deeds drawn up by notaries serve as written evidence capable of establishing legal certainty in private legal relationships and preventing disputes in the future.<sup>36</sup> According to Ahmad Mubarak, notarial deeds are not mere formalities; rather, they carry substantive legal consequences, as they encapsulate the free will of the parties, which has been objectively examined by the notary.<sup>37</sup>

The notary's function in safeguarding legal certainty is further reflected in their role in verifying the identity of the parties, examining the substance of the agreement, and ensuring that the content of the deed does not contravene prevailing legal norms.<sup>38</sup> This role is particularly significant given that many disputes arise from ambiguities in contractual substance and inconsistencies with substantive law. Consequently, the notary's

---

<sup>33</sup> Rahadian Kadafi, Rahmadi Indra, and Iwan Rachmad, "Kepastian Hukum Pembuatan Akta Perjanjian Kredit Digital Oleh Notaris," *JURNAL RECHTENS* 14, no. 1 (2025): 171–195, <https://doi.org/10.56013/rechtens.v14i1.4200>.

<sup>34</sup> Kadek Setiadewi and I Made Hendra Wijaya, "Legalitas Akta Notaris Berbasis Cyber Notary Sebagai Akta Otentik," *Jurnal Komunikasi Hukum (JKH)* 6, no. 1 (2020): 126–32, <https://doi.org/10.23887/jkh.v6i1.23446>.

<sup>35</sup> Maridza Puspitasari and Siti Malikhatun Badriyah, "Pertanggungjawaban Notaris Dalam Akta Perjanjian Agar Mempunyai Kepastian Hukum," *Notarius* 17, no. 3 (2024), <https://doi.org/10.14710/nts.v17i3.57707>.

<sup>36</sup> Ali Arben and Andrew Shandy Utama, "Kedudukan Akta Notaris Sebagai Akta Autentik Dalam Hukum Perdata Berdasarkan Undang-Undang Jabatan Notaris," *Andrew Law Journal* 3, no. 1 (2024): 1–11, <https://doi.org/10.61876/alj.v3i1.26>.

<sup>37</sup> Ahmad Mubarak, "Menjelajahi Dialektika: Voluntarisme Vs Objektivisme Sebagai Prinsip Dasar Dalam Instrumen Autentik Notaris," *Indonesian Journal of Islamic Jurisprudence, Economic and Legal Theory* 4, no. 3 (2025): 2591–92, <https://doi.org/10.62976/ijjel.v3i3.1323>.

<sup>38</sup> Dea Derika, "Fungsi Notaris Dalam Pemeriksaan Identitas Penghadap Terhadap Autentisitas Akta Dihubungkan Dengan Asas Kehati-Hatian," *Syiar Hukum : Jurnal Ilmu Hukum* 18, no. 2 (2020): 177–78, <https://doi.org/10.29313/shjih.v18i2.6514>.

role transcends that of a mere recorder, evolving into a guardian of legal certainty who contributes to maintaining legal order within society.<sup>39</sup>

In addition, notaries are required to ensure the security of data and information related to notarial deeds, particularly in light of the increasing risks associated with cybersecurity threats.<sup>40</sup> One of the principal challenges in notarial practice lies in balancing conventional legal principles with demands for efficiency through digitalization. In this regard, the concept of cyber notary emerges as a potential solution, enabling the utilization of digital technology to perform notarial duties, including the electronic execution of contractual deeds.<sup>41</sup>

Empirical studies indicate that the use of digital technology in the preparation of legal documents can enhance procedural efficiency and reduce transaction costs.<sup>42</sup> Nevertheless, digital transformation simultaneously raises concerns regarding legal certainty, particularly with respect to the validity of electronic signatures, document authenticity, and their conformity with the legal guarantees traditionally attached to conventional notarial deeds. In the absence of clear regulatory standards, the application of technology in notarial practice may give rise to doubts concerning the evidentiary value of electronic deeds before courts and other legal institutions.<sup>43</sup>

To address these critical challenges, Indonesia should consider adopting best practices from jurisdictions that have successfully integrated technology into their notarial regulatory frameworks.<sup>44</sup> Beyond a purely conceptual approach, a comparative legal analysis examining fundamental regulatory structures is indispensable.<sup>45</sup> For instance, in France, the implementation of electronic authentic deeds is supported by The Real Network for Notaries (REAL), a closed private digital infrastructure that ensures security and confidentiality. French notaries are equipped with government-facilitated cryptographic keys enabling them to affix electronic signatures with legal force equivalent

---

<sup>39</sup> Dherista Lestary and Unggul Basoeky, "Kedudukan Notaris Dalam Menjamin Perlindungan Hukum Hak Waris Anak Luar Kawin," *Jurnal Ilmu Hukum, Humaniora Dan Politik* 6, no. 1 (2025), <https://doi.org/10.38035/jihhp.v6i1.6344>.

<sup>40</sup> E. Nurita, *Cybernotary: Pemahaman Awal Dan Konsep Pemikiran* (Jakarta: Refika Aditama, 2014).

<sup>41</sup> Krisna Bayumurti, Novan Perdana, and Ronan Steven Tjandra, "Penerapan Konsep Cyber Notary Dalam Praktek Hukum Di Indonesia," *Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–17, <https://doi.org/10.56370/jhlg.v6i4.896>.

<sup>42</sup> Jannati and Ruhly Kesuma Dinata, "Pengaruh Teknologi Terhadap Perkembangan Hukum Di Indonesia," *Arus Jurnal Sosial Dan Humaniora* 5, no. 1 (2025): 633–634, <https://doi.org/10.57250/ajsh.v5i1.1093>.

<sup>43</sup> Amelia Dwi Juliani, "Penyusunan Akta Perjanjian Elektronik Dalam Hukum Keperdataan: Peran Notaris Dan Tanggung Jawab Hukum," *Officium Notarium* 4, no. 2 (2025): 184–85, <https://doi.org/10.20885/jon.vol4.iss2.art2>.

<sup>44</sup> Ikhsan Lubis et al., "Development of the Concept of Cyber Notary in Common Law and Civil Law Systems," *Law and Humanities Quarterly Reviews* 1, no. 4 (2022), <https://doi.org/10.31014/aior.1996.01.04.32>.

<sup>45</sup> Ikhsan Lubis et al., "Comparison Of Civil Law Regarding The Implementation Of Cyber Notary In Countries With Common Law And Civil Law Traditions," *Jurnal IUS Kajian Hukum Dan Keadilan* 10, no. 1 (2022): 1–11, <https://doi.org/10.29303/ius.v10i1.981>.

to handwritten signatures.<sup>46</sup> This comparison highlights Indonesia's systemic weakness, as cyber notary practices are still conducted through general-purpose platforms that lack guaranteed security and centralized identity verification mechanisms specifically designed for notaries.

Estonia offers an even more progressive model through its e-Residency and Digital ID systems. Under this framework, identity verification is no longer a procedural burden for notaries, as the state guarantees authentication through digital certificates embedded in chip-based identity cards or Mobile IDs. When an Estonian citizen appears virtually before a notary, the system automatically conducts rigorous identity validation with a high level of trust.<sup>47</sup> This stands in stark contrast to Indonesia, where notaries must manually verify physical identity cards via video calls, a process that is highly susceptible to forgery. Normatively, lessons can also be drawn from the United States, where cyber notary practices cannot operate independently but must be supported by an effective national digital identity system as a prerequisite.<sup>48</sup>

This analysis must be contextualized within the broader concept of legal certainty in digital governance, which emphasizes legal predictability grounded in statutory norms and the reliability of technological infrastructure. The legal system should acknowledge, within certain limits, the proposition that "code is law".<sup>49</sup> Accordingly, standardized technical requirements must be established within Indonesia's cyber notary framework, such as the use of asymmetric encryption and blockchain technology for storing notarial minutes as an essential element of deed validity. Without legislatively mandated technological standards, the validity of notarial deeds remains vulnerable to technical challenges in judicial proceedings.

The reconstruction of notarial authority in the digital era should also encompass the role of notaries as registration authorities for the issuance of electronic certificates. In this sense, notaries would not merely draft deeds but also verify that the holder of an electronic signature is indeed the rightful individual.<sup>50</sup> Such authority would address deficiencies in Indonesia's identity verification regime and transform notaries from mere deed recorders into guarantors of electronic transaction security.

---

<sup>46</sup> Syafira Paramita, "Legalization Of Cyber Notary-Based Notary Deeds As Authentic Deeds," *Authentica* 6, no. 1 (2023): 70–79, <https://doi.org/10.20884/1.atc.2023.6.1.363>.

<sup>47</sup> Piia Tammpuu et al., "Estonian E-Residency And Conceptions Of Platformbased State-Individual Relationship," *TRAMES: A Journal of the Humanities & Social Sciences* 26, no. 1 (2022), <https://www.ceeol.com/search/article-detail?id=1040414>.

<sup>48</sup> Naurah Humam Alkatiri, Mohamad Fajri Mekka Putra, and Kyle Ongko, "A Legal Perspective: Implementing an Electronic Notarization System in Indonesia in the Post-Pandemic Era," *Jambura Law Review* 5, no. 2 (2023): 332–55, <https://doi.org/10.33756/jlr.v5i2.19221>.

<sup>49</sup> Herliyan, Sutrisno, and Astawa, "Digitalization Of Notary Services Towards Legal Certainty For The Parties In Making Deeds."

<sup>50</sup> Henry Aspan et al., "Cyber Notary Issues Authority Certificate to Provide Legal Protection in Online Selling," *Journal of Law and Sustainable Development* 11, no. 10 (2023), <https://doi.org/10.55908/sdgs.v11i10.1801>.

Similarly, the concept of notarial protocol storage (*minuta akta*) requires reconceptualization, given that the Law on Notarial Office mandates physical storage to preserve deed integrity. By comparison, Japan permits electronic archival storage through timestamping mechanisms that ensure documents cannot be altered after execution.<sup>51</sup> Indonesia should consider developing a centralized national notarial repository under the supervision of the Central Supervisory Council or the Ministry of Law and Human Rights. Such a repository would function as a secure digital archive, ensuring that deeds are not lost, manipulated, or damaged, thereby replacing the conventional physical archives that impose logistical burdens on notaries.

Legal reconstruction must also address the principle of territoriality, as the cyber notary concept transcends geographical boundaries. Regulatory reform should therefore permit notaries to draft deeds for parties located outside their territorial jurisdiction, provided that the notary remains physically present within their official domicile.<sup>52</sup> Territorial restrictions rooted in physical presence have become increasingly obsolete in the context of legal acts conducted in virtual spaces.<sup>53</sup> To prevent unfair competition, regulatory safeguards such as limits on the number of electronic deeds or digital zoning systems similar to those applied in certain jurisdictions in the United States may be implemented.<sup>54</sup>

From an evidentiary perspective, amendments to the Law on Notarial Office must explicitly affirm that the evidentiary force of electronic authentic deeds is equivalent to that of physically executed deeds.<sup>55</sup> Such clarification would resolve divergent judicial interpretations and should be accompanied by provisions stipulating that printed copies of electronic deeds constitute valid reproductions, while the original authentic instrument remains the digitally archived document stored on national notarial servers. This represents a paradigmatic shift from printed documents as primary evidence to digital documents as the primary evidentiary source with equal probative value.

In the current cyber notary framework, notaries often function primarily to legalize private deeds, rendering their role as neutral third parties essential in guaranteeing the validity of electronic signatures, party identities, certification timestamps, and the legal status of the appearing parties. As long as notaries perform their duties in accordance with

---

<sup>51</sup> Noval Dwi Kurnia, Muhammad Sood, and Hirsanuddin Hirsanuddin, "Juridical Study of Arrangements for Authentic Deeds through Cyber Notary: Comparative Study with Japan," *Path of Science* 9, no. 1 (2023): 3014–22, <https://doi.org/10.22178/pos.89-16>.

<sup>52</sup> Fahim Muhammad Rizky and Aminah Aminah, "Akibat Hukum Terhadap Notaris Yang Membuat Akta Diluar Wilayah Jabatan Notaris Ditinjau Dari Undang-Undang Nomor 2 Tahun 2014 Tentang Perubahan Atas Undang-Undang Nomor 30 Tahun 2004 Tentang Jabatan Notaris," *AL-MANHAJ: Jurnal Hukum Dan Pranata Sosial Islam* 5, no. 1 (2023): 505–12, <https://doi.org/10.37680/almanhaj.v5i1.2513>.

<sup>53</sup> Cedric Ryngaert, "Extraterritorial Enforcement Jurisdiction in Cyberspace: Normative Shifts," *German Law Journal* 24, no. 3 (2023): 537–50, <https://doi.org/10.1017/glj.2023.24>.

<sup>54</sup> Enas Mohammed ALqodsi and Leila Arenova, "Smart Contracts in Contract Law as an Auxiliary Tool or a Promising Substitute for Traditional Contracts," *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* 16, no. 3 (2024), <https://doi.org/10.1061/jldah.ladr-1132>.

<sup>55</sup> Della Fauziah, "Tantangan Penerapan Konsep Cyber Notary Terhadap Kewenangan Pembuatan Akta Otentik Oleh Notaris," *Al-Zayn: Jurnal Ilmu Sosial & Hukum* 3, no. 4 (2025): 4949–58, <https://doi.org/10.61104/alz.v3i4.2067>.

the Law on Notarial Office, the implementation of Article 15 paragraph (3), as elucidated in its explanatory notes, remains within the scope of notarial authority without diminishing the authenticity of the resulting certification. In the digital era, more detailed, structured, and integrated regulatory reforms are indispensable to ensure legal certainty in the implementation of cyber notary practices in Indonesia.<sup>56</sup>

Such harmonization is also critical for integration within the ASEAN economic system. If Indonesian notarial law lags behind, international business actors may prefer alternative jurisdictions for executing commercial contracts, thereby disadvantaging the Indonesian notarial profession.<sup>57</sup> Accordingly, legal modernization extends beyond formal compliance and carries significant economic implications. Indonesian notaries are entitled to equal access and professional capacity comparable to their counterparts in jurisdictions that have effectively integrated cyber notary systems to facilitate global digital transactions.

Ultimately, optimizing the role of notaries through cyber notary mechanisms requires strong policy support from authorities empowered to undertake comprehensive revisions of the Law on Notarial Office. Such reforms must be aligned with the Electronic Information and Transactions Law and should position technology not as a threat to authenticity, but as a medium that reinforces it.<sup>58</sup> By adopting a legal framework grounded in international cybersecurity standards and theories of digital legal certainty, Indonesian notaries can adapt to technological transformation while maintaining their status as trusted public officials in the digital era ensuring that every digital consent carries the same legal force as a handwritten signature on paper.

#### 4. Conclusion

Regulatory disharmony between the Law on Notarial Office and the Law on Electronic Information and Transactions not only creates administrative gaps but also generates ambiguity regarding the evidentiary force of notarial deeds. Authentic deeds, which should possess perfect evidentiary value, are effectively downgraded to the status of private deeds when executed in digital form. This finding carries fundamental theoretical implications, particularly concerning the urgent need to reconstruct the concept of cyber notary within the framework of civil evidence law. Specifically, the notion of appearance before a notary “*menghadap*” should no longer be narrowly interpreted as mere physical presence, but rather reconceptualized as a form of digitally verified appearance supported by integrated cybersecurity procedures. From a practical perspective, this study offers

---

<sup>56</sup> Grace Aimelia and Rasji Rasji, “Pembaharuan Hukum Terhadap Kekuatan Akta Autentik Elektronik,” *Jurnal USM Law Review* 8, no. 2 (2025): 849–64, <https://doi.org/10.26623/julr.v8i2.12116>.

<sup>57</sup> Anastasia Zefanya et al., “Integrasi Hukum Kontrak Dagang Indonesia–Rusia: Strategi Harmonisasi Ketentuan Hukum Kontrak Dagang Internasional Di Era Globalisasi Perdagangan,” *IKRA-ITH HUMANIORA: Jurnal Sosial Dan Humaniora* 9, no. 3 (2025): 461–77, <https://doi.org/10.37817/ikraith-humaniora.v9i3.5416>.

<sup>58</sup> Alvian Mato et al., “Analisis Hukum Tentang Urgensi Pembuatan Akta Notaris Secara Online,” *Al-Mizan* 21, no. 1 (2025): 163–78, <https://doi.org/10.30603/am.v21i1.6712>.

policy recommendations urging lawmakers to promptly harmonize the regulatory framework through the adoption of standardized, closed, and nationally documented technical systems for cyber notary practices, as implemented in advanced jurisdictions to ensure legal certainty. For notaries, this transformation necessitates a reconstruction of professional roles that extends beyond acting solely as deed-drafting officials, positioning them instead as authorities vested with the power to regulate, filter, and substantively validate digital transactions

Despite proposing novel conceptual contributions, this study remains limited by its predominantly normative-juridical approach and does not empirically assess the readiness of Indonesia's technological infrastructure, particularly given the country's significant digital disparities. Furthermore, the study does not comprehensively address the issue of liability borne by electronic system providers in the event of system failures during the execution of notarial deeds. Accordingly, future research should adopt a socio-legal approach to evaluate the technical preparedness of the notarial profession and to formulate risk mitigation frameworks for cyber notary transactions. Such efforts constitute concrete steps toward ensuring that the proposed regulatory framework not only achieves normative coherence but also guarantees fair and effective implementation in practice.

## 5. References

- Abdillah, Satrio, and Hamanda Hadi Saputra. "Urgensi Regulasi Cyber Notary Dalam Mendukung Kepastian Hukum Di Era Digital." *Lex Stricta Jurnal Ilmu Hukum* 4, no. 1 (2025). <https://doi.org/10.46839/lexstricta.v4i1.1367>.
- Agheniței, Mihaela. "Global Notarial Digitalization." *Acta Universitatis Danubius. Juridica* 18, no. 2 (2022): 149–67. <https://www.ceeol.com/search/article-detail?id=1180431>.
- Agustin, Ika Yuli, and Ghansham Anand. "Proposing Notaries' Deed Digitalization in Indonesia: A Legal Perspective." *Lentera Hukum* 8, no. 1 (2021): 49–72. <https://doi.org/10.19184/ejllh.v8i1.21375>.
- Aimelia, Grace, and Rasji Rasji. "Pembaharuan Hukum Terhadap Kekuatan Akta Autentik Elektronik." *Jurnal USM Law Review* 8, no. 2 (2025): 849–64. <https://doi.org/10.26623/julr.v8i2.12116>.
- Alkatiri, Naurah Humam, Mohamad Fajri Mekka Putra, and Kyle Ongko. "A Legal Perspective: Implementing an Electronic Notarization System in Indonesia in the Post-Pandemic Era." *Jambura Law Review* 5, no. 2 (2023): 332–55. <https://doi.org/10.33756/jlr.v5i2.19221>.
- Almeida, Matheus Phelipe Mendes de. "New Technologies in the Context of Notary Offices: An Analysis of the Implementation of Electronic Notarial Acts through the e-Notariado Platform in Light of Territorial Jurisdiction Established by Law in Brazil." *Brazilian Journal of Law, Technology and Innovation* 3, no. 2 (2025): 192–208. <https://doi.org/10.59224/bjlti.v3i2.192-208>.
- ALqodsi, Enas Mohammed, and Leila Arenova. "Smart Contracts in Contract Law as an Auxiliary Tool or a Promising Substitute for Traditional Contracts." *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* 16, no. 3 (2024). <https://doi.org/10.1061/jladah.ladr-1132>.
- Amelia, Syinta. "Progressive Legal Approach to Modern Community Law Enforcement in Indonesia." *Pancasila and Law Review* 4, no. 1 (2023): 1–12.

- <https://doi.org/10.25041/plr.v4i1.2729>.
- Anastasia Zefanya, Ricky Martin Simanullang, Jessica Theresia Elizabeth, and Posma Sariguna Johnson Kennedy. "Integrasi Hukum Kontrak Dagang Indonesia–Rusia: Strategi Harmonisasi Ketentuan Hukum Kontrak Dagang Internasional Di Era Globalisasi Perdagangan." *IKRA-ITH HUMANIORA : Jurnal Sosial Dan Humaniora* 9, no. 3 (2025): 461–77. <https://doi.org/10.37817/ikraith-humaniora.v9i3.5416>.
- Arben, Ali, and Andrew Shandy Utama. "Kedudukan Akta Notaris Sebagai Akta Autentik Dalam Hukum Perdata Berdasarkan Undang-Undang Jabatan Notaris." *Andrew Law Journal* 3, no. 1 (2024): 1–11. <https://doi.org/10.61876/alj.v3i1.26>.
- Aspan, Henry, Abdi Setiawan, Irawan, Ety Sri Wahyuni, Ari Prabowo, and Ami Natuz Zahara. "Cyber Notary Issues Authority Certificate to Provide Legal Protection in Online Selling." *Journal of Law and Sustainable Development* 11, no. 10 (2023). <https://doi.org/10.55908/sdgs.v11i10.1801>.
- Bayumurti, Krisna, Novan Perdana, and Ronan Steven Tjandra. "Penerapan Konsep Cyber Notary Dalam Praktek Hukum Di Indonesia." *Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–17. <https://doi.org/10.56370/jhlg.v6i4.896>.
- Borowski, Martin. "Gustav Radbruch's Theory of Legal Obligation." In *Law and Philosophy Library*, 146:99–122, 2024. [https://doi.org/10.1007/978-3-031-54067-7\\_5](https://doi.org/10.1007/978-3-031-54067-7_5).
- Derika, Dea. "Fungsi Notaris Dalam Pemeriksaan Identitas Penghadap Terhadap Autentisitas Akta Dihubungkan Dengan Asas Kehati-Hatian." *Syiar Hukum : Jurnal Ilmu Hukum* 18, no. 2 (2020): 177–78. <https://doi.org/10.29313/shjih.v18i2.6514>.
- Donald Lbn Toruan, Henry. "The Importance of Using Electronic Deeds to Facilitate The Service and Storage of Notary Archives." *Jurnal Penelitian Hukum De Jure* 22, no. 4 (2022): 483–98. <https://doi.org/10.30641/dejure.2022.v22.483-498>.
- Efendi, Wiji Achmat, and Rusdianto Sesung. "Transformation of the Notary's Role in Electronic Deed Regulations Based on Digital Technology." *Journal of Law, Politic and Humanities* 5, no. 5 (2025): 3764–72. <https://doi.org/10.38035/jlph.v5i5.1946>.
- Fahmi, Ardiansyah, and Anas Luthfi. "Legal Study on the Validity of Electronic Notarial Deeds in Indonesia: Regulatory Analysis and Practical Implications." *Journal of Public Representative and Society Provision* 5, no. 2 (2025): 397–406. <https://doi.org/10.55885/jprsp.v5i2.544>.
- Farhan, Rafiqah Zahra, Azmi Fendri, and Yussy Adelina Mannas. "The Legal Study on Notary Authority in Certifying Electronic Transactions (Cyber Notary)." *Andalas Notary Journal* 2, no. 1 (2025): 25–39. <https://anj.fhuk.unand.ac.id/index.php/anj/article/view/66>.
- Fauziah, Della. "Tantangan Penerapan Konsep Cyber Notary Terhadap Kewenangan Pembuatan Akta Otentik Oleh Notaris." *Al-Zayn: Jurnal Ilmu Sosial & Hukum* 3, no. 4 (2025): 4949–58. <https://doi.org/10.61104/alz.v3i4.2067>.
- Ginting, Sindy Nurihta Br., Hasim Purba, and Tony Tony. "Potensi Tanda Tangan Digital (Digital Signature) Jika Dimuat Dalam Akta Notaris Demi Mewujudkan Kepastian Hukum." *Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–34. <https://doi.org/10.56370/jhlg.v6i4.2154>.
- Hadi Putra, Panca O., Iskandar Muda, Mohammad Ryan Bakry, Chandra Yusuf, and Irwan Santosa. "A Framework for Integrated E-Notary Services Based on Blockchain for Civil Law Notaries: The Case of Indonesia." *International Journal on Informatics Visualization* 9, no. 1 (2025): 153–62. <https://doi.org/10.62527/joiv.9.1.3170>.
- Herliyan, Esse, Endang Sutrisno, and I. Gede Pantja Astawa. "Digitalization Of Notary

- Services Towards Legal Certainty For The Parties In Making Deeds.” *Veredas Do Direito* 22, no. 6 (2025). <https://doi.org/10.18623/rvd.v22.n6.3573>.
- Hutahayan, Benny, Mohamad Fadli, Satria Amiputra Amimakmur, and Reka Dewantara. “Investment Decision, Legal Certainty and Its Determinant Factors: Evidence from the Indonesia Stock Exchange.” *Cogent Business and Management* 11, no. 1 (2024). <https://doi.org/10.1080/23311975.2024.2332950>.
- Jannati, and Ruhly Kesuma Dinata. “Pengaruh Teknologi Terhadap Perkembangan Hukum Di Indonesia.” *Arus Jurnal Sosial Dan Humaniora* 5, no. 1 (2025): 633–634. <https://doi.org/10.57250/ajsh.v5i1.1093>.
- Juliani, Amelia Dwi. “Penyusunan Akta Perjanjian Elektronik Dalam Hukum Keperdataan: Peran Notaris Dan Tanggung Jawab Hukum.” *Officium Notarium* 4, no. 2 (2025): 184–85. <https://doi.org/10.20885/jon.vol4.iss2.art2>.
- Kadafi, Rahadian, Rahmadi Indra, and Iwan Rachmad. “Kepastian Hukum Pembuatan Akta Perjanjian Kredit Digital Oleh Notaris.” *JURNAL RECHTENS* 14, no. 1 (2025): 171–195. <https://doi.org/10.56013/rechtens.v14i1.4200>.
- Koos, Stefan. “The Digitization of Notarial Tasks-A Comparative Overview and Outlook of ‘Cyber Notary’ In Indonesia and Germany.” *The Indonesian Journal of Socio-Legal Studies* 2, no. 2 (2023): 1–26. <https://doi.org/10.54828/ijsls.2023v2n2.1>.
- Kurnia, Noval Dwi, Muhammad Sood, and Hirsanuddin Hirsanuddin. “Juridical Study of Arrangements for Authentic Deeds through Cyber Notary: Comparative Study with Japan.” *Path of Science* 9, no. 1 (2023): 3014–22. <https://doi.org/10.22178/pos.89-16>.
- Lestary, Dherista, and Unggul Basoeky. “Kedudukan Notaris Dalam Menjamin Perlindungan Hukum Hak Waris Anak Luar Kawin.” *Jurnal Ilmu Hukum, Humaniora Dan Politik* 6, no. 1 (2025). <https://doi.org/10.38035/jihhp.v6i1.6344>.
- Lubis, Ikhsan, Tarsisius Murwadji, Mahmul Siregar, Detania Sukarja, Robert, Dedi Harianto, and Mariane Magda Ketaren. “Comparison Of Civil Law Regarding The Implementation Of Cyber Notary In Countries With Common Law And Civil Law Traditions.” *Jurnal IUS Kajian Hukum Dan Keadilan* 10, no. 1 (2022): 1–11. <https://doi.org/10.29303/ius.v10i1.981>.
- Lubis, Ikhsan, Tarsisius Murwadji, Sunarmi Sunarmi, and Detania Sukarja. “Cyber Notary as A Mean of Indonesian Economic Law Development.” *Sriwijaya Law Review* 7, no. 1 (2023): 62–72. <https://doi.org/10.28946/slrev.Vol7.Iss1.1972.pp62-72>.
- Lubis, Ikhsan, Tarsisius Murwadji, Sunarmi Sunarmi, Detania Sukarja, T. Keizerina Devi Azwar, and Faradillah Sitepu. “Development of the Concept of Cyber Notary in Common Law and Civil Law Systems.” *Law and Humanities Quarterly Reviews* 1, no. 4 (2022). <https://doi.org/10.31014/aior.1996.01.04.32>.
- Lubis, Ikhsan, Detania Sukarja, Rosmalinda, and Tarsisius Murwadji. “Penetration Of International Economic Law In The Development Of The Cyber Notary Concept In Indonesia.” *Al-Risalah: Forum Kajian Hukum Dan Sosial Kemasyarakatan* 22, no. 1 (2022): 125–38. <https://doi.org/10.30631/alrisalah.v22i1.868>.
- Marquez, Neilpon Yulinar, Hono Sejati, and Mohamad Tohari. “Validity of Digital Signature Evidence as Valid Evidence in Civil Procedure Law.” *UNES Law Review* 6, no. 4 (2024): 11442–48. <https://doi.org/10.31933/unesrev.v6i4.2163>.
- Marzuki, Peter Mahmud. *Penelitian Hukum*. Jakarta: Kencana, 2017.
- Mato, Alvian, Siti Rahmawaty Igrisa, Ismail Uno, and Rulyjanto Podungge. “Analisis Hukum Tentang Urgensi Pembuatan Akta Notaris Secara Online.” *Al-Mizan* 21, no. 1 (2025): 163–78. <https://doi.org/10.30603/am.v21i1.6712>.
- Mubarak, Ahmad. “Menjelajahi Dialektika: Voluntarisme Vs Objektivisme Sebagai Prinsip Dasar Dalam Instrumen Autentik Notaris.” *Indonesian Journal of Islamic*

- Jurisprudence, Economic and Legal Theory* 4, no. 3 (2025): 2591–92. <https://doi.org/10.62976/ijijel.v3i3.1323>.
- Najib, Ainun. “Perlindungan Hukum Keamanan Data Cyber Notary Berdasarkan Undang-Undang Perlindungan Data Pribadi.” *ACTA DIURNAL Jurnal Ilmu Hukum Kenotariatan* 7, no. 1 (2023): 43–59. <https://doi.org/10.23920/acta.v7i1.1680>.
- Nurita, E. *Cybernotary: Pemahaman Awal Dan Konsep Pemikiran*. Jakarta: Refika Aditama, 2014.
- Ovie, Sumita Putri, Dwina Dahen Lovely, and Ridha Irfan. “Tinjauan Yuridis Keabsahan Pembuktian Tanda Tangan Elektronik (Digital Signature) Dengan Menggunakan Aplikasi Privy Dalam Perjanjian Berdasarkan KUHPperdata.” *Journal of Sharia and Law* 2, no. 4 (2023): 1157–1182.
- Paramita, Syafira. “Legalization Of Cyber Notary-Based Notary Deeds As Authentic Deeds.” *Authentica* 6, no. 1 (2023): 70–79. <https://doi.org/10.20884/1.atc.2023.6.1.363>.
- Poliakov, Oleksii. “Administrative and Legal Framework for the Introduction of the Electronic Notarial System in Ukraine.” *Visegrad Journal on Human Rights*, no. 4 (2024): 79–86. <https://doi.org/10.61345/1339-7915.2024.4.11>.
- Puspitasari, Maridza, and Siti Malikhatun Badriyah. “Pertanggungjawaban Notaris Dalam Akta Perjanjian Agar Mempunyai Kepastian Hukum.” *Notarius* 17, no. 3 (2024). <https://doi.org/10.14710/nts.v17i3.57707>.
- Rai, Hari Mohan, Kaustubh Kumar Shukla, Lilia Tightiz, and Sanjeevikumar Padmanaban. “Enhancing Data Security and Privacy in Energy Applications: Integrating IoT and Blockchain Technologies.” *Heliyon*, 2024. <https://doi.org/10.1016/j.heliyon.2024.e38917>.
- Rizkianti, Wardani, Sylvana Murni Deborah Hutabarat, Andriyanti Adhi Nugroho, Muhammad Bintang Firdaus, and Akhdan Adityo Latri. “Cyber Notary Di Indonesia: Tantangan, Peluang Dan Kebutuhan Rekonstruksi Hukum.” *Notaire* 8, no. 1 (2025): 123–140. <https://doi.org/10.20473/ntr.v8i1.67806>.
- Rizky, Fahim Muhammad, and Aminah Aminah. “Akibat Hukum Terhadap Notaris Yang Membuat Akta Diluar Wilayah Jabatan Notaris Ditinjau Dari Undang-Undang Nomor 2 Tahun 2014 Tentang Perubahan Atas Undang-Undang Nomor 30 Tahun 2004 Tentang Jabatan Notaris.” *AL-MANHAJ: Jurnal Hukum Dan Pranata Sosial Islam* 5, no. 1 (2023): 505–12. <https://doi.org/10.37680/almanhaj.v5i1.2513>.
- Rusakova, Ekaterina, and Tatyana Chernysheva. “The Development Of Digital Notary Production As A New Opportunity For Transparency Of The Judicial Process And Civil Turnover In African Countries: Using The Example Of Nigeria.” *Russian Law Journal* 12, no. 1 (2024): 829–37.
- Ryngaert, Cedric. “Extraterritorial Enforcement Jurisdiction in Cyberspace: Normative Shifts.” *German Law Journal* 24, no. 3 (2023): 537–50. <https://doi.org/10.1017/glj.2023.24>.
- Saraswati, Putu Sekarwangi, and Nengah Susrama. “Cyber Notary Juridical Review In The Legal System In Indonesia.” *Russian Law Journal* 11, no. 8s (2023): 581–88. <https://doi.org/10.52783/rj.v11i8s.1378>.
- Setiadewi, Kadek, and I Made Hendra Wijaya. “Legalitas Akta Notaris Berbasis Cyber Notary Sebagai Akta Otentik.” *Jurnal Komunikasi Hukum (JKH)* 6, no. 1 (2020): 126–32. <https://doi.org/10.23887/jkh.v6i1.23446>.
- Setiawan, Nurwanty, and Nynda Fatmawati Octarina. “Legal Uncertainty Over Notary Protocols in Law Number 43 of 2009.” *Journal of Law and Legal Reform* 3, no. 4

- (2022): 543–66. <https://doi.org/10.15294/jllr.v3i4.58654>.
- Sugiana, Surya, Putu Ayu Sriasih Wesna, and Anak Agung Istri Agung. “Position of the Premises in the Authentic Deed Made by the Notary.” *Journal of Political And Legal Sovereignty* 2, no. 3 (2024): 288–94. <https://doi.org/10.38142/jpls.v2i3.243>.
- Sukmana, Teja, Zahrah Salsabillah Ashari, and Yadi Darmawan. “Responsive Law and Progressive Law: Examining the Legal Ideas of Philip Nonet, Philip Selznick, and Sadjipto Raharjo.” *Peradaban Journal of Law and Society* 2, no. 1 (2023): 92–105. <https://doi.org/10.59001/pjls.v2i1.82>.
- Supeno, Supeno, and Herma Yanti. “Regulations Concerning International Arbitral Awards in Indonesia: An Approach to the Theory of Legal Values by Gustav Radbruch.” *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 12, no. 2 (2022): 298–325. <https://doi.org/10.15642/ad.2022.12.2.298-325>.
- Suroso, Joko T., Dani Durahman, and Indra Budi. “The Simplification of Licensing Procedure in Job Creation Law: The Effectiveness to Attract Foreign Investor.” *Cogent Social Sciences* 10, no. 1 (2024). <https://doi.org/10.1080/23311886.2024.2414509>.
- Tamppuu, Piia, Anu Masso, Mergime Ibrahim, and Tam Abaku. “Estonian E-Residency And Conceptions Of Platformbased State-Individual Relationship.” *TRAMES: A Journal of the Humanities & Social Sciences* 26, no. 1 (2022). <https://www.ceeol.com/search/article-detail?id=1040414>.
- Tao, Yu, Hao Hu, Feng Xu, and Zhipeng Zhang. “Ergonomic Risk Assessment of Construction Workers and Projects Based on Fuzzy Bayesian Network and DS Evidence Theory.” *Journal of Construction Engineering and Management* 149, no. 6 (2023). <https://doi.org/10.1061/JCEMD4.COENG-12821>.
- Toyi, Abdul Rahman, and Elmira Zachra Putri Hamidun. “Establishing Legal Certainty in the Digital Era: Challenges and Solutions.” *Estudiante Law Journal* 7, no. 2 (2025): 444–460. <https://doi.org/10.33756/eslaj.v7i2.31630>.
- Wardantik, Yuli Endah, Khoidin Khoidin, and Wahyu Prawesthi. “Legal Liability For Notaries Due To The Issuance Of Authentic Deeds Resulting In State Losses.” *Journal of Social Sciences and Humanities* 2, no. 1 (2023): 23–38. <https://doi.org/10.56943/jssh.v2i1.264>.
- Zhu, Konglin, Fengjuan Wu, Fei Wang, Tingda Shen, Hao Wu, Bowei Xue, and Yu Liu. “Blockchain-Based Digital Asset Circulation: A Survey and Future Challenges.” *Symmetry*, 2024. <https://doi.org/10.3390/sym16101287>.
- Zulfikar, Indri Meiliawati. “Digitalisasi Akta Notaris Sebagai Tantangan Dan Peluang Dalam Menjaga Keutuhan Dokumen Hukum.” *Lex Lectio: Jurnal Kajian Hukum* 3, no. 2 (2024). <https://doi.org/10.61715/jll.v3i2.94>.