



# Harmonization of Electronic Signature Regulations in Notarial Practice: A Comparative Analysis of The Notary Law and The Electronic Information and Transactions law

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## ABSTRACT

The rapid development of digital technology has heightened the urgency of adopting electronic signatures in legal transactions, including notarial practice. However, regulatory disharmony between the Notary Law (UUJN) and the Electronic Information and Transactions Law (ITE Law) creates legal uncertainty in its implementation. The UUJN requires physical presence and manual signatures for authentic deeds, while the ITE Law recognizes the legal validity of electronic signatures. This study aims to analyse the regulatory disharmony between these two laws and to formulate a harmonisation framework for the implementation of electronic signatures in notarial practice. This research employs a normative juridical method, drawing on statutory and conceptual approaches. Data were collected through library research on primary and secondary legal materials and analysed qualitatively using the Miles and Huberman technique. The findings reveal three main aspects of disharmony: physical presence requirements, signature form specifications, and document authentication procedures. The study concludes that regulatory harmonization can be achieved through amendments to the UUJN that accommodate certified electronic signatures for official reports (akta relaas), while maintaining physical presence requirements for party deeds (akta partij). The harmonization framework requires electronic certification standards supervised by the National Cyber and Encryption Agency (BSSN), technical guidelines from the Indonesian Notary Association, and public education regarding the validity of digital documents. This research contributes to the legal discourse on modernizing notarial practice in Indonesia while maintaining legal certainty and document authenticity.



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## INTRODUCTION

The rapid advancement of digital technology has transformed various aspects of society, including legal practice and business transactions. This digital transformation drives a shift from conventional methods toward more efficient electronic-based systems (Makarim, 2003). One significant change is the gradual replacement of manual signatures with electronic signatures across various transactions. This transformation requires the legal system to adapt through regulatory harmonization that accommodates technological developments without compromising legal certainty.

Signatures serve fundamental functions in legal systems encompassing six main aspects. First, the symbolic function serves to mark the agreement between the parties. Second, the identification function identifies the signatory. Third, the authentication function verifies the authenticity of documents. Fourth, the attribution function connects documents to the signatory. Fifth, the agreement function demonstrates the willingness to be legally bound. Sixth, the evidentiary function establishes documents as valid legal evidence (Kotimah & Santoso, 2018). These functions must be fulfilled when using electronic signatures to guarantee the validity of legal documents.

Indonesia has two main regulations governing electronic signatures and notarial practice: Law Number 2 of 2014 concerning Amendments to Law Number 30 of 2004 concerning Notary Position (UUJN), and Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE Law). These two regulations contain different provisions regarding the use of signatures in legal documents. The ITE Law recognises the validity of electronic signatures under Article 11, paragraph (1), which provides that electronic signatures have legal force when they meet specific requirements. Conversely, the UUJN still requires physical presence and

manual signatures for the creation of authentic deeds, as regulated under Article 16. This difference in provisions creates regulatory disharmony, hindering the implementation of electronic signatures in notarial practice.

Lumban Tobing (1991) explains that several limitations bind the exercise of notary authority in the creation of deeds. First, notaries can only create certain deeds as permitted by law and regulation. Second, notaries are authorised to draw up deeds only for interested parties and are prohibited from drafting deeds for themselves or close family members. Third, notary authority is limited to their jurisdictional area. Fourth, notaries cannot create deeds during leave periods, before official appointment, or before taking the oath of office. These limitations demonstrate that the UUJN embodies a philosophy to provide certainty, protection, and legal order for society (Jaya, 2014). However, these limitations also serve as obstacles to adopting electronic signature technology that could actually improve the efficiency of notarial services.

Several previous studies have examined the implementation of electronic signatures in notarial practice. Purwanto and Purwoadmojo (2023) found that the use of electronic signatures on notarial documents can only be applied to official reports (*akta relaas*), while party deeds (*akta partij*) do not allow the use of electronic signatures because Article 16 of the UUJN requires direct meetings between parties. Sihombing (2020) emphasises the legal force of electronic signatures in resolving electronic agreement disputes and evaluates their equivalence to conventional signatures. Astiriani (2015) discusses Constitutional Court decisions on notary position formation provisions and their relevance to the use of electronic signatures, emphasising the need for legal certainty in the digitalisation of the notary sector. These studies indicate an urgent need for regulatory harmonization between the ITE Law and the UUJN.

The legal certainty theory proposed by Gustav Radbruch (2006) holds that legal certainty is one of the main objectives of law, to be balanced with justice and utility. In the context of electronic signatures in notarial practice, legal uncertainty arises from the disharmony between the ITE Law and the UUJN. This disharmony encompasses three main aspects, namely physical presence requirements, signature form specifications, and document authentication procedures. Article 1875 of the Indonesian Civil Code still recognizes manually signed documents as authentic deeds, while Government Regulation Number 71 of 2019 and the ITE Law provide a legal basis for certified electronic signatures. This condition creates doubt in law enforcement regarding electronic documents produced by notaries.

This research is of high urgency, given the rapid development of digital technology and public demand for efficient notarial services. Regulatory harmonisation between the ITE Law and the UUJN is necessary to achieve synchronisation that enables the use of electronic signatures in notarial practice without lowering security standards or document validity. Without proper harmonisation, the digitalisation of notarial services will be hampered, and the public will not be able to benefit from technology fully. This study aims to analyze the forms of disharmony between the ITE Law and the UUJN and to formulate a harmonization framework that can bridge the implementation of electronic signatures in notarial practice. This analysis is expected to contribute to legal discourse on modernizing notarial practice in Indonesia while maintaining legal certainty and document authenticity.

## **RESULTS AND DISCUSSION**

### **a. Regulatory Disharmony between the ITE Law and the UUJN in Electronic Signature Implementation**

The implementation of electronic signatures in Indonesian notarial practice faces significant regulatory challenges stemming from the disharmony between the Electronic Information and Transactions Law (ITE Law) and the Notary Law (UUJN). This study identifies three main aspects of disharmony that require harmonization: physical presence requirements, signature form specifications, and document authentication procedures. Understanding these aspects of disharmony lays the foundation for formulating a practical harmonisation framework.

The first aspect of disharmony concerns physical presence requirements. Article 16, paragraph (1), letter m, of the UUJN explicitly requires notaries to read deeds to the parties in the presence of at

least two witnesses and to sign them immediately after reading. This provision mandates physical presence as an essential element for creating authentic deeds. In contrast, the ITE Law, under Article 5, paragraph (1), recognises electronic information and electronic documents as valid legal evidence without requiring physical presence. Article 11, paragraph (1) of the ITE Law further strengthens this position by acknowledging electronic signatures as having legal force and legal effect when meeting specified requirements. This fundamental difference creates legal uncertainty for notaries who wish to utilize electronic signatures in their practice (Anshori et al., 2022).

The second aspect of disharmony relates to signature form specifications. The UUJN does not explicitly define the form of signature required for notarial deeds, but traditional interpretation and practice have always assumed manual signatures on physical documents. Article 1, number 12, of the UUJN defines a notarial deed as an authentic deed made by or before a notary, according to the form and procedure stipulated by law, implying the creation of a conventional document. Meanwhile, Article 1, Section 12 of the ITE Law defines electronic signatures as signatures consisting of electronic information attached to, associated with, or related to other electronic information used for verification and authentication. Government Regulation Number 71 of 2019 concerning Electronic System and Transaction Implementation further elaborates that electronic signatures can be certified or uncertified, with certified electronic signatures having stronger legal standing. This difference in the conceptualisation of signatures creates ambiguity in applying electronic signatures to notarial documents.

The third aspect of disharmony involves document authentication procedures. Under the UUJN framework, authentication of notarial deeds occurs through the notary's official capacity, physical signatures, and the notary's seal or stamp. Article 38 of the UUJN specifies the structure of notarial deeds, including the opening, body, and closing sections, all of which traditionally take the form of a physical document. The ITE Law establishes a different authentication paradigm through electronic certification. Article 13, paragraph (1) of the ITE Law states that every person has the right to use electronic certification services for electronic signatures. The National Cyber and Encryption Agency (BSSN) supervises electronic certification providers to ensure the security and validity of electronic signatures. Purwanto and Purwoadmojo (2023) note that this difference in authentication mechanisms poses challenges for integrating electronic signatures into the existing notarial framework.

Gustav Radbruch's legal certainty theory provides a valuable lens for analyzing this regulatory disharmony. Radbruch (2006) argues that law must achieve balance among three fundamental values: justice, utility, and legal certainty. In the context of electronic signatures in notarial practice, the current regulatory framework fails to achieve this balance. The utility value supports the adoption of electronic signatures because it offers efficiency, speed, and accessibility benefits. However, legal certainty remains compromised due to conflicting provisions between the ITE Law and the UUJN. Justice considerations also arise when certain parties cannot access notarial services efficiently due to rigid physical presence requirements. Harmonization efforts must address all three values to create a comprehensive regulatory framework.

The analysis reveals an important distinction between official reports (*akta relaas*) and party deeds (*akta partij*) regarding the applicability of electronic signatures. Lumban Tobing (1991) explains that *akta relaas* records events witnessed by the notary, such as general meeting minutes, while *akta partij* contains statements or agreements made by the parties before the notary. For *akta relaas*, Tobing (2010) demonstrates that notaries can use electronic signatures after recording events they witnessed, because these deeds do not require party signatures. However, *akta partij* requires the direct party's presence before the notary for signing, making implementing electronic signatures more challenging under current regulations. This distinction suggests that harmonization efforts may need to adopt differentiated approaches for different deed types.

## **b. Harmonization Framework for Electronic Signature Implementation in Notarial Practice**

Achieving effective implementation of electronic signatures in notarial practice requires a comprehensive harmonization framework that addresses the identified regulatory disharmony. This framework encompasses three interconnected components: regulatory amendments, technological infrastructure development, and stakeholder capacity building. Each component plays a crucial role in

ensuring that electronic signature adoption maintains legal certainty while embracing technological advancement.

The first component involves regulatory amendments to reconcile conflicting provisions. The UUJN requires revision to accommodate electronic signatures for certain deed types while maintaining essential authenticity requirements. Article 15, paragraph (3) of the UUJN opens possibilities for notaries to perform other authorities regulated by law, which could serve as the legal basis for electronic signature adoption. Astiriani (2015) emphasizes that regulatory changes must ensure document integrity and authenticity remain uncompromised. The proposed amendments should explicitly recognise certified electronic signatures as valid for *akta relaas*, establish clear procedures for the creation and storage of electronic deeds, and define the conditions under which electronic signatures may substitute for manual signatures. These amendments must align with the ITE Law provisions to eliminate regulatory conflicts and provide clear guidance for notaries.

The second component focuses on developing technological infrastructure to support the implementation of secure electronic signatures. Article 59, paragraph (3), of Government Regulation Number 71 of 2019 establishes requirements for certified electronic signatures, including identity verification, exclusive signatory control, and detectability of post-signature changes. The National Cyber and Encryption Agency (BSSN) plays a central role in supervising electronic certification providers and ensuring compliance with security standards. Makarim (2003) notes that robust technological infrastructure must include encryption systems, secure key management, timestamping services, and reliable identity verification mechanisms. For notarial practice, the infrastructure should integrate with existing notary information systems and provide audit trails for regulatory compliance. The Indonesian Notary Association (INI) should collaborate with BSSN to develop technical guidelines specific to notarial electronic signatures.

The third component addresses stakeholder capacity-building through education and socialisation programs. Sihombing (2020) identifies public perception as a significant barrier to electronic signature adoption, with many clients still preferring physical signatures as proof of document authenticity. Overcoming this barrier requires systematic education programs targeting both notaries and the general public. For notaries, training programs should cover technical aspects of electronic signature creation and verification, legal implications of electronic deeds, and best practices for maintaining document security. For the public, awareness campaigns should explain the legal validity of electronic signatures, security features that protect document integrity, and the efficiency benefits of digital notarial services. The Ministry of Law and Human Rights, together with the Indonesian Notary Association, should coordinate these capacity-building efforts.

The harmonization framework should follow a phased implementation strategy to ensure a smooth transition. The first phase involves regulatory preparation, including drafting UUJN amendments, developing technical standards, and establishing institutional coordination mechanisms. The second phase focuses on pilot implementation, where selected notaries in designated areas test electronic signature systems under supervised conditions. This phase allows for the identification and resolution of practical challenges before the nationwide rollout. The third phase encompasses full implementation with continuous monitoring and evaluation. Throughout all phases, feedback mechanisms should enable stakeholders to report issues and suggest improvements. This phased approach balances innovation with prudent risk management.

Comparative analysis with other jurisdictions provides valuable insights for Indonesia's harmonization efforts. The European Union's eIDAS Regulation establishes a comprehensive framework for electronic identification and trust services, including electronic signatures in notarial contexts. Several civil law countries, such as France and Germany, have successfully integrated electronic signatures into their notarial systems while maintaining legal certainty. Singapore's Electronic Transactions Act offers another model for harmonizing traditional legal requirements with digital innovations. These international experiences demonstrate that regulatory harmonization can preserve notarial authenticity functions while embracing technological efficiency. Indonesia can adapt relevant aspects of these frameworks to suit its legal tradition and practical needs.

Successful harmonization will generate multiple benefits for Indonesian legal practice and society. For notaries, electronic signature implementation reduces administrative burden, accelerates

document processing, and expands service reach to remote areas. For clients, digital notarial services offer convenience, time savings, and reduced transaction costs. For the legal system, properly authenticated electronic deeds provide reliable evidence with enhanced security features compared to traditional paper documents. Environmental benefits also emerge from reduced paper consumption and physical document storage requirements. Notodisoerjo (1993) emphasizes that notarial practice must evolve with societal needs while maintaining its core function of providing legal certainty. The harmonization framework positions Indonesian notarial practice to fulfil this dual mandate in the digital era.

Despite its potential benefits, the harmonisation process faces several challenges that require mitigation strategies. Digital infrastructure disparities across Indonesian regions may limit universal access to electronic signatures, necessitating targeted infrastructure investments in underserved areas. Cybersecurity threats pose risks to the integrity of electronic documents, requiring robust security protocols and incident response mechanisms. Resistance from traditionalist stakeholders may slow adoption, highlighting the importance of comprehensive socialization programs. Legal disputes over the validity of electronic deeds may arise during the transition period, underscoring the need for explicit transitional provisions and judicial guidance. Addressing these challenges proactively through the harmonization framework will maximize the likelihood of successful implementation.

The analysis demonstrates that regulatory harmonisation between the ITE Law and the UUJN is an essential prerequisite for effective implementation of electronic signatures in Indonesian notarial practice. The identified disharmony in physical presence requirements, signature form specifications, and document authentication procedures creates legal uncertainty, hindering digital transformation. The proposed harmonisation framework, encompassing regulatory amendments, technological infrastructure development, and stakeholder capacity-building, provides a systematic approach to resolving these issues. By adopting this framework through phased implementation, Indonesia can modernize its notarial practice while maintaining the legal certainty and document authenticity that society requires. This harmonization effort represents not merely a technical adjustment but a fundamental step toward creating an inclusive, efficient, and legally sound notarial system for the digital age.

## CONCLUSION

This study concludes that regulatory disharmony between the Electronic Information and Transactions Law (ITE Law) and the Notary Law (UUJN) creates significant legal uncertainty for the implementation of electronic signatures in Indonesian notarial practice. The analysis identifies three main aspects of disharmony. First, physical presence requirements in Article 16 of the UUJN conflict with the ITE Law's recognition of electronic transactions without physical presence. Second, the signature form specifications differ fundamentally: the UUJN assumes manual signatures, while the ITE Law accommodates electronic signatures. Third, document authentication procedures operate under different paradigms, with the UUJN relying on notary capacity and physical seals. At the same time, the ITE Law establishes electronic certification mechanisms supervised by the National Cyber and Encryption Agency (BSSN). These disharmonies prevent notaries from fully utilizing electronic signatures and hinder the modernization of notarial services in Indonesia.

The study proposes a comprehensive harmonisation framework comprising three interconnected components. The first component requires regulatory amendments to the UUJN that explicitly recognise certified electronic signatures for official reports (*akta relaas*), while maintaining the physical presence requirements for party deeds (*akta partij*). The second component involves the development of technological infrastructure, including electronic certification systems, encryption protocols, and integration with existing notary information systems under BSSN supervision. The third component addresses stakeholder capacity-building through education programs for notaries and public awareness campaigns on electronic signature validity and security. This framework should follow a phased implementation strategy encompassing regulatory preparation, pilot testing, and full implementation with continuous monitoring.

The implications of this research extend to multiple stakeholders in the Indonesian legal system. For legislators, this study recommends initiating UUJN amendments that harmonize with ITE Law provisions while preserving notarial authenticity functions. For the Ministry of Law and Human Rights, the findings suggest developing technical guidelines and coordinating with BSSN on notarial electronic signatures. For the Indonesian Notary Association, the study recommends establishing training programs and professional standards for the creation of electronic deeds. For notaries, adopting electronic signatures for akta relaas offers immediate efficiency gains within current regulatory boundaries. For the public, understanding electronic signature validity enables informed decisions when engaging notarial services. Successful harmonisation will position Indonesian notarial practice to serve society effectively in the digital era while maintaining legal certainty and document authenticity, which form the foundation of notarial functions.

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