

3-30-2023

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Recommended Citation

Koos, Stefan (2023) "The Digitization of Notarial Tasks - A Comparative Overview and Outlook of 'Cyber Notary' In Indonesia and Germany," *The Indonesian Journal of Socio-Legal Studies*: Vol. 2: No. 2, Article 1.

DOI: 10.54828/ijsls.2023v2n2.1

Available at: <https://scholarhub.ui.ac.id/ijsls/vol2/iss2/1>

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Cover Page Footnote

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Abstract

This article highlights the newer discussion of the term "cyber notary" in the Indonesian legal context and compares the discussion with the discussion on the use of digital instruments for German notaries. The article notes that the concept of cyber notary is being discussed in Germany and other EU-member states as well, where the integration of digital and cyber elements into the notary system is considered as a way to make processes more efficient, accessible, and secure. This includes the use of digital signatures, online notarization, the use of notarial blockchains, or secure digital storage for notarized documents. However, the implementation of cyber notary systems in Indonesia is still in a very early stage and not yet fully regulated. Consequently, it needs more discussion for the consistent integration of digital instruments for notarial work into the legal system of Indonesia. The article provides a comprehensive overview of the situation of the digitalization of notarial tasks in Indonesia. It presents some new developments in Germany that are relevant for cyber notaries and may be interesting for the development of digitalization of notarial work processes in Indonesia. Finally, the article will discuss some aspects of the ongoing digitalization that may affect the profession of notaries in the future. As in all legal professions, we are facing future disruptive developments through digitalization, namely with artificial intelligence, blockchain technology, or cloud computing. The article aims to show that AI and blockchain technology will not replace civil law notaries in the near and middle term but will be integrated into the daily work of notaries as supporting instruments.

Keywords: cyber notary, blockchain, artificial intelligence, legal tech, digitization of society

Abstrak

Artikel ini menyoroti diskusi yang lebih baru tentang istilah "cyber-notary" dalam konteks hukum Indonesia dan membandingkan diskusi tersebut dengan diskusi tentang penggunaan instrumen digital untuk notaris Jerman. Artikel ini mencatat bahwa konsep cyber-notary sedang dibahas di Jerman dan negara-negara anggota Uni Eropa lainnya juga, di mana integrasi elemen digital ke dalam sistem notaris pada dasarnya dianggap sebagai cara untuk membuat proses lebih efisien, mudah diakses dan aman. Ini termasuk penggunaan tanda tangan digital, notaris online, penggunaan blockchain notaris, atau penyimpanan digital yang aman untuk dokumen yang diaktakan. Namun, implementasi sistem cyber-notary di Indonesia masih dalam tahap yang sangat awal dan belum sepenuhnya diatur. Akibatnya, perlu lebih banyak diskusi untuk integrasi yang konsisten dari instrumen digital untuk pekerjaan notaris ke dalam sistem hukum Indonesia. Artikel ini memberikan gambaran yang komprehensif mengenai situasi digitalisasi tugas-tugas notaris di Indonesia. Artikel ini menyajikan beberapa perkembangan baru di Jerman yang relevan untuk cyber notary dan mungkin menarik untuk pengembangan digitalisasi proses kerja notaris di Indonesia. Akhirnya, artikel ini akan membahas beberapa aspek dari digitalisasi yang sedang berlangsung yang dapat mempengaruhi profesi notaris di masa depan. Seperti dalam semua profesi hukum, kita menghadapi perkembangan disruptif di masa depan melalui digitalisasi, yaitu dengan Kecerdasan Buatan, Teknologi Blockchain, atau komputasi awan. Artikel ini bertujuan untuk menunjukkan, bahwa teknologi AI dan blockchain tidak akan dapat menggantikan notaris 'Civil Law' dalam waktu dekat dan jangka menengah, tetapi akan diintegrasikan ke dalam pekerjaan notaris sehari-hari sebagai instrumen pendukung.

Kata kunci: cyber-notary, blockchain, kecerdasan buatan, legal tech, sistem informasi



I. Introduction

The term "cyber notary" has been the subject of countless academic articles in Indonesia since it was first mentioned in Law No. 2/2014 (Amendment to Law No. 30/2004 regarding Notary Profession) in the Elucidation of Art. 15 Law No. 30/2004 regarding Notary Profession (UUJN). The great interest in digitization in general and the legal profession in particular that exists in Indonesia is not surprising, given the large territorial expansion of the island nation. Digitization can lead to significant cost advantages and increases in effectiveness here. However, regarding digitization, there has so far been a lack of detailed legislative shaping of the norms that deal specifically with the tasks of notaries, which has additionally stimulated the literature to shed light on the options for digital working tools for notaries on the basis of the current law.

This article provides a comprehensive overview of the situation of the digitization of notarial tasks in Indonesia. It presents new developments in Germany that are relevant for cyber notaries and may be interesting for the development of digitization of notarial work in Indonesia. Finally, the article will discuss some aspects of the ongoing digitization that may affect the profession of notaries in the future. As in all legal professions, we are facing future disruptive developments through digitization, namely with Artificial Intelligence, Blockchain Technology, or Cloud Computing. The article aims to show that AI and blockchain technology will not be able to replace notaries in the near and middle term but will be integrated into the daily work of notaries as supporting instruments. This leads to the need for legislative adjustments of the law of notary profession and also to the need for preparing future notary professionals for the integration of technologies that will change the profession they will enter after their studies¹.

II. Method

The article is based on a normative legal approach using analysis and interpretation of legal sources in Indonesia and Germany and analysis of literature in the Indonesian and German legal discussion. The article is a legal comparative study. Law comparison needs a definition of the purpose of the specific comparison. This includes a statement on why the comparison of

¹ Habib Adjie, 'Mengikuti Arus Kenotariatan Era 4.0, Kemenkumham Buka Seminar Nasional UPH', 4 July 2019, <https://www.uph.edu/id/2019/07/04/following-the-4-0-era-notary-trend-kemenkumham-opens-national-seminar-uph/>



the chosen legal systems is instructive for the research aim. The purposes and tasks of notaries in Indonesia and in Germany are similar in relevant aspects. This refers especially to the function of notaries as mediators and to the function of notaries regarding legal counselling. This involves questions of personal communication with clients, which are relevant issues for the discussion of the question of how far digitization can replace personal contact between notaries and clients. A comparing study therefore is instructive for the further legal development in the compared legal systems. To show that the US discussion on cyber-notaries is not simply transferable to the situation in Roman law legal systems, the article also briefly deals with the US situation insofar as this is useful for understanding.

The topic of the cyber notary has an important socio-legal dimension, as it concerns the intersection of technology and the communicative tasks of the notary. In addition to verifying identities and authenticating signatures, notaries also play a role in providing legal advice, mediation and dialogue with clients. Furthermore, the potential of the cyber notary to improve access to legal services by increasing affordability and accessibility is an important consideration for the legislator, policy makers and society in general, especially in a large island nation like Indonesia. In addition to the traditional roles of notaries, the development of metaverses and virtual worlds can provide new opportunities for notaries to act as trusted third parties and enable interpersonal trust in virtuality. As virtual goods and digital identities proliferate, the need for trusted intermediaries in the real world to verify identities and facilitate trustworthy transactions may increase.

III. Discussion

A. Notary in Indonesia and in Germany

1. Germany

The tasks of a notary in Germany, similar to those in Indonesia based on the Civil Law origins of its notary system², differ categorically from the tasks of a US public notary. A public notary in the United States is a public officer authorized by the state government to serve as an impartial witness to the signing of important documents and to administer oaths. In the United States, public notaries are responsible for verifying the identity of individuals who are signing

² 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): 4–5, <http://dx.doi.org/10.29303/ius.v0i0.981>.



documents and ensuring that the documents are properly executed. They also have the authority to certify copies of documents, administer oaths and affirmations, and take affidavits and depositions. Public notaries play a crucial role in the legal system by serving as a neutral third party who can verify the authenticity of documents and the identity of the individuals involved in the transaction.

In Germany, a notary is an independent holder of a public office for the certification of declarations of intent in the field of precautionary administration of justice. Depending on the Federal State in which the notary is situated, the office is either a full-time-notary ('Nur-Notar', following the French notary system, e.g., in the State of Bavaria) or a lawyer-notary. He or she is responsible for witnessing and certifying the authenticity of legal documents and transactions. Notaries in Germany are required to be impartial and unbiased and must follow strict rules of conduct to maintain the integrity and fairness of their work. The purpose of a notary in Germany, however, goes beyond that of the US public notary, which is limited to certification, to provide a level of legal protection for both parties involved in a transaction, ensuring that all documents and agreements are legally binding and enforceable. Notaries are also responsible for issuing official certificates and documents, such as deeds, powers of attorney, and wills, among others. In short, a notary in Germany plays a crucial role in ensuring the legal validity and reliability of various types of legal transactions and documents.

It is important to note that the purpose of the notary is to provide legal advice to the parties and to represent the parties before courts and authorities. The legal basis for this is the German Federal Code for Notaries ('BNotO') and professional guidelines of the Chambers of Notaries. Section 24, paragraph 1 of the German Federal Notary Act ('BNotO') defines the office of the notary:

*"The office of notary also encompasses the provision of other advisory services to the parties involved in the preventive administration of justice, in particular the drawing up of draft documents and advising of the parties involved. Unless other provisions impose restrictions, notaries are also authorised to represent parties before the courts and administrative authorities to that extent."*³

This is specified in section 17 (1) of the Notarization Act ('Beurkundungsgesetz', 'BeurkG'):

³ English translation by Federal Ministry of Justice, https://www.gesetze-im-internet.de/englisch_bnoto/index.html (visited 23.1.2023).



“The notary shall ascertain the will of the parties, clarify the facts, instruct the parties about the legal implications of the transaction, and reproduce their declarations clearly and unambiguously in the minutes. In doing so, he shall ensure that errors and doubts are avoided, and that inexperienced and unsophisticated parties are not disadvantaged.”⁴

In the case of existing doubts about the free will decision of the parties, the notary must perform special duties of discussion and instruction according to section 17 (2) BeurkG:

“If there are doubts as to whether the transaction complies with the law or the true will of the parties involved, the doubts should be discussed with the parties involved. If the notary doubts the validity of the transaction and the parties involved insist on the certification, he shall note the instruction and the explanations given by the parties involved in the minutes.”⁵

2. Indonesia

The notary in Indonesia is regulated in Law No 30/2004 regarding Notary Profession (UUJN), amended by Law No 2/2014. The office is regulated as a full-time-notary. The tasks of the notary are regulated in principle in Art. 15 UJN.

Regarding the notary's task of providing legal advice to the parties or mediation, Art. 15 Law No 30/2004 is not very detailed. Although Paragraph 2 lit. e explicitly mentions the notary's task of providing legal advice in connection with the drawing up of deeds, it is disputed in Indonesian literature how far the notary's active advisory task goes. This depends on whether the Indonesian notary is more like the public notary of Anglo-American law or the continental European notary. Historically, based on the Civil Law basis, and due to the opening up of the notary's area of responsibility in Art. 15 Paragraph 2 lit. 3 and Art. 15 Paragraph 3 UU 30/2004, the latter is more likely to be the case.

Indonesian authors consider a strict passivity of the notary to be too narrow and assume advisory and mediation⁶ tasks for the notary⁷. The starting point for the question of digitization of notarial tasks in Indonesia and Germany is thus similar, and a comparison can be instructive, even if differences exist in detail. For example, the warning function of a notary involved in important transactions, such as land purchase agreements and transfer of ownership of land in

⁴ English translation by the author

⁵ English translation by the author

⁶ See regarding mediation tasks Ayu Ningsih, Faisal A. Rani, and Adwani Adwani, ‘Kedudukan Notaris sebagai Mediator Sengketa Kenotariatan Terkait dengan Kewajiban Penyuluhan Hukum’, Jurnal Ilmiah Kebijakan Hukum 13, no. 2 (2019): 201–17, <http://dx.doi.org/10.30641/kebijakan.2019.V13.201-228>.

⁷ H.I.W. Utomo, ‘LEGAL COUNSELING BY A NOTARY AS A MEANS TO PRODUCE A BALANCED AGREEMENT’, Jurnal Notariil 7, no. 1 (6 March 2022): 7, <https://doi.org/10.22225/jn.7.1.2022.1-8>.



German law, is seen as extremely relevant. It follows that the personal contact of the parties with the notary is likely to remain of particular importance and cannot be easily replaced by digitization. The differences between the functions of notaries in the Anglo-Saxon systems and in Civil Law systems show that the implementation of cyber notary elements into the law of notaries is not problematic in the Anglo-Saxon system because the cyber notary concept does not affect the strength of the deed, which is different in the Civil Law system⁸.

B. The Term ‘Cyber Notary’

The more formal position of the public notary ultimately led to the American Bar Association (ABA) Information Security Committee proposing the concept of a cyber notary in 1994. The problem that was seen here is the fact that notarial acts of the traditional notary public had widely been unrecognized in foreign legal systems. In order to solve this problem, a specialized notary's office was to be developed, which, in contrast to the traditional public notary, would have special legal qualifications as well as special qualifications in the field of information security technology. This was to ensure that such a notary could also function internationally as a certification authority in the sense of a 'trusted third party' (T3P). A cyber notary in this sense was therefore to be understood as a computer and legal specialist who would be able to electronically certify and authenticate all elements of an electronic business transaction.⁹

As mentioned above, the concept of the ABA is not instructive for the question of the implementation of cyber notary elements into Civil Law systems such as Indonesia or Germany due to the functional differences, especially regarding the proof of power of an authentic deed.¹⁰

In contrast, the concept of 'electronic notary' proposed in 1989 by the French delegation to the TEDIS Group (Trusted Electronic Data Interchange System) concerned a concept for ensuring integrity and confidentiality for EDI (Electronic Data Interchange) transactions and the use of digital signatures. It aimed at the creation of transaction notarization services

⁸ Lubis et al., 'Comparison of Civil Law Regarding the Implementation of Cyber Notary in Countries With Common Law and Civil Law Traditions', 5.

⁹ Leslie G. Smith, 'The Role of the Notary in Secure Electronic Commerce' (Queensland University of Technology, 2006), 37–38, https://eprints.qut.edu.au/16407/1/Leslie_Smith_Thesis.pdf.

¹⁰ Ika Yuli Agustin and Gansham Anand, 'Proposing Notaries' Deed Digitalization in Indonesia: A Legal Perspective', *Lentera Hukum* 8, no. 1 (2021): 58, <https://doi.org/10.19184/ejlh.v8i1.21375>; 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): 31–32, <https://doi.org/10.31014/aior.1996.01.04.32>.



involving third-party industry organizations. These should record transactions between parties electronically as T3P entities. The process of notarization (authentication) of a signature on an electronic document should be enabled by a specific method leading to the output in the form of a notarial deed that is created or processed electronically.¹¹

The term ‘Cyber Notary’ is popular especially within the Indonesian legal discussion. The number of publications in Indonesia in Indonesian or English language on the topic between 2015 and 2022 is, compared to Germany, almost unmanageable. In contrast to the concept of the ABA, which understands the electronic notary as a specialized kind of notary, in German literature, the issue is discussed in the sense of adding certain functions and instruments to the notary in general, and the term is mostly not used in the sense of ‘The Cyber-Notar’. In principle, German literature on notarial law is rather conservative and discusses the question of digitization of notarial tasks mostly not in terms of a complete transformation of the notary's professional profile, but rather in terms of a cautious and considered integration of certain digital functions.¹² Cyber notary is not seen as a comprehensive concept of a 'digital notary', but rather discussed in terms of certain aspects of digitization of the notary's office. In this respect, the German discussion differs slightly from the discussion in Indonesia, where a more comprehensive concept of a Cyber Notary seems sometimes to be discussed.

However, based on a frequently cited definition given by Nurita¹³, where a cyber notary is “a notary who carries out his duties or authority based on information technology, which is related to the duties and functions of a notary, especially in making deeds.”¹⁴, ‘cyber notary’ is understood – similarly to the German discussion – in the sense of a functional integration of digitization into the work of notaries. The term does not imply a parallel concept of a cyber

¹¹ Smith, ‘The Role of the Notary in Secure Electronic Commerce’, 38–39.

¹² Jens Jeep, ‘Notary Disrupted – Legal Tech und der Rechtsstaat’, *Anwaltsblatt Online*, 2019, 823–37.

¹³ Dewa Ayu Widya Sari, R.A. Retno Murni, and I Made Udiana, ‘KEWENANGAN NOTARIS DI BIDANG CYBER NOTARY BERDASARKAN PASAL 15 AYAT (3) UNDANG-UNDANG NOMOR 2 TAHUN 2014 TENTANG PERUBAHAN ATAS UNDANG-UNDANG NOMOR 30 TAHUN 2004 TENTANG JABATAN NOTARIS’, *Acta Comitatus: Jurnal Hukum Kenotarian* 2, no. 2 (2017): 222, <https://doi.org/10.24843/AC.2017.v02.i02.p06>; David Tan, ‘CYBER-NOTARIES FROM A CONTEMPORARY LEGAL PERSPECTIVE: A PARADOX IN INDONESIAN LAWS AND THE MARGINAL COMPROMISES TO FIND EQUILIBRIUM’, *Indonesia Law Review* 10, no. 2 (2020): 121, <https://doi.org/10.15742/ilrev.v10n2.635>; Mutiaratu Astari Rafli, ‘Legality Of Authentic Deed With Cyber Notary Basis According To Legal Assurance Principles’, *UNRAM Law Review* 6, no. 1 (2022): 129, <https://doi.org/10.29303/ulrev.v6i1.225>; Masrur Ridwan, ‘Reconstruction Of Notary Position Authority and Implementation Of Basic Concepts Of Cyber Notary’, *Jurnal Akta* 7, no. 1 (2020): 64, <http://dx.doi.org/10.30659/akta.v7i1.9432>.

¹⁴ Emma Nurita, *Cyber Notary, Pemahaman Awal Dalam Konsep Pemikiran* (Bandung: Refika Aditama, 2012), 4, 28–29.



notary as a potential substitute for traditional notaries. Nurita's definition serves well, as it is general enough to cover various aspects of the digitization of notarial tasks.

Aspects of the cyber notary to be specially outlined are:

- Electronic notarial deeds.
- Digital fingerprints.
- Notarial online procedures, e.g., notarization of online company formation via video conferencing software.
- Secure digital archiving of documents.
- Identity verification can be performed electronically.

Further questions arise regarding the possible impact of blockchain technology in the notarial field of activity. This article will not deal with all these aspects but will outline only some peculiar aspects.

C. Cyber Notary in Indonesia

The high level of interest in this topic in Indonesian literature is based on legislation that does not appear to be complete. The Indonesian legislature probably intended to generally open up options for digitization of the notary's office without already regulating the matter too specifically, possibly because the legislature did not yet see itself in a position to anticipate further developments in digitization in this area. This has led to contradictions with existing legal rules and legal uncertainties about the extent to which Indonesian notaries can use digital instruments.

The term "cyber notary" is mentioned in Law No. 2/2014 (Amendment to Law No. 30/2004 regarding Notary Profession) in the Elucidation of Art. 15 Law No. 30/2004 regarding Notary Profession (UUJN). Art. 15 Paragraph 3 Law No. 30/2004 states that notaries have powers in addition to those mentioned in paragraphs 1 and 2. These additional powers are specified in laws and regulations. The Elucidation explicitly mentions "the authority to certify electronic transactions (cyber notary)."

This gives rise to various problems for legal research and practice: Firstly, both UJUN and Law No. 2/2014, as well as other legal sources, lack a definition of the term "cyber notary," making it unclear which technologies notaries can use in practice to provide "cyber notarial services." So far, there is no legislative regulation on the tasks and instruments of notaries in the sense of the "cyber notary's office."



Secondly, the term "cyber notary," at least as it is understood comprehensively in the sense of the definition proposed by Indonesian literature, comes into conflict with existing rules of the Notaries Act, such as Art. 1 No. 7 UUJN. This norm defines the notarial deed as

"...an authentic deed made by or in front of a Notary in accordance with the form and procedure stipulated in this Law."

Such a deed must therefore be drawn up by a notary (relaas akten) or before a notary (partij akten) in accordance with the formal and procedural requirements laid down in the UUJN. Consequently, electronic deeds would not be regarded as authentic deeds but as mere ratifications of deeds under the hand (Art. 1867 Civil Code).¹⁵

Also, Article 16, paragraph 1, letter m of UUJN stipulates that the Notary is obliged to

"...read out the Deed in the presence of the proponent in the presence of at least 2 (two) witnesses, or 4 (four) witnesses specifically for the making of an underhand testament Deed, and signed at that time by the proponent, witnesses, and Notary."

The Elucidation to this norm states explicitly that the notary must attend physically in this procedure.

This gives rise to two main problems: notarial deeds drawn up via teleconferencing systems, for example, seem unlikely to meet the legal requirement of a deed drawn up before a notary. Additionally, the law does not contain concrete procedural requirements for deeds to be drawn up by means of teleconferencing systems.

The issue of legal evidence is particularly discussed in Indonesian legal literature. Article 5 of Law No. 11/2008 concerning electronic information and transactions (EIT) stipulates in Paragraph 1:

"Electronic Information and/or Electronic Documents and/or the printouts thereof are valid legal evidence."

However, Paragraph 4, letter b, excludes from this

"...certificates together with their papers that under laws must be made in notary deed or deed made by land conveyances".

¹⁵ Maghfira Humaira and Pieter Everhardus Latumeten, 'Comparison of Notary Deed in Indonesia, Netherlands, and Belgium during the COVID-19 Pandemic', *Linguistics and Culture Review* 6, no. S5 (2022): 237, <https://doi.org/10.21744/lingcure.v6nS5.2154>.



Coresy and Saleh conclude that, based on the current legal situation, electronically created notarial deeds do not have valid legal evidence.¹⁶ This means, according to their opinion, that there is not currently a sufficient legal basis to allow notaries to produce a deed within a virtual meeting using online conferencing software.¹⁷ However, another opinion by Mutiaratu proposes interpreting Article 5, Paragraph 4 in a more flexible way. Mutiaratu suggests accepting legal evidence of the notarial deed in the form of an electronic document or its printout, but only for legal actions that do not have to be made in a legal document or notarial deed.¹⁸ This could have implications for the preparation of minutes of meetings in general meetings of public limited companies. According to Art. 77, Paragraph 1 of Law No. 40/2007, these meetings can also be conducted through teleconferencing or video conferencing, and according to Art. 9, Paragraph 2, a notarial deed for these minutes is not required. From this, Mutiaratu argues that there is a legislative intention to allow for a purely digital notarial deed on the minutes of the meeting to have probative value.

In Indonesian literature, there is also discussion about the possibility of online storage of notarial records. Indonesian authors generally consider it possible, but according to the current legal situation under Law No. 2/2014, it is only allowed as a backup of the original physical documents. This is due to the aforementioned Art. 5, Paragraph 4 of Law No. 11/2008, which does not attribute full probative value to electronic documents, as well as the unmet requirements for the authenticity of the document as defined in Art. 1, No. 1 of UUJN and Art. 1868 of the Civil Code.¹⁹

Despite some indications in contemporary Indonesian law that suggest a desire for the integration of certain cyber notary aspects, there are significant gaps in the legal system. It appears that the mention of the term "cyber notary" in the Elucidation of the UUJN is not sufficient to achieve the desired digitalization of the notarial profession, as interfaces with

¹⁶ Grace Coresy and Moh Saleh, 'Liability for Breach of Confidentiality Principles in Electronic Action If Connected to Law of Notary Service and Law of Electronic Information and Transaction', *Research, Society and Development* 9, no. 7 (2020): 10, <https://doi.org/10.33448/rsd-v9i7.3591>.

¹⁷ Maghfira Humaira and Latumeten, 'Comparison of Notary Deed in Indonesia, Netherlands, and Belgium during the COVID-19 Pandemic', 237.

¹⁸ Mutiaratu Astari Rafli, 'Legality Of Authentic Deed With Cyber Notary Basis According To Legal Assurance Principles', 133.

¹⁹ Dewi Indah Kusuma, 'KAJIAN TENTANG PENYIMPANAN PROTOKOL NOTARIS DALAM BENTUK ELEKTRONIK TERKAIT KETENTUAN MENGENAI CYBER NOTARY' (Tesis (not published), Universitas Gadjah Mada, 2015), <http://etd.repository.ugm.ac.id/penelitian/detail/78117>; Cyndiarnis Cahyaning Putri and Abdul Rahmad Budiono, 'Konseptualisasi dan Peluang Cyber Notary dalam Hukum', *Jurnal Ilmiah Pendidikan Pancasila dan Kewarnanegaraan* 4, no. 1 (2019): 35, <http://dx.doi.org/10.17977/um019v4i1p29-36>.



traditional notarial law and civil law have not yet been adapted. In Indonesian literature, it is rightly pointed out that this results in uncertainties for notarial practice.²⁰ The urgent need for comprehensive legal regulation of digital instruments and procedures for notarial activity is derived from this.²¹ In the Indonesian legal discussion, it is pointed out that even if there was a legislative opening to the use of cyber notary practices, it would be, following grammatical interpretation of the Elucidation, limited to the "authority to certify transactions conducted electronically".²² This means that, for example, a cyber notary using videoconferencing systems might not be covered. However, the strong role of grammatical interpretation in Indonesian literature on the wording of the Elucidation regarding the term "Cyber Notary" shows that the concept and its consequences for notarial practice are anything but clear, resulting in a conflict of norms and in an obvious problem for legal certainty and significant liability risks for notaries.²³

D. Recent developments relevant for cyber-notary functions in the European Union and Germany

1. The eIDAS-Regulation of the European Union

The eIDAS regulation (Electronic Identification, Authentication and Trust Services) is a European Union (EU) regulation that came into effect in 2014. The regulation is designed to ensure that electronic identification and trust services in the EU are secure, reliable, and recognized across all EU member states. The main goal of eIDAS is to create a single digital market within the EU by establishing common technical and legal standards for electronic identification and trust services. This will make it easier for individuals and businesses to access online services and conduct online transactions across the EU.²⁴ One of the main components of eIDAS is the creation of a trust framework for electronic identification and trust services. This framework establishes a set of technical and legal standards that all electronic identification and trust services must adhere to. This ensures that all electronic identification

²⁰ Coresy and Saleh, 'Liability for Breach of Confidentiality Principles in Electronic Action If Connected to Law of Notary Service and Law of Electronic Information and Transaction'.

²¹ Mutiaratu Astari Rafli, 'Legality Of Authentic Deed With Cyber Notary Basis According To Legal Assurance Principles', 133.

²² Cyndiarnis Cahyaning Putri and Abdul Rahmad Budiono, 'Konseptualisasi dan Peluang Cyber Notary dalam Hukum', 32–33.

²³ Cyndiarnis Cahyaning Putri and Abdul Rahmad Budiono, 35.

²⁴ European Commission, 'Shaping Europe's Digital Future - Discover EIDAS', accessed 10 January 2023, <https://digital-strategy.ec.europa.eu/en/policies/discover-eidas>.



and trust services in the EU are secure, reliable, and recognized across all EU member states. With eIDAS, a network of trust service providers will be created. These providers will offer a range of services, including electronic signatures, electronic seals, timestamping, and website authentication.²⁵ This network is meant to make it easier for individuals and businesses to access these services and conduct online transactions across the EU. EIDAS also includes provisions for mutual recognition of electronic identification schemes between EU member states. This means that if an individual or business uses an electronic identification scheme in one EU member state, it will be recognized and accepted in all other EU member states. This will make it easier for individuals and businesses to access online services and conduct online transactions across the EU.

2. Digital Company Incorporation

Starting from August 1, 2022, German companies can use a combination of physical and virtual means for notarization procedures for the (cash) incorporation of limited liability companies ('GmbH') and Entrepreneurial Company ('Unternehmergeellschaft', 'UG'),²⁶ thanks to the implementation of the European Union Directive (EU) 2019/1151²⁷ in June 2021, also known as the Digitization Directive by the DiRUG (Act on Implementation of the Digitization Directive). This option will replace the traditional practice of needing a physical meeting at the notary's office. The new online procedure is regulated in more detail in the German Notarization Act (BeurkundungsG) and Section 2 of the Limited Liability Companies Act (GmbHG). The virtual notarization process also applies to shareholders' resolutions passed during the formation process.

The new law establishes strict requirements to guarantee the authenticity and integrity of the process. The notary is responsible for verifying the identity of the parties through legally regulated electronic proofs of identity (eID, see above). To replace physically written signatures, permanently verifiable qualified electronic signatures are used (see Sec. 33 BNotO). The use of a specific secure, tamper-resistant, and reliable video conference platform

²⁵ European Union Agency for Cybersecurity ENISA, 'Security Guidelines on the Appropriate Use of Qualified Electronic Seals', 29 June 2017, <https://www.enisa.europa.eu/publications/security-guidelines-on-the-appropriate-use-of-qualified-electronic-seals>.

²⁶ The UG is a form of a limited liability company. Unlike the 'GmbH', it is not required to meet the legally mandated €25,000 share capital required of a GmbH but can be established with one euro of paid-in capital.

²⁷ 'Directive (EU) 2019/1151 of the European Parliament and of the Council of 20 June 2019 Amending Directive (EU) 2017/1132 as Regards the Use of Digital Tools and Processes in Company Law', L 186/80 11.7.2019.



established by the German Federal Notaries Chamber is mandatory for the virtual meeting. It is important to mention that the servers of the system must be on German territory. This precludes the legal use of common video conferencing software such as Zoom or Teams. The participants of the online notarization process can be physically outside Germany, however, in this case, the online notarization procedure must follow German law. On August 1st, 2022, the first online formation of a GmbH was conducted through a video conference portal provided by the German Federal Chamber of Notaries. The company's founder was located in Berlin, and the notary in Munich.²⁸

However, the new option for the use of video conferencing software in notarial practice is still very limited. It cannot be used analogously for other corporation formation procedures beyond the 'GmbH' or 'Unternehmergeellschaft' (UG), nor is it possible to use video conferencing systems for other legal actions related to corporations, such as the amendment of articles of association, change of legal form, merger and dissolution, or disposal and pledging of shares in the company. This is restrictive compared to, for example, EU member state Estonia, which restored the civil law notary concept in 1993²⁹ and allows notaries to process all notarial acts (apart from marriage and divorce) via remote notarization since 2020.³⁰ It must be understood, however, that the digitalization of authorities and official processes in Estonia is far more developed compared to Germany.³¹

Some points of discussion among practitioners of the judiciary and the notary's office regarding the implementation of online incorporation are interesting to note. For example, there were concerns that communication via video conferencing systems entails disadvantages compared to communication with physically present persons (for example, participants may give less honest testimony in video conferences or are less communicative) and it was discussed whether and in which cases the notary may terminate video communication (for example, if

²⁸ Bundesnotarkammer, 'Die neuen notariellen Online-Verfahren', accessed 13 January 2023, <https://online-verfahren.notar.de/ov/>.

²⁹ Ene Andresen, 'State Tasks of the Public Office of Notary — Belonging to the Domain of National or European Union Law?', *Juridica International* XVI (2009): 163.

³⁰ Blessing Oyetunde, 'Estonia's Fully Remote e-Notary Service – 1st State e-Service of Its Kind in Europe', 17 November 2021, <https://e-estonia.com/estonias-fully-remote-e-notary-service-1st-state-e-service-of-its-kind-in-europe/>.

³¹ See also the webpage of the Estonian Chamber of Notaries <https://www.notar.ee/en> (accessed 15.1.2023).



there is insufficient seriousness, e.g. if a participant follows the conference while driving a car) and when the notary may compulsorily demand physical presence.³²

3. Electronic Documents Archive (EDA) by the German Federal Chamber of Notaries

A central electronic archive for notarial documents offers a number of advantages over traditional paper-based archiving methods. One of the most significant benefits is the ability to access documents electronically, eliminating the need to physically locate and retrieve paper documents. Copies and transcripts can be made directly from the electronic version of the original document, rather than from a print or scan. Another advantage is the ability to create and certify notarial documents electronically or in paper form, allowing notaries to provide the same level of service to clients regardless of their preferred format. However, it should be noted that notarial copies are only available in paper form. The "Once-Only-Principle" is also a key feature, stating that notarial documents should only be stored in the notarial archive, and that registers and authorities should be able to access these documents via secure links, helping to save resources and reduce the risk of data duplication. Additionally, the ability to use notarial deeds electronically without media discontinuity is another major benefit, eliminating the need to transfer documents between different systems and media, which can be time-consuming and prone to error.

As of July 1, 2022, the Ordinance on the Maintenance of Notarial Records and Directories (Verordnung über die Führung notarieller Akten und Verzeichnisse, NotAktVV) in Germany requires notaries to make an electronic copy of all new notarial deeds and keep it in an electronic collection immediately after entry in the register of deeds. This is done by creating a PDF/A file from a scan of the paper form of the deed. Archiving is done in the central electronic document archive (EDA) of the Federal Chamber of Notaries, which also hosts the register of documents and custody register of the notaries. To ensure confidentiality, each notary is connected to the EDA via a secure network and all documents are stored in content-encrypted form, only accessible to the notary and staff. There is no master key.³³ The storage of paper

³² Stefan D. J. Schmitz, '11. Berufspolitische Tagung in Berlin - Video Kills the Notary? - Digitale Disruption oder Evolution Der Notariellen Tätigkeit', Conference Report (Berlin: Deutscher Notarverein, 25 January 2019), <https://www.dnotv.de/der-verband/berufspolitische-tagung/11-berufspolitische-tagung-in-berlin/>.

³³ Bundesnotarkammer, 'Notare verwahren Urkunden auch elektronisch - Ein Überblick', accessed 13 January 2023, <https://www.elektronisches-urkundenarchiv.de>.



deeds is typically discarded after 30 years, while electronic archiving of notarial deeds is required for 100 years.

E. Outlook to the Future of the Digitalized Notary

1. Notaries and Video Conferencing

It is questionable whether the use of video conferencing would be accepted as a suitable method for areas of notarial tasks in Germany other than the company incorporation. As previously mentioned, the discussion on the digitalization of notarial tasks in Germany is quite cautious. The fundamental differences between notaries in the Anglo-Saxon legal system and notaries in the continental European legal system, specifically in Germany and likely also in Indonesia, are important to consider. In the US, for example, digitization and automation of notary tasks is generally easier because they are primarily limited to formal acts and do not include legal advisory and warning functions.

In contrast, German notaries provide legal advice to parties and represent them before courts and authorities. The formal requirements of German law that prescribe a notarial form serve the purpose of warning parties against hasty or ill-considered decisions in significant transactions and are not exhausted in a mere evidentiary function. For example, Section 311b (1) sentence 1 of the German Civil Code (BGB) requires the notarial form for contracts that obligate the transfer of ownership of property:

“A contract by which one party agrees to transfer or acquire ownership of a plot of land must be recorded by a notary.”³⁴

According to the legislator's intention, the formal requirement serves four functions: firstly, it ensures the validity of the legal transaction; secondly, it ensures proof of the agreement reached. Additionally, it draws the parties' attention to the special significance of the legal transaction and protects them from hasty commitments or imprudent conditions. This is the warning function of the formal requirement. Lastly, it ensures proper legal advice for the parties in accordance with section 17(1) of the German Notarization Act (BeurkG), which is the advisory function of the formal requirement.³⁵ The notary's obligations under section 17(1) of

³⁴ Translations from Federal Ministry of Justice, https://www.gesetze-im-internet.de/englisch_bgb/englisch_bgb.html#p1023 (visited 13.1.2023).

³⁵ Bundesgerichtshof, 14.9.2018 – V ZR 213/17, 12; <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=87946&pos=0&anz=1> (visited 13.1.2023).



the BeurkG ensure that the content of the deed aligns with the will of the parties who have been informed of the legal implications.³⁶

The described warning function and the advisory function also exist for other legal transactions to which the German legislator attaches particular importance, such as donation contracts (section 518 [1] BGB), marriage contracts (section 1410 BGB), acknowledgement of paternity (section 1597 [1] BGB) or inheritance contracts (section 2276 [1] BGB).

This makes it clear why the use of video conferencing systems for notarial work may be viewed critically.³⁷ One major concern is the law of succession, as clients may not have special legal knowledge and need to be protected. This can be difficult to achieve through video conferencing, as the notary may not be able to fully assess the client's understanding of the situation and provide the necessary guidance. Another area of concern is family law, as clients may not have special legal knowledge in matters of marriage, divorce, and child custody. In these cases, it is important for the notary to be present to ensure that the client fully understands the legal implications of their decisions. Lastly, in real estate transactions, the notary's presence is important to ensure that the client fully understands the legal implications of their decisions and to protect the client's interests. The German notary has an advisory and warning function that is different from that of a notary public in the United States, which is essential in real estate transactions to ensure that the transaction is carried out in accordance with the law.

Indonesian notarial law does not clearly formulate the advisory and warning functions of notaries as German law does. The scope of these functions in Indonesian law must be determined through the interpretation of certain norms in the UUJN and, if necessary, through an examination of the historical foundations of the Indonesian notary system. However, given the continental European origins of the Indonesian notary system, it can be inferred that the Indonesian notary has similar qualified functions as those in continental Europe. Therefore, reservations against a comprehensive adoption of digital instruments for online communication between notaries and parties also exist under Indonesian law.

³⁶ Bundesgerichtshof, 10.6.2016 – V ZR 295/14, 8; <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=76230&pos=0&anz=1> (visited 13.1.2023).

³⁷ In favor of an opening of video options in Germany: Jeep, 'Notary Disrupted – Legal Tech und der Rechtsstaat', 836–37.



2. Can Blockchain Technology Replace Notaries?

Experts have claimed that blockchain technology has the potential to revolutionize various industries. Some have suggested that blockchain could make notaries obsolete, while others disagree.³⁸ On the surface, blockchain technology appears to have the potential to replace public registers, specifically land registers, by providing a decentralized, tamper-proof, and transparent system for recording and verifying real estate transactions. Along with the replacement of public registers, the need for notarization may also decrease. However, the reality is not as simple. At least for the German legal system and its real estate property law, blockchain cannot replace land registers and notaries.

Generally, blockchains may replace registers and notaries in legal systems where the proof of a contractual acquisition chain is relevant for real estate ownership and where the legality of contractual transactions is not assessed by notaries.³⁹ Blockchain could be used to record and verify transactions, making the registering of contractual transactions more efficient and cost-effective.

Blockchain technology cannot be used in cases where registering leads to a change in the rights to real estate, such as in Germany.⁴⁰ In German Civil Law the transfer process for a thing (moveable and immovable goods) is characterized by the “Trennungsprinzip”.⁴¹ The principle means that a strict separation between the act within the law of obligation and the act within the property law must be made. The act within the law of obligation (“Verpflichtungsgeschäft”) is e.g., a sales contract (section 433 BGB). This act is irrelevant for the transfer of the ownership as it merely imposes an obligation to transfer the ownership. The act within the property law is

³⁸ Maurice Barbieri and Dominik Gassen, ‘Blockchain – Can This New Technology Really Revolutionize the Land Registry System?’, in *Responsible Land Governance: Towards an Evidence Based Approach* (2017 World Bank Conference on Land and Poverty, Washington DC, 2017), 11, https://www.notariesofeurope.eu/wp-content/uploads/2021/09/Land-and-Poverty-Conference_Blockchain-Presentation.pdf (“...it appears that the well-established interplay between cadaster and the land register and especially the role of the notary in the framework of the preventive administration of justice has not been fully understood by the advocates of blockchain-based solutions”); Jerry Lucas, ‘Can Blockchain Replace Notaries?’, Colorado Notary Blog (blog), 6 June 2021, <https://abclegaldocs.com/blog-Colorado-Notary/can-blockchain-replace-notaries/>; Bosch-Bages Notaris, ‘Blockchain, NFT and the Role of the Notary’, 27 December 2021, <https://notariaboschbages.com/en/blockchain-nft-and-the-role-of-the-notary/>.

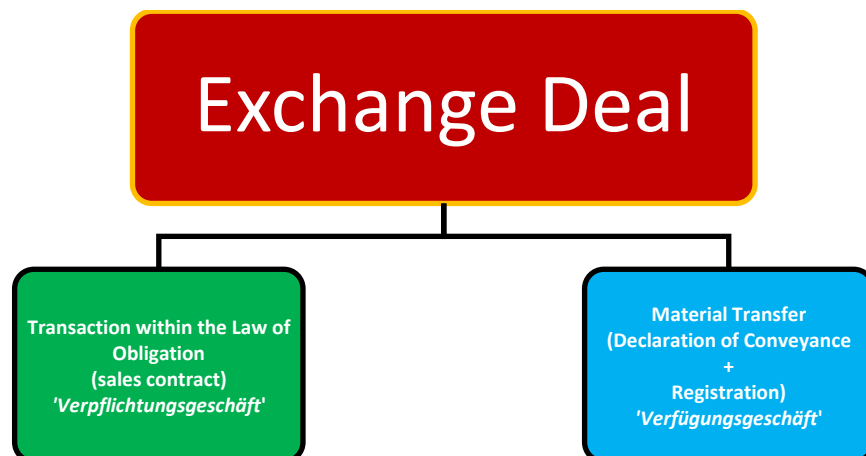
³⁹ Schmitz, ‘11. Berufspolitische Tagung in Berlin - Video Kills the Notary? - Digitale Disruption oder Evolution der notariellen Tätigkeit’ (see the summary of the presentation of Dominik Gassen).

⁴⁰ Maximilian Zimmer, ‘Die Blockchain Im Deutschen Immobiliarsachenrecht - Keine Konkurrenz fürs Grundbuch’, Legal Tribune Online (blog), 15 January 2018, <https://www.lto.de/recht/hintergruende/h/blockchain-grundstuecksrecht-immobilien-verkauf-notare-grundbuch-transaktionen-sicherheit/>.

⁴¹ See Lutz-Christian Wolff, ‘STATUTORY RETENTION OF TITLE STRUCTURES? A COMPARATIVE ANALYSIS OF GERMAN PROPERTY TRANSFER RULES IN LIGHT OF ENGLISH AND AUSTRALIAN LAW’, *Deakin Law Review* 14, no. 1 (2009): 3–6.



called “Verfügungsgeschäft” and contains an abstract agreement on the transfer of the ownership (“dinglicher Vertrag”) and a real act. In the case of a transfer of a moveable good this real act in principle is the handover of the good (section 929 BGB) and in the case of a transfer of real estate it is the entrance in the land register.



The German law follows the ‘germanistic’ land registers model (‘Realfoliensystem’) where the right to real estate is registered. Therefore, the entry in the land register is constitutive for the change of the right.⁴² The transfer of the ownership to the real estate requires, in addition to an abstract agreement between the parties about the property transfer closed before the notary (Declaration of Conveyance, ‘Auflassung’, section 925 [1]⁴³ in conjunction with section 873 [1] BGB⁴⁴) an entry in the land register. In this system, replacing the land register with a blockchain is not possible without changing the functions of the land register model and the material real estate law itself. Even if the entry into a public register could be replaced by an entry in a blockchain this would not replace the function of the notary in the process of the agreement on the transfer of the property (‘Verfügungsgeschäft’; section 873 [1], 925 [1] BGB).

⁴² Harald Wilsch, ‘The German “Grundbuchordnung”: History, Principles and Future about Land Registry in Germany’, *Zeitschrift Für Geodäsie, Geoinformation Und Landmanagement* 137, no. 4 (2012): 230.

⁴³ “The agreement between the alienor and the acquirer (declaration of conveyance) necessary for the transfer of ownership of a plot of land under section 873 must be declared in the presence of both parties before a competent agency. Any notary is competent to receive the declaration of conveyance, notwithstanding the competence of other agencies. A declaration of conveyance may also be made in an in-court settlement or in an insolvency plan that has been finally and non-appealably confirmed.” (Official English translation)

⁴⁴ “The transfer of the ownership of a plot of land, the encumbrance of a plot of land with a right and the transfer or encumbrance of such a right require agreement between the person entitled and the other person on the occurrence of the change of rights and the registration of the change of rights in the Land Register, except insofar as otherwise provided by law.” (official English translation)



The notary has the task of warning and advising the parties in real estate transfers, and he must assess the legality and fulfilment of the obligation contract (the purchase contract, 'Verpflichtungsgeschäft') by the purchaser. This cannot be replaced by a digital process without a notary.

In contrast, in the "Romanistic" land register model, legal transactions from which rights arise are registered. The legal nature of the entry in the register is declarative only, as the transfer of rights has already occurred with the preceding legal transaction.⁴⁵

It is clear that using blockchains may be easier in the "Romanistic" system. However, the advisory function of civil law notaries, which plays an important role in the transfer of real estate derivatives, cannot be replaced by blockchains.⁴⁶ Additionally, the need for the warning and advisory function is typically given when the contract is closed, prior to the act of registering. Even if blockchain technology is used to record and verify transactions, it is still necessary to perform a due diligence check of the legality of the transactions, as blockchain technology cannot check the legality of a transaction, it can only provide a tamper-proof record of the transaction. Furthermore, blockchain technology does not provide a state guarantee of the trustworthiness of the register, which poses a problem for the public faith function of the register and the publicity aspect,⁴⁷ which are important factors in real estate transactions.

Blockchain technology can be a useful tool for notaries in certain functions, such as authenticating and storing electronic copies of notarial deeds.⁴⁸ European chambers of notaries are exploring the use of blockchain technology for such purposes. For example, the French National Council of Notaries is testing a blockchain-based proof of concept⁴⁹ using a consortium blockchain.⁵⁰

⁴⁵ Caroline S. Rupp, 'Germanisches Grundbuch und romanisches Register - Harmonisierende Überlegungen; Max Planck Private Law Research Paper No. 14/14', *Archiv für die civilistische Praxis* 214, no. 4 (2014): 577, <https://doi.org/10.1628/000389914X14061177683778>.

⁴⁶ Bertrand Crettez and Marie Obidzinski, 'The Choice of Titling System in Land and the Blockchain' (Centre de Recherches en Économie et Droit - Université Paris II, July 2021), 10, http://cred.u-paris2.fr/sites/default/files/working_papers/CRED-WORKING-PAPER-2021-07.pdf.

⁴⁷ Barbieri and Gassen, 'Blockchain – Can This New Technology Really Revolutionize the Land Registry System?', 12.

⁴⁸ Felix Härer and Hans-Georg Fill, 'Usage Scenarios for Blockchain Technologies in the Domain of Civil Law Notaries', in *International Trends in Legal Informatics, Festschrift for Erich Schweighofer* (Bern: Editions Weblaw, 2020), 14–17.

⁴⁹ European Commission, 'About Blockchain Based Notary Proof Of Concept', accessed 13 January 2023, <https://joinup.ec.europa.eu/collection/blockchain-egov-services/solution/blockchain-based-notary-proof-concept/about>.

⁵⁰ Crettez and Obidzinski, 'The Choice of Titling System in Land and the Blockchain', 10; 'The Paris Chamber of Notaries Tests Private Blockchain with Digitalberry' (digitalberry), accessed 13 January 2023,



Another use case for blockchain technology in the field of notaries is the issuance of Temporary Digital Identities (TDIs) through a notary blockchain.⁵¹ This process allows for the creation of unique digital identities for individuals or entities that can be used for specific, limited periods of time. This can be useful for situations where a traditional, permanent identity is not necessary or where anonymity is desired. The process of issuing a TDI begins with the individual or entity in question providing the necessary personal information and documentation to a notary as a Trusted Third Person (T3P), who verifies the information and creates a digital identity on the blockchain. The identity is then linked to the individual or entity and can be used for specific purposes. One of the key benefits of using a notary blockchain for TDI issuance is the added security and trust provided by the blockchain. The use of a decentralized, distributed ledger ensures that the information stored on the blockchain is secure and tamper-proof, providing added confidence in the authenticity of the digital identity. Another benefit is the ability to control the duration of the identity, making it temporary, which can be useful for situations where a permanent identity is not necessary.

The use of TDIs gains particular importance through the growing use of qualified electronic signatures and electronic proofs of identity.⁵² Such electronic proofs of identity will become even more important with a possible future virtualisation of the social life ("Metaverse"), because the dynamic character of virtual actors and avatars makes interpersonal trust in virtual space difficult and therefore unambiguous digital identity assignments will be essential in the virtual realm.⁵³ On the other hand, digitisation also poses an increased risk to data integrity and the personal rights of individuals. This is likely to result in an even greater need for temporary digital identities in the future.

3. Artificial Intelligence and Notary

Artificial intelligence (AI) cannot replace notaries because their work involves more than just formal acts or the combination of text blocks.⁵⁴ Smart contracts produced by AI cannot

<https://www.digitalberry.fr/en/reference/the-paris-chamber-of-notaries-tests-private-blockchain-with-digitalberry/>; Christophe Auffray, 'Le Grand Paris dispose désormais de sa blockchain notariale' (Cryptonaute, 9 July 2020), <https://cryptonaute.fr/le-grand-paris-dispose-desormais-de-sa-blockchain-notariale/>.

⁵¹ Härer and Fill, 'Usage Scenarios for Blockchain Technologies in the Domain of Civil Law Notaries'

⁵² Härer and Fill, 10.

⁵³ See regarding judges Stefan Koos, 'The Individual and the Property in Virtual Worlds', *Veritas et Justitia* 8, no. 2 (2022): 283, <https://doi.org/10.25123/vej.v8i2.5627>.

⁵⁴ See regarding judges Stefan Koos, 'ARTIFICIAL INTELLIGENCE – SCIENCE FICTION AND LEGAL REALITY', *Malaysian Journal of Syariah and Law* 6, no. 3 (20 December 2018): 28, <https://doi.org/10.33102/mjssl.v6i3.135>.



replace the work of notaries as AI cannot properly assess the relevant aspects of the case.⁵⁵ Civil law notaries must apply and interpret the law in a qualified manner and, importantly, explain it to the parties. They must also perform mediation tasks, assist in the negotiation of contracts, support the drafting of testamentary dispositions and marriage contracts, fulfil warning functions, provide advice, and be able to adapt to the individuality of the parties. Notaries bear their own responsibility, whereas AI does not have the ability to be responsible or empathetic at today's technological level. However, it is likely that advanced AI-driven text systems will design drafts of documents that will be controlled, amended, and finalized by humans, saving time on writing repetitive text components and formalities. In general, given the example of Beta versions of AI-based language dialogue models like 'ChatGPT' of OpenAI or other comparable systems like 'LaMDA',⁵⁶ generative AI will become sophisticated instruments that, for the time being, still need users who know how to use them properly and who are well-versed in the subject matter to be able to identify mistakes and integrate the creativity necessary to deal with individual and social aspects.

IV. Conclusion

The legislative basis for cyber notaries in Indonesia is certainly still incomplete. However, it is noteworthy that the Indonesian legislator began addressing the concept of digitalized notarial work as early as 2014. The lack of integration with the rest of the law governing notaries and civil law may be due to a desire to wait for further developments. After all, the mention of the term "cyber notary" has greatly intensified academic discussion on the topic, and the results of this discussion can be used to inform future legislative adjustments. In Germany, the concept of the cyber notary is discussed selectively in relation to certain aspects of the legal norms for notaries, which are generally considered up to date. The "danger" of the notary being replaced by technology is not seen, but the appropriate inclusion of digitalization in the work of notaries is. This seems to be an accurate assessment of the current situation. Because of the similarities between the duties of the notary in Indonesia and in Germany, the conclusion that the human notary is unlikely to be replaced in the near future applies to both countries. This finding does

⁵⁵ Schmitz, '11. Berufspolitische Tagung in Berlin - Video Kills the Notary? - Digitale Disruption oder Evolution der notariellen Tätigkeit' (see presentation by Dominik Gassen).

⁵⁶ Nitasha Tiku, 'The Google Engineer Who Thinks the Company's AI Has Come to Life' (The Washington Post, 11 June 2022), <https://www.washingtonpost.com/technology/2022/06/11/google-ai-lamda-blake-lemoine/>.



not immediately change when considering new generative AI text generators. However, this is based on the current state of this technology, which might change rapidly.

Blockchain technology could potentially be used in certain areas in conjunction with notaries, but it is not a replacement for notaries in Germany or generally in Civil Law notary systems. Due diligence checks of the legality of transactions are still necessary and the blockchain can only provide a tamper-proof record of the transaction. The trustworthiness and state guarantee of the register should be considered. Generally, the possible use of blockchain technology by civil law notaries should not be overestimated given the wide scope of activities, which go far beyond the mere functions as intermediary or certification instance. The functions of civil law notaries also include assessing the signatory's ability, verifying the legality of the transaction, drawing up the document under their responsibility, and verifying its legality. Notaries must ensure that the parties have understood the content and provide impartial advice. They may also have significant functions in preventing money laundering⁵⁷ and terrorism.⁵⁸ Digitization should make the work of notaries more effective without reducing the quality of task fulfilment. Uncritical digitization for the sake of digitization should be avoided. This applies, for example, to the use of video conferencing which might reduce the warning and advisory effect of notarial activity. In particular, the potential of artificial intelligence to replace human notaries should not be overestimated, but also not underestimated. Like blockchain technology, artificial intelligence will support notarial work as far as avoiding errors and delegating less-qualified, automatable, but time-consuming tasks are concerned.

⁵⁷ Bundesnotarkammer, 'Geldwäschebekämpfung NOTARINNEN UND NOTARE HABEN EINE ZENTRALE ROLLE BEI DER BEKÄMPFUNG VON GELDWÄSCHE UND TERRORISMUSFINANZIERUNG', accessed 14 January 2023, <https://www.bnotk.de/aufgaben-und-taetigkeiten/geldwaeschebekaempfung>.

⁵⁸ In Germany the duties follow from the 'Geldwäschegesetz' (GwG), https://www.gesetze-im-internet.de/gwg_2017/index.html#BJNR182210017BJNE000304123.



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