# Comparison of Legal Authority of Notary and Electronic Signature Validity in Indonesia and the United States of America

**Ni Ketut Indah Primadani** [1], **Djumardin** [1], **Aris Munandar** [1]

[1] *University of Mataram*
Jl. Majapahit No 62 Mataram, Nusa Tenggara Barat, Indonesia

DOI: 10.22178/pos.89-17

JEL Classification: K40

Received 26.12.2022
Accepted 29.01.2023
Published online 31.01.2023

Corresponding Author:
Ni Ketut Indah Primadani
indahprimadani37@gmail.com



**Abstract** The purpose of this research is to compare the analysis of the legal authority of a notary in Indonesia with the control of a notary in the United States. This is normative legal research with a statute, conceptual, and historical approach. According to a study, in carrying out their duties and positions, notaries in Indonesia are subject to and obedient to the law, which lies in the enactment for all of Indonesia. In contrast, in the United States, each state has its notary law. The legality of electronic signatures is valid in the eyes of the law when they meet several conditions. Electronic signatures must be certified to guarantee trust for the owner, namely in the form of authentication data. Any signature requirements under the law can be met in the states and territories where ESIGN is valid. In addition, electronic signatures can be presented as evidence and will survive in court as applicable. Uniform Electronic Transactions Act applies in some Indonesian states and territories.

**Keywords:** Notary Legal Authority; Signature Legitimacy.

## INTRODUCTION

Civil law is a set of legal provisions that regulate the interests of individuals in their efforts to meet the needs of their lives and society. This civil law is said to be private law because what is regulated is about the relationship and interests between one another [1]. One of those mentioned in the Civil Code, whose authority is closely related to making authentic deeds and other authorities, is the notary. The position of a notary as a public official who does original deeds is increasingly considered necessary with developments in the field of law. Notaries are expected to bring positive results in implementing their duties and authorities in Indonesia.

Law No 2 of 2014 states that a Notary is a public official authorized to do authentic deeds and has other authorities as referred to in this law or based on a law's different rules. An act is original not because of the stipulation of law but because it is made by or before a public official. The authenticity of a notary's deed originates from Article 1, in which a notary is made a "general official" so that a deed made by a notary in that position acquires the nature of an authentic act, as referred to in Article 1868 of the Civil Code.

The function of an authentic deed in terms of proof is certainly expected to be able to explain in full in the evidentiary process at trial. An original deed as a product of a notary in defence at trial is categorized as documentary evidence. The authority to do this authentic deed is at the parties' request as long as it does not conflict with Article 1320 of the Civil Code. Based on this authority, in carrying out its duties and obligations, a notary must provide guarantees of legal certainty.

In this regard, the authors are interested in comparing duties and powers between notaries in Indonesia and notary public in the United States; and comparing of legality and legal authority of electronic signatures in Indonesia and the United States.

## METHODS

The type of research used in this research is normative legal research. This research was carried out based on existing legal regulations. It is called doctrinal legal research because it is carried out or aimed only at written rules or legal materials [2]. This type of legal research often

examines legal material conceptualized as written law in statutory regulations (law in the book) or law conceptualized as rules or norms that are benchmarks for human behaviour that are considered appropriate [3].

The problem approach method used in this study is:

a) Statute Approach, which prioritizes legal material in laws and regulations as primary reference material for conducting research. The approach is to examine all laws and regulations related to the legal issues being handled [4].

b) Conceptual approach, moving from the views and doctrines that developed in the Science of Law by studying the beliefs and principles that evolved regarding the problem under study [5].

c) Historical Approach, this approach is carried out to understand the philosophy that underlies the rule of law. This approach is carried out by examining the background and development of regulations regarding the issues at hand.

d) Comparative Approach is an approach that compares legal regulations or court decisions in one country with legal regulations in other countries (can be one or more countries).

## RESULTS AND DISCUSSION

### Comparison of Legal Authority of Notaries in Indonesia and the United States

In the Law of the Republic of Indonesia, No 2 of 2014 states Notary Public is officially authorized to make deeds authentic and has other powers. That definition makes a notary a public official so that the legal consequences in the Notary Deed get an exact position and have an executorial nature.

The duties of a notary as a public official, there are the following elements [6]:

1. Public Official does not mean that the notary is a civil servant referred to in Law No 43 of 1999 concerning Staffing Principles.

2. Notaries are not civil servants from an employee corps, structured with a hierarchical working relationship (meaning the order of levels or levels of office or rank of office).

3. A notary is not a paid position. A notary does not receive a salary from the government but receives an honorarium from those who request the services of a notary.

According to Article 1868 of the Civil Code, an authentic deed is meant as a deed in the form according to the provisions of the law made by or before a public official who is authorized to do so at the place where the act was done.

The leading authority possessed by a notary is to do an authentic deed. A deed must fulfil Article 1868 of the Civil Code to be accurate, also called an act under the hand. There are several differences between an original deed and a deed made under the needle, namely:

1. Authentic deed. It is perfect evidence as stipulated in article 1870 of the Civil Code. This deed has the strength of such evidence because it is considered attached to the act itself, so it does not need to be proven again. For the judge, it is "compulsory evidence". Whoever states that an authentic deed is fake must prove the falsity of the act. Because of that, an original deed has perfect evidentiary power both physically, formally and materially.

2. Under the hand deed. The deed under the hand of the judge is "Free Evidence" because the deed under the hand only has the strength of material evidence after being proven vital in the formal Meanwhile, the power of the formal proof will only occur if the parties concerned know the truth of the contents and method of doing the deed. Thus the deed under the hand is different from an authentic deed because if a deed under the hand is declared fake, then the one who used the deed under the writing it as evidence must prove that the deed is not affected. Based on the description above, a deed made authentically with a deed made privately has the value of establishing a deed.

The authority given to a position must be based on the rule of law as a limitation so that the work can run well and does not collide with the power of other places [7]. The law gives authority to a notary to make a document in the form of a Notary Deed in civil law [8].

The authority of a Notary in Article 15, paragraph 1, namely: "The Notary has the authority to do authentic deeds regarding all actions, agreements and provisions required by laws and regulations and or desired by interested parties so that they are stated in an authentic deed, guaranteeing the certainty of the date drawing up the deed, keeping the deed, providing Grosse, copies and excerpts of the deed, all of that as long as the making of the deed is not assigned or exempted

from other officials or other people determined by law."

Based on the authority above, the notary can do a deed as long as it is desired by the parties or according to legal regulations. The act must be done in the form of an authentic deed. The deed made by a notary must be based on legal rules relating to the procedure for making a notary deed. Furthermore, according to Article 15, paragraph 2, the notary also has the authority to:

1. Validate the signature and determine the certainty of the date of the letter under the hand by registering it in a particular book.

2. Book private letters by registering them in a particular book.

3. Make copies of the original confidential documents in a composition containing the written description in the relevant letter.

4. Verify the compatibility of the photocopy with the initial letter.

5. Providing legal counselling in connection with doing deeds.

6. Doing deeds related to land.

7. Make a deed of minutes of the auction.

Then in Article 15, paragraph 3 stated that in addition to the powers mentioned above, notaries have other authorities regulated in legislation.

In carrying out his duties and authorities as a public official, the notary authorized making authentic deeds and other authorities. Given the responsibilities, functions and management of a Notary very important for the traffic of people's lives, the behaviour and actions of a Notary in carrying out his professional position are vulnerable to abuse which can be detrimental to society. Hence, institutions for fostering and supervising Notaries need to be made effective.

In terms of carrying out the duties of his position as a notary, the notary has responsibility for his work and must be responsible to his client and for all his actions. The notary's responsibility is not only for himself and his professional colleagues but also for clients and the public who need his services. It must be understood that a notary carrying out his duties and positions must be based on responsibility and morals so that later it is hoped that the notary will be able to carry out his duties and functions as regulated by law and what is required of a notary by law and the public interest. Being responsible to the community means that a notary is willing to provide the best possible service by his profession without distinguishing between paid and complimentary services. A notary must be able to produce quality services that have a positive impact on the community. Being responsible also means bearing the risks arising from the services it provides.

The conceptual and substantive differences between the US legal and civil law systems and how lawyers practice in the United States that enable civil law notaries raise fundamental ethical and practical questions.

The National Association of Civil Law Notaries has recommended the Civil Law Model Notary Act to states to allow the establishment of civil law notaries. Alabama and Florida are the only US jurisdictions that have enacted laws allowing civil law notaries. The Alabama Statute is based on the acting model. The Florida Ordinance was passed in 1997 primarily to enable legal documents certified by civil law notaries in Florida to have legal effect in civil law countries, especially in Central and South America.

This model incorporates the concept of a civil law notary as an office in a civil law country. The model civil law notary deed recommends that a civil law notary be a lawyer admitted to practising law within the jurisdiction who has practised for at least five years. Lawyers must successfully pass a civil law notary examination. Florida regulations prescribe a particular course of study and analysis for civil law notaries.

In general, in America, a Notary is in charge of giving advice and preparing documents, especially documents for treaty relations with foreign countries. In the United States, a notary is appointed by a state government, for example, Governor, Lieutenant Governor, Secretary of State, or in some cases, the state legislature, whose primary role is to serve the public as an impartial witness when important documents are signed. Because a notary is a state official, the duties of a notary can vary widely from state to state. Notaries are often only allowed to act outside their home state if they also have a commission.

A notary is almost always permitted to notarize documents wherever in the state where their commission is issued. Some states only issue commissions "generally," meaning no indication is made of which state the commission was printed from. Still, some states require the notary to include the area of issue of their commission

as part of the jury or, where a seal is needed, to indicate the size of the case of their commission on the seal. If a state requires to show the county where the commission was issued, it does not mean that notaries are restricted from notarizing documents in that area. However, some states may enforce this as a requirement.

Notaries in the United States are far less tightly regulated than notaries in most other common law countries, usually because US notaries have little legal authority. The most common notarial acts in the United States are taking acknowledgements and oaths. Many professions may require someone to also serve as a notary, which is why US court reporters are often notaries. This allows them to swear as witnesses (deponents) when depositing; secretaries, bankers, and some attorneys are usually public notaries. Although their role is limited, some American notaries can perform several small actions not generally found elsewhere. Depending on the jurisdiction, they may take depositions.

The visible similarity between Indonesian Notaries and Notaries in the State of Alabama, United States of America, is that the Notary in Alabama has the same authority to do an authentic deed. In Indonesia, this authority is the leading authority of a Notary.

Other notary authorities in Alabama, namely:

1. Swear an oath in all matters relating to the implementation of his office.

2. Take acknowledgement or proof of papers relating to trade or navigation and certify the same and all other official acts under the seal of their office.

3. Demand acceptance and payment of money orders, promissory notes and all other writings regulated by commercial law regarding grace days, requests and notifications of non-payment and the same protest not to be accepted or not paid and to give notice thereof as required by law.

4. Under commercial use or state law, exercising such other powers that may belong to a notary public.

As can be seen from the description above, the Notary in Alabama has several roles that seem more prominent than other authorities, namely to pronounce an oath and take confessions or evidence of letters or, in other words, legalize essential documents related to law.

*Notarial Deed*. A notary deed in Indonesia is an official document issued by a notary according to the Civil Code Article 1870, which has absolute and binding evidentiary power.

Deed made by Notary in Indonesia: Act of Establishment of PT; Foundation Establishment; Business Entity Establishment; Power to sell; Lease Agreement; Sale Purchase Agreement; Information on Inheritance Rights; Will; Establishment of a CV; Acknowledgement of Debt; Credit Agreement; Granting of Mortgage Rights; Cooperation Agreement; Work Contract; All forms of agreements that are not excluded from other officials.

Notary deed in Alabama, namely an authentic act which contains a compact, transaction or other legal action and which can also include validation of facts. A notarial deed may involve one party, as in the case of a will, or multiple parties, as in a contract.

The similarity between Indonesian and Alabama notarial deeds is that they produce authentic acts such as agreements, arrangements and wills.

The visible difference is that the notary in Alabama has a limited scope of notary deed coverage, which does not produce deeds of the establishment of companies or business entities.

*Contents of the Notary Deed.* Notary deeds in Indonesia consist of the beginning of the act or the head of the show, the body of the show, and the end or closing of the deed, the detailed elaboration of which is regulated in Article 38 UUJN.

While the contents of the Alabama Notary Deed contain the following:

1. Handwritten signature and genuine stamp of Alabama Notary.

2. The full name of the Notary of Alabama is typed in the form in which the application for notary appointment was initially filed with the Office of the Secretary of State.

3. The words "Notary Public of Alabama" are typed in English.

4. Current business address and telephone No of Alabama Civil Notary Public typed in English.

5. A statement typed in English that "Under the laws of the State of Alabama, Act No. 99-449, this authentic deed is legally equivalent to the notarized civil law authentic deed in all jurisdictions outside the geographic boundaries of the United

States and was issued under the authority of the Secretary of State of Alabama."

The original deed date is signed and sealed by the Alabama Civil Notary and the parties' signatures to the transaction.

All words or statements required to appear in English can also occur in other languages.

An authentic deed may also contain information or other material necessary to comply with any legal requirements, address ethical or legal issues, or the parties' business needs to the transaction.

Similarities between the contents or contents of the notary deed in Indonesia and Alabama, namely that they both contain the notary's signature as well as the parties and the notary's stamp, containing the full name and office or domicile of the notary

The visible difference is that the notary in Indonesia contains the deed in detail and is systematically related to the notary and the parties interests. In contrast, the contents of the notary deed in Alabama have a limited scope. Another difference can also be seen in the language used; the notary deed in Indonesia uses Indonesian, while the notary deed in Alabama uses English.

## Ratio Electronic Signatures of Indonesia and the United States

The definition of "Signature" in general is an arrangement (letter) or a sign in the form of writing from the person signing, with which the person making the statement can be individualized [9]. A signature is a statement of the will of the signature maker (signer). By affixing his signature under a piece of writing, he wants that writing to be considered in law as his writing [10].

A signature is part of a fundamental culture in the interaction of society. A signature is essential because a signature is a form of representing someone's agreement on something. Applying the signature itself has four primary purposes: evidence, a sign of approval, fulfilment of formalities and efficiency. A signature is a way to provide validation and is helpful as a sign of identity for an agreement. Along with the development of conventional signatures, they are transformed into electronic signatures, which make it easier to use them to form a deal even at a considerable distance. Electronic signatures can provide practical and fast solutions for making agreements.

An electronic signature is a technology that is gaining popularity in Indonesia. This technology allows electronic signatures to be carried out face-to-face without physical documents. Electronic signature technology is considered to revolutionize agreeing on contracts to be easier, faster and more efficient. However, although electronic signature technology is supposed to provide many benefits, it still needs to be filled with many doubts, one of which is whether it is true that electronic signatures can be legally recognized in the eyes of applicable law in Indonesia.

Signatures generally have a broader meaning, namely: something code or sign that is used as a tool for legalizing signed documents, while electronic signatures have a narrower sense, namely the application of a set of computer techniques to information that is useful for maintaining document security [11].

*Electronic Signatures in Indonesia.* Through an electronic signature, an electronic document can be ratified by the parties that agree. The authenticity of the paper can also be guaranteed because, with the electronic signature on the record, the parties can no longer change the contents of the agreement. After all, if you make changes to the document, it will be known through a separate system. This guarantees the authenticity of electronic documents signed through electronic signatures. Electronic signatures use unique computer algorithms and techniques in their application that can prevent changes to the document's contents.

Regarding the position of electronic signatures in transactions, there is a fundamental law that regulates as in article 1338, which states, "All agreements made legally by the law apply as laws for those who make them". This principle of freedom of contract has emphasized that the parties can agree in any form and media as long as it does not conflict with the provisions of the law, which regulate the legal requirements of an agreement to be bound as stipulated in article 1320 of the Civil Code, namely: 1) Agreement from both parties; 2) The ability to perform legal acts; 3) There is an object; 4) There is a lawful cause.

Terms of agreement and competence are personal requirements for the validity of the deal,

and if there is a violation, the result of the contract can be cancelled. At the same time, the following condition is a sure thing, and a legal cause is an objective condition that becomes a limitation on the object agreed upon. If this condition is not fulfilled, it is considered null and void.

Based on the provisions of Article 1320 of the Civil Code, there is no problem with the media used in transactions. In other words, Article 1320 of the Civil Code does not require the form and type of media used in commerce. Therefore, it can be done directly or electronically.

Article 1975 of the Civil Code provides for arrangements regarding a person's signature, which read: "A private writing whose truth is acknowledged by the person presented to it or legally considered to have been justified by it, creates complete evidence such as an authentic deed for those who sign it, their heirs and those who derive rights from them". Therefore, the validity of a signature comes from the acknowledgement of the person who put the signature. As an innovation in technology in Indonesia, electronic signatures have been regulated in laws, and regulations have been issued since 2008 concerning Electronic Information and Transactions (ITE), which were later amended to become law.

Since the enactment of the ITE Law in 2008 was then changed to law No 19 of 2016, which is the foundation for the application of electronic signature technology in Indonesia. However, it was only in 2012 that a government regulation was issued, which was later changed to Government Regulation No 71 of 2019, concerning the implementation of electronic systems and transactions, which became the legal basis for online transactions and the implementation of electronic signatures in Indonesia.

According to Indonesian law, electronic signatures are regulated in Article 1, paragraph 12 of law No 19 of 2016 concerning Amendments to Law No 11 of 2008 concerning Information and Electronic Transactions.

Regarding electronic signatures according to Indonesian law, electronic signatures are regulated in article 1, paragraph 12 of Law No 19 of 2016 concerning Electronic Information and Transactions, which the meaning: "Electronic Signature is a signature consisting of Electronic Information attached, associated with or related to other Electronic Information that is used as a means of verification and authentication".

Law No. 19 of 2016 concerning Amendments to Law no. 11 of 2008 concerning Information and Electronic Transactions and PP No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, electronic signatures can be considered valid in the eyes of the law and have a legal basis.

The Electronic Information and Transaction Law (UU ITE) has principles including neutrality in technology or freedom of choice. This includes selecting the type of electronic signature used to sign electronic information and/or document. The neutral origin of technology in the Information and Electronic Transactions Law needs to be understood carefully. Parties conducting electronic transactions should use electronic signatures with legal force and valid legal consequences as stipulated in Article 11, paragraph 1 of the law. Electronic Information and Transaction Law (UU ITE).

Furthermore, when reviewing the legal force regarding electronic signatures, according to Indonesian law, electronic signatures are regulated in Article 1 paragraph (12) of law No 11 of 2008 concerning Electronic Information and Transactions, which means: "Electronic Signature is a signature consisting of Electronic Information that is attached to, associated with or related to other Electronic Information that is used as a means of verification and authentication.

Articles 5-12 of law No 19 of 2016 say that electronic information and/or electronic documents and/or printouts are valid legal evidence and are an extension of valid proof by the procedural law in force in Indonesia. The law also stipulates that electronic signatures have legal power and consequences as long as they are made according to the specified requirements.

*Electronic Signatures in the United States.* In the United States, e-signature laws are regulated at the federal and state levels. Under the federal ESIGN of 2000, electronic signatures generally have the equivalent legal status to handwritten signatures.

ESIGN applies uniform national standards to all electronic transactions and encourages the use of electronic signatures, electronic contracts and electronic records by providing legal certainty for these instruments when parties adhere to its standards. ESIGN predates any state statute to the extent that they are inconsistent with it. This law makes electronic signatures legal in every US state and territory where federal law applies.

This puts digital signatures on the same level as handwritten signatures regarding legality, which is a huge win for businesses and consumers who are otherwise burdened with physically signing documents.

An electronic signature is defined in ESIGN as "an electronic sound, symbol, or process attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record."

The broad definition of "electronic signature" was intended to allow for many types of technology and methods for signing electronically. An electronic signature can be nearly anything produced by electronic means (for example, a symbol, result, or consequence) created to demonstrate a party's intent to sign an electronic record.

However, several components must be present for an electronic signature to provide complete legal protection under an ESIGN. There needs to be a clear intention to sign documents, express consent to do business electronically, straightforward options for opting out of doing business electronically, and distribution and storage of digital documents. The customer and the company must receive a copy of the digital signature for their records.

UETA (Uniform Electronic Transactions Act) applies in some states and territories. This law also states that digital signatures are legally binding. Similar to ESIGN, there are legal protections that come with UETA. Digital signatures are considered valid and binding, meaning that documents cannot be denied just because they are digitally signed.

In addition, it reflects the protection of ESIGN, which states that where signatures are required by law, digital signatures can be used legally. It also protects the digital record, not just the signature itself. That means if the law requires written records, digital records will also comply with the law under the UETA.

Several documents are exempt from UETA, such as marriage, birth, or death certificates, as well as wills and other inheritance documents. The main difference between ESIGN and UETA is the rate at which the action is created. ESIGN is a federal digital signature law, whereas UETA is a state-level act adopted by most states. If federal law does not apply, which will cover certain US States and territories, ESIGN cannot be enforced. However, at the state or territory level, UETA may be implemented for digital signature protection.

Under the ESIGN and UETA Acts, electronic signatures have the same evidentiary power as handwritten signatures in most cases in the United States.

## CONCLUSIONS

The comparison of the duties of a Notary under the Indonesian Notary Law and the United States Public Notary Law lies in the enactment of UUJN for all of Indonesia. In contrast, in the United States, each state has its notary law. From a comparison of notaries in Indonesia and in the State of Alabama, the United States, the similarities and differences are obtained from several apparent aspects, namely the finances of the notary, the deed and the contents of the notary deed.

Electronic signatures' validity and legal force are contained in Article 11 of Law No 19 of 2016 concerning Information and Electronic Transactions, which explains that Electronic Signatures have legal power and legal consequences. It is said to be valid in the eyes of the law when it fulfils several conditions, especially the electronic signature must be certified to guarantee trust for the owner, namely in the form of data authentication. The legal strength of an electronic signature is like the strength of a manual signature contained in an authentic deed, which is complete and perfect. Electronic signatures generally have the same status as manual ones, which have legal force and consequences. The use of electronic signatures in court is a form of expanding valid evidence by the Indonesian procedural law to be used as one of the judge's considerations in deciding a case considered good as long as the information contained therein can be accessed, displayed, guaranteed for its integrity, and can be accounted for to explain a situation. This proves that the validity of electronic signatures can be recognized as valid evidence in the applicable procedural law in Indonesia. The ESIGN Act validates digital signatures and creates additional legal protections. Any signature requirements under the law can be met with an electronic signature in the states and territories where ESIGN is valid. In addition, electronic signatures can be presented as evidence and will survive in court. UETA applies in some states and territories. This law also states that digital signatures are legally binding.

## REFERENCES

1. Prasetyaningtyas, Y. (2014). *Hukum Untuk Orang Awam* [Laws for the Layman]. Yogjakarta: Efata Publishing (in Indonesian).

2. Muhaimin. (2020). *Metode Penelitian Hukum* [Legal Research Methods]. Mataram: Mataram University Press (in Indonesian).

3. Amiruddin, S. H., & Asikin, Z. (2018). *Pengantar Metode Penelitian Hukum* [Introduction to Legal Research Methods]. Jakarta: Raja Grafindo Persada (in Indonesian).

4. Muhammad, A. K. (2009). *Metode Penelitian Hukum* [Legal Research Methods]. Jakarta: Raja Grafindo (in Indonesian).

5. Ibrahim, J. (2003). *Teori, Metode Hukum Normatif* [Theory, Normative Legal Methods]. Malang: Bayu Media Publishing (in Indonesian).

6. Andasasmita, K. (1983). *Notaris* [Notary]. Selayang: Alumni (in Indonesian).

7. Adjie, H. (2008). *Hukum Notaris Indonesia* [Indonesian Notary Law]. Bandung: Refika Adhitama (in Indonesian).

8. Budiono, H. (2011). *Ajaran Umum Hukum Perjanjian dan Penerapannya di Bidang Kenotariatan* [General Principles of the Law of Treaties and its Application in the Field of Kenotariatan]. Bandung: Citra Aditya Bakti (in Indonesian).

9. Budiono, H. (2007). *Kumpulan Tulisan Hukum Perdata di Bidang Kenotariatan* [Collection of Civil Law Writings in the Field of Kenotariatan]. Bandung: Citra Aditya Bakti (in Indonesian).

10. Tan, T. K. (1994). *Studi Notariat dan Serba Serbi Praktek Notaris* [Notarial Studies and the Nitty Gritty of Notary Practice]. Jakarta: Ichtiar Baru Van Hoeve (in Indonesian).

11. Raditio, R. (2014), *Aspek Hukun Transaksi Elektronik: Perikatan, Pembuktian dan Penyelesaian Sengketa* [Legal Aspects of Electronic Transactions: Liability, Evidence and Dispute Resolution]. Yogyakarta: Cipta Bakti (in Indonesian).