



Pacific
E-commerce
Initiative

UNCITRAL TEXTS ON E-TRANSACTIONS AND E-SIGNATURES

E-Commerce Training Programme
for Pacific Negotiators
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PACIFIC ISLANDS FORUM



E-transactions law

- Establishes general principles on the use of electronic communications, electronic contracting and electronic signatures.
- A limited number of provisions is sufficient to accommodate the use of electronic means.
- Does not amend general contract law.
- The adoption of uniform models, such as UNCITRAL model laws, facilitates legal harmonisation and legal recognition across borders.
- Applies to all types of electronic transactions, such as: websites and e-commerce platforms, e-mails, instant messaging and mobile payments



Legal status of electronic transactions

- About 80% of the States in the world have adopted some legislation on e-transactions and/or e-signatures
 - Source [UNCTAD Global Cyberlaw Tracker](#)
- If there is a law on electronic transactions:
 - Does it apply only to certain types of electronic communications (e.g., signed with a specific electronic signature)?
 - Does it apply only to certain types of transactions (e.g., commercial ones)?
- If there is no law on electronic transactions:
 - Do courts recognize the legal validity of electronic transactions based on general principles?



E-transactions law and contract law

- Contract law has not become outdated:
 - Online and offline contracts are not different
 - Medium is generally irrelevant
- Accordingly, the same contract law applies, but with adaptation:
 - Paper-based legal notions: document, original, signature, archive
 - Geographic-based legal notions: dispatch, receipt, delivery
 - Classification challenges: software, digital goods and assets
 - New contracts: cloud computing, platform hosting, etc.



E-transactions law: lessons learned

- Legislation should:
 - provide legal validity and raise legal certainty
 - facilitate rather than regulate electronic commerce
 - adapt existing legal requirements
- To do so, UNCITRAL laws are based on three fundamental principles:
 1. **non-discrimination** against the use of electronic communications
 2. **functional equivalence**
 3. **technology neutrality**



Non-discrimination against the use of electronic communications

A communication shall not be denied validity on the sole ground that it is in electronic form

- In the public sector, dedicated legislation and/or regulations may be needed to provide operational details

UNCITRAL Model Law on Electronic Commerce, articles 5 and 5 bis

- Information shall not be denied legal effect, validity or enforceability **solely because it is in the form of a data message** or it is incorporated by reference

UNCITRAL Model Law on Electronic Commerce, article 9

- In any legal proceedings, nothing in the rules of evidence shall apply so as to deny the admissibility of a data message in evidence solely because it is a data message



Functional equivalence

Purposes and functions of paper-based form requirements may be satisfied with electronic communications, provided certain criteria are met

UNCITRAL Model Law on Electronic Commerce, article 6

- Where the law requires information to be in **writing**, that requirement is met by a data message if the **information** contained therein is **accessible so as to be usable for subsequent reference**.

UNCITRAL Model Law on Electronic Commerce, article 8

- A data message can be regarded as an **original** document if:
 - There exists a **reliable assurance as to the integrity** of the information from the time when it was first generated in its final form, as a data message or otherwise; and
 - The **information is capable of being displayed** to the person to whom it is to be presented.



Technology neutrality

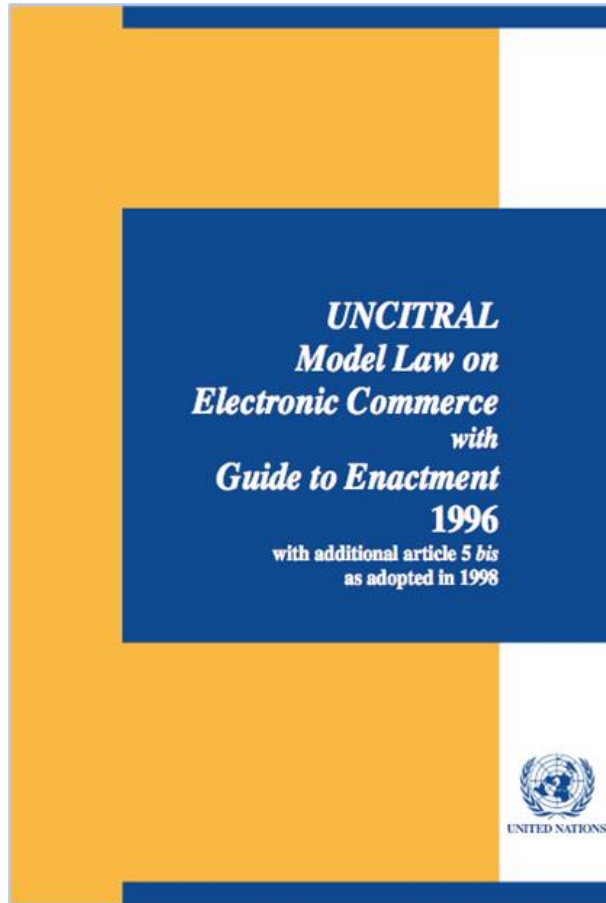
The law shall **not mandate or favor** the use of any specific **technology, method or product**

- Favors the adoption of future technologies and make laws futureproof
- Technology requirements may be specified in regulations or contractual agreements;
 - Example: PKI-based digital signatures security vs. costs

UNCITRAL Model Law on Electronic Signatures, article 3

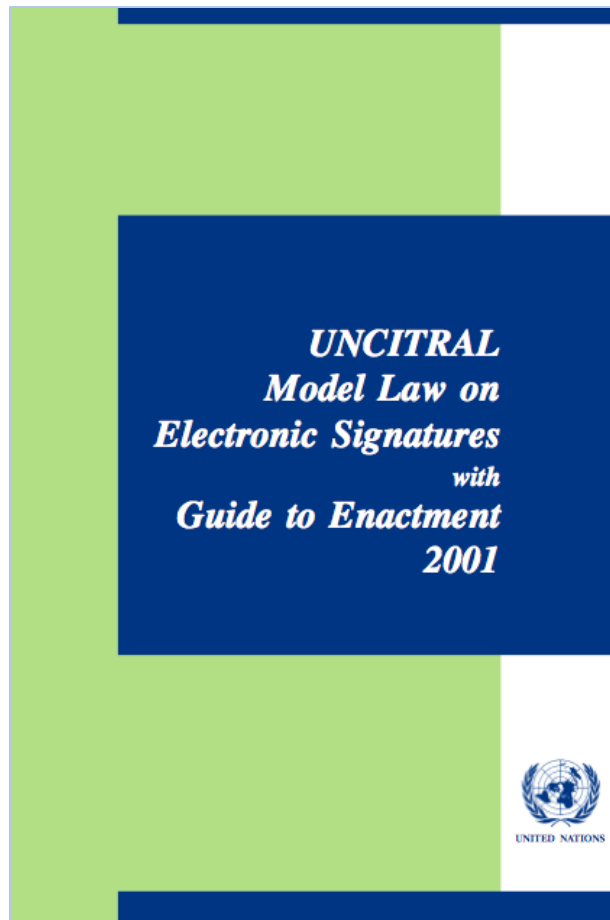
- Nothing in this Law ... shall be applied so as to exclude, restrict or deprive of legal effect any method of creating an electronic signature that satisfies the requirements referred to in article 6, paragraph 1, or otherwise meets the requirements of applicable law

UNCITRAL Model Law on Electronic Commerce



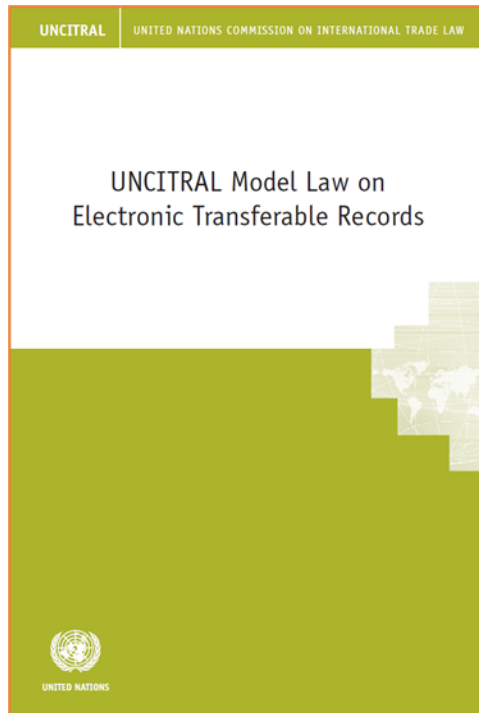
- Adopted in 1996, the UNCITRAL Model Law on Electronic Commerce enables the use of electronic communications and storage of information.
- Contains the first formulation of the fundamental principles in this field.
- It also establishes rules for the formation and validity of contracts concluded electronically and for the attribution and retention of data messages.
- It has been enacted in over 80 States.

UNCITRAL Model Law on Electronic Signatures



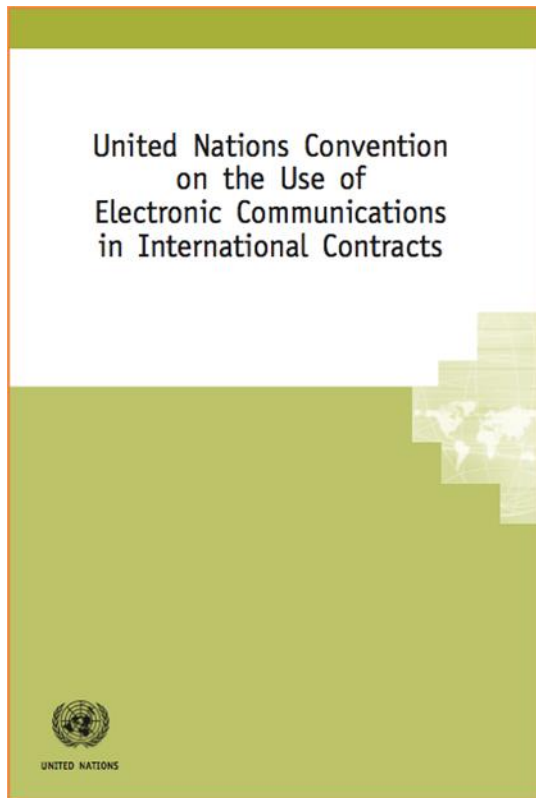
- Adopted in 2001, the UNCITRAL Model Law on Electronic Signatures aims at bringing additional legal certainty to the use of electronic signatures.
- The MLES follows a “two-tier” technology-neutral approach, which avoids favouring the use of any specific technical product.
- It establishes basic rules for assessing possible responsibilities and liabilities for the signatory, the relying party and trusted third parties intervening in the signature process.
- It has been enacted in almost 40 States.

UNCITRAL Model Law on Electronic Transferable Records



- Adopted in July 2017, the UNCITRAL Model Law on Electronic Transferable Records legally enables the use of electronic transferable records, which are electronic documents or instruments incorporating the right to delivery of goods or payment of sums of money (bills of lading; bills of exchange; warehouse receipts; promissory notes; cheques).
- Technology-neutral, it promotes the use of blockchain, IoT, smart contracts.
- Supports paperless trade facilitation.
- Allows issuing a single electronic record replacing transport, finance and customs documents.
- It has been enacted in 7 jurisdictions

United Nations Convention on the Use of Electronic Communications in International Contracts



- Adopted in 2005, the Convention builds up on and updates the provisions of the Model Laws.
- It aims at enhancing legal certainty and commercial predictability where electronic communications are used across borders.
- The Convention among others: 1) enables the cross-border recognition of electronic transactions and electronic signatures, including by setting functional equivalence requirements; 2) prevents medium- and technology-discrimination; 3) gives certainty on the legal status of the use of electronic means in connection with other commercial law treaties.
- It is in force in 15 State parties.
- 20+ States have enacted domestically its provisions.



Functional equivalence of signatures

Signature requirements are met in relation to a data message if:

- a method is used to **identify the signatory** and to **indicate its intention** with respect to the information contained in the data message; and
- that **method is as reliable as appropriate for the purpose** for which the data message was generated or communicated in the light of all the circumstances, including any relevant agreement.

No reference to integrity of the message (which pertains to the notion of “original”)



Assessment of reliability of e-signatures

List of prequalified reliable methods (*ex ante*)

- But who decides what qualifies?

Assessment carried out only in case of dispute (*ex post*) against an open-ended list of relevant factors

When is a signature method “as reliable as appropriate”? Consider:

- Sophistication of equipment used
- Frequency of commercial transactions between the parties
- Type and value of the transaction
- Legal function of signature
- Agreements between the parties



Minimalist approach

- Law provides minimum requirements, i.e., functional equivalence rule
 - Functional equivalence is confirmed provided that certain specified functions and requirements are met
- Implements the principle of technology neutrality
- Parties are free to choose any signature method they deem appropriate
- Does not provide specific guidance on reliable methods before their use



Technology-specific approach

- Prescribes the use of a specific technology
- Provides maximum predictability on which methods are reliable and will get legal recognition
- Not technology neutral
- May exclude new technologies from entering and competing in the marketplace by mandating incompatible technical requirements
- Parties are not free to choose the signature method they deem appropriate.



“Two-tier” legislation

- All electronic signature may have legal recognition provided functional equivalence requirements are met
- Certain electronic signatures compliant with additional requirements may benefit from legal presumptions on origin and integrity
 - See, e.g., article 6(3) MLES: Compliance with a requirement for a signature
 - In practice, these are based on PKI
- A designated entity may identify a list of electronic signatures presumed reliable

Advantages and disadvantages of e-signature technologies

	PKI / Cryptography	Biometrics	Sharing of codes and secrets	Other methods
Application:	SSL/TSL; blockchain.	Fingerprints, iris scan, voice recognition	PINs, Smart Cards	Scanned signatures, verification of e-mail or IP addresses
Advantages:	High security level (encryption),	High security level (unique data)	Speed, no third party involved	Ease of use, speed, low cost
Disadvantages:	Costs; involvement of third party; less available in certain environments; not secure as expected.	Not replaceable; privacy issues.	Risk of compromise despite multiple factors of authentication	Low level of security

Policy approaches to certification / trust service providers

Free market approach

Any entity may offer certification services without requiring prior authorization

Accreditation schemes

Certification authorities are encouraged to seek accreditation with a public body or with a private non-for-profit business sector organization

Mandatory licensing schemes

Certification authorities need to obtain a license from a governmental body

Monopoly schemes

Only public bodies or notaries are authorized to issue certificates: used for public functions



Barriers to cross-border mutual legal recognition of electronic signatures

- Conflicting notions of electronic signatures
- Different approaches: minimalist vs. technology specific
- Technology specific laws based on national standards
- Varying role of public bodies (as provider, as oversight authority or absent)
- Geographic-specific assessment of reliability



Digital and free trade agreements

Free Trade Agreements with e-commerce chapters:

- CPTPP and RCEP
- WTO plurilateral Joint Statement Initiative

Dedicated treaties on digital and paperless trade:

- Digital Economy (Partnership) Agreement
- ESCAP Framework Agreement on Paperless Trade Facilitation

These agreements **influence** the content of **domestic law** also in States that are not a party to them

UNCITRAL texts **interact** with these treaties in **three manners**:

1. Direct reference
2. Incorporation of provisions originating in UNCITRAL texts
3. Indirect reference



CPTPP and RCEP

Chapter 14 of the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) and Chapter 12 of the Regional Comprehensive Economic Partnership (RCEP) aim to promote e-commerce and paperless trade facilitation


Comprehensive formulation of e-commerce provisions:

- Pursue mutual legal recognition and interoperability
- Endorse the principles of non-discrimination and technology neutrality, including with respect to e-signatures
- Explicitly refer to a duty to adopt UNCITRAL texts:
 - ECC and MLEC – and other texts in RCEP
- Allow specific technologies for certain types of transactions



CPTPP Article 14.5: Domestic Electronic Transactions Framework

1. Each Party shall maintain a legal framework governing electronic transactions consistent with the principles of the UNCITRAL Model Law on Electronic Commerce 1996 or the United Nations Convention on the Use of Electronic Communications in International Contracts, done at New York, November 23, 2005.
2. Each Party shall endeavour to:
 - a) avoid any unnecessary regulatory burden on electronic transactions; and
 - b) facilitate input by interested persons in the development of its legal framework for electronic transactions.



CPTPP Article 14.6: Electronic Authentication and Electronic Signatures

1. Except in circumstances otherwise provided for under its law, a Party shall not deny the legal validity of a signature solely on the basis that the signature is in electronic form.
2. No Party shall adopt or maintain measures for electronic authentication that would:
 - a) prohibit parties to an electronic transaction from mutually determining the appropriate authentication methods for that transaction; or
 - b) prevent parties to an electronic transaction from having the opportunity to establish before judicial or administrative authorities that their transaction complies with any legal requirements with respect to authentication.
3. Notwithstanding paragraph 2, a Party may require that, for a particular category of transactions, the method of authentication meets certain performance standards or is certified by an authority accredited in accordance with its law.
4. The Parties shall encourage the use of interoperable electronic authentication.



Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific

Relies on a voluntary implementation mechanism

Is based on two complementary principles:

- Technical interoperability
- Mutual legal recognition

Refers to principles underlying UNCITRAL texts

Cross-border mutual legal recognition of electronic communications may be achieved:

- through the adoption of treaties;
- through the harmonisation of national laws

Article 10(1) of the CPTA calls for adopting those treaties and laws



JSI draft text and UNCITRAL provisions: direct reference

Enabling Electronic Commerce

A.1. Facilitating Electronic Transactions

(1) Electronic transactions frameworks

1. *Each [Party/Member] shall maintain a legal framework governing electronic transactions consistent with the principles of the UNCITRAL Model Law on Electronic Commerce 1996 [taking into account, as appropriate, other relevant international standards.]*
- This is **satisfied by adopting UNCITRAL texts**:
 - The UNCITRAL Model Law on Electronic Commerce
 - Subsequent UNCITRAL legislative texts (or regional models based on them)



JSI draft text and incorporation of UNCITRAL provisions

Electronic signatures and electronic authentication

2. “Electronic signature” means data in electronic form that is in, affixed to, or logically associated with an electronic data message that may be used to identify the signatory in relation to the data message and indicate the signatory’s approval of the information contained in the data message.

This definition follows the one in article 2(a) UNCITRAL Model Law on Electronic Signatures



JSI draft text and UNCITRAL provisions

Electronic signatures and electronic authentication

3. Except in circumstances otherwise provided for under its laws or regulations, a [Party/Member] shall not deny the legal effect, legal validity, or admissibility as evidence in legal proceedings of an electronic signature solely on the basis that the signature is in electronic form.

This provision **implements the principle of non-discrimination** against the use of electronic means with respect to electronic signatures.



JSI draft text and UNCITRAL provisions

Electronic contracts

1. [Alt 1: Except in circumstances otherwise provided for in its [law / laws and regulations / legal system], a [Party/Member] shall not adopt or maintain measures that deprive an electronic contract of legal effect, legal validity or enforceability, solely on the ground that the contract has been made by electronic means.]

This provision **implements the principle of “non-discrimination** against the use of electronic means” with respect to electronic contracts. (Alt 2 does the same.)



Indirect reference

Digital trade facilitation and logistics

Obligation to accept trade documents and supporting document in electronic form as legal equivalent of paper ones (art. 1.3 and 1.3 bis).

Implementation may rely on UNCITRAL texts to achieve equivalence between electronic and paper form.



UNCITRAL technical assistance work

- The work of UNCITRAL is part of the broader agenda of the United Nations
- UNCITRAL is the core legal body in the United Nations system in the field of international commercial law
- Promoting the adoption and use of UNCITRAL texts is an integral part of the UNCITRAL mandate
- Technical activities offered by the UNCITRAL secretariat include:
 - organizing or participating in briefing missions, seminars and conferences
 - **undertaking law reform assessments**
 - **assisting in drafting legislation**
 - cooperating with other IGOs and NGOs in law reform activities and projects



UNCITRAL Regional Center for Asia and the Pacific

Opened on 10 January 2012 in Incheon, Rep. of Korea

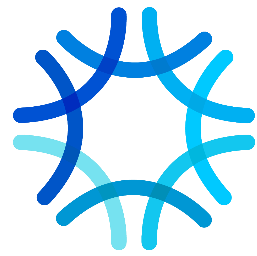
The main objectives of the Regional Centre are:

- a) to enhance international trade and development in the Asia-Pacific region by promoting the adoption and use of UNCITRAL texts;
- b) to provide technical assistance to States on the adoption and uniform interpretation of UNCITRAL texts;
- c) to engage in coordination activities with international and regional organizations; and
- d) to function as a channel of communication between States and UNCITRAL.



Current work in the Pacific

- Work conducted alone or in partnership with other organisations
- Diagnostics with UNCTAD eTrade4all
- Regional engagement with PIFS, ESCAP and APEC
- Cooperation at the country level (EIF, WEF, etc.)
- Assisted in ETA drafting in Fiji, Kiribati, PNG
- Starting work in Tuvalu



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