



# UNCITRAL texts as legal enablers of the digital economy: blockchain, smart contracts, identity management

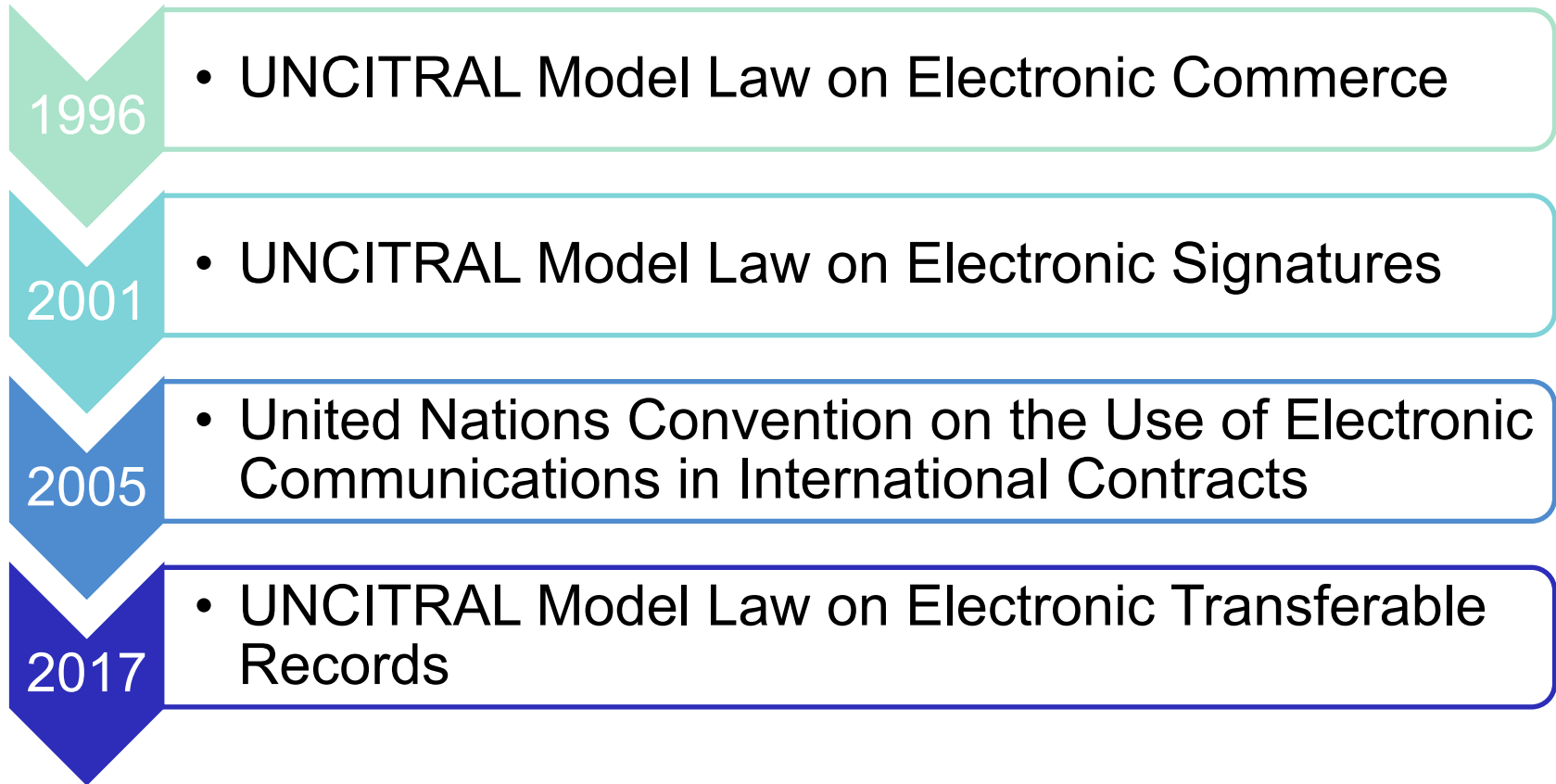
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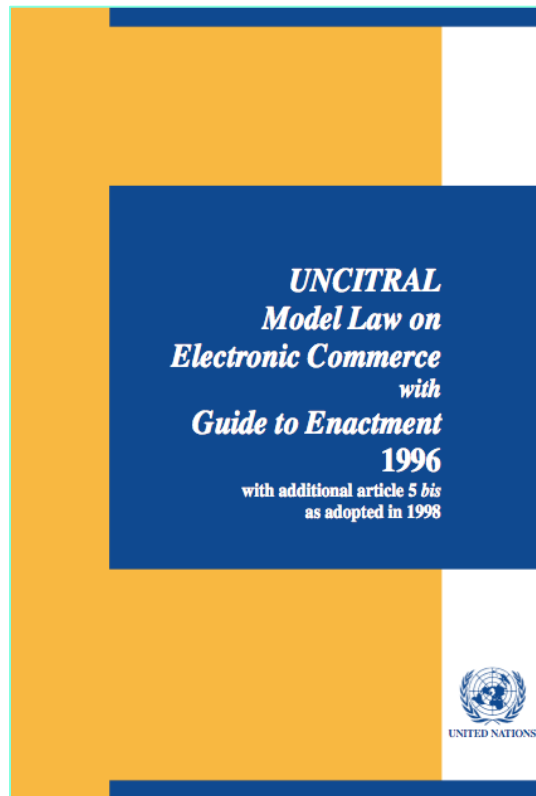
# United Nations Commission on International Trade Law

## UNCITRAL

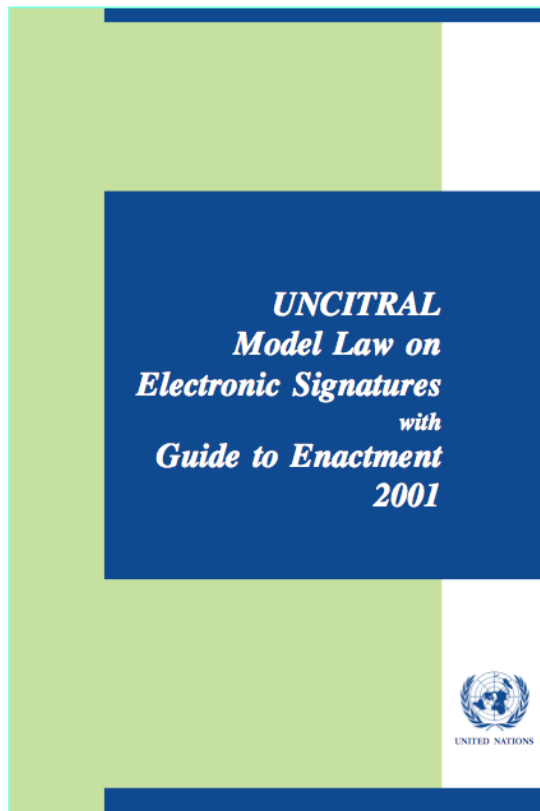
- Established by United Nations General Assembly in 1966 to promote the progressive harmonization and modernization of international trade law
- Core legal body of the UN system in the field of commercial law
- Central and coordinating role in addressing legal issues relating to the digital economy and digital trade
- For over two decades, UNCITRAL texts have been enabling the use of electronic means in all fields of commerce in more than 100 countries
- They are increasingly referred to in free trade agreements

## UNCITRAL E-Commerce Texts

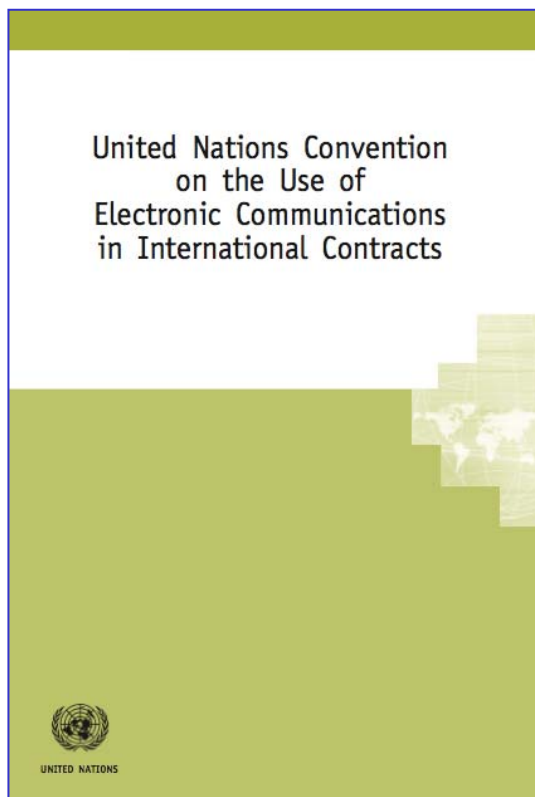




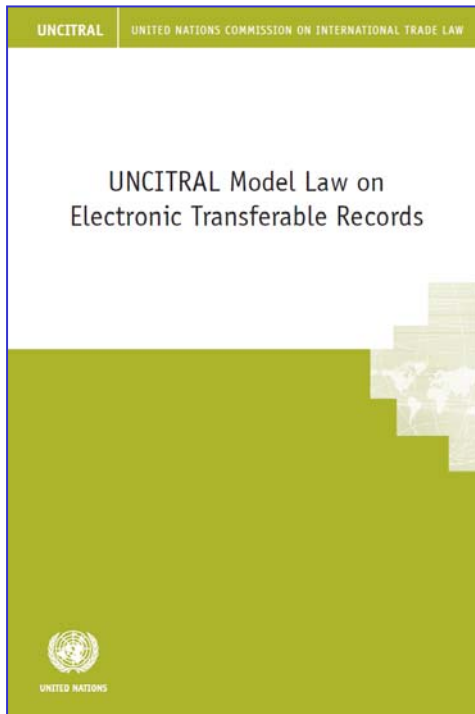
- Adopted in 1996, the UNCITRAL Model Law on Electronic Commerce (MLEC) is intended to enable the use of modern means of communications and storage of information
- It is based on the establishment of a functional equivalence in electronic media for paper-based concepts such as “writing”, “signature” and “original”
- It also establishes rules for the formation and validity of contracts concluded electronically and for the attribution and retention of data messages
- More information is available [here](#)



- Adopted in 2001, the UNCITRAL Model Law on Electronic Signatures (MLES) gives additional legal guidance on the use of electronic signatures
- The MLES follows a 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
- Additional information is available [here](#)



- Adopted in 2015, it builds on and updates the provisions of previous UNCITRAL texts.
- It aims at enhancing legal certainty and commercial predictability where electronic communications are used across borders by, among others: validating the legal status of cross-border electronic communications; preventing medium and technology discrimination; enabling the use of electronic communications in other treaties.
- 18 signatories, 12 States parties. 15 other States have enacted its substantive provisions domestically
- More information is available [here](#)



- Adopted in 2017, the Model Law on Electronic Transferable Records (MLETR) legally enables the use of electronic transferable records that are equivalent to 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)
- Technology and model-neutral
- Supports paperless trade facilitation by allowing issuance of a single electronic record replacing transport, finance and customs documents
- More information is available [here](#)

## Blockchain in the MLETR

- The MLETR is based on the principle of technology neutrality:
  - Compatible with registry-, token- and distributed ledger-based systems
- The Explanatory Note provides guidance on blockchain implementation Built around functional equivalence rules
  - Duty to identify and pseudonymity
  - Use of single record and its composite / distributed nature
  - Reliable assurance of integrity and immutability
- Possible applications include Singapore's TradeTrust



## Smart contracts

- Automated execution of part or whole contract
- Article 12 ECC: use of automated message systems for contract formation valid regardless of lack of human review
- Article 6 MLETR: possibility to include dynamic information generating from oracles
- Need to review the impact on major texts like the UN Convention on Contracts for the International Sale of Goods (CISG)

## Current work of UNCITRAL Working Group IV on IdM and trust services

- Overarching goal to promote trust in online transactions
- Desire to establish a comprehensive and inclusive process based on shared principles and terminology
- Respect general principles of commercial and e-commerce law
- Exclude data protection and privacy
- Deal with all types of IdM systems (private/public), all roles, all entities (persons/objects), as well as all trust services
- Clarify relationship between primary and secondary identity and/or IdM and trust services.

## Features of draft provisions

- In November 2019, WG IV discussed draft provisions (possibly in the form of a model law):
  - Legal effect based on reliability
  - Balance between “ex post” determination of reliability and “ex ante” designation of reliable services
  - Cross-border and domestic application
    - Non-discrimination for geographic reasons
    - Possibly, mutual recognition of designation
  - Obligations of service providers
  - Open list of trust services
  - Liability

## Exploratory work on digital economy

- The UNCITRAL Secretariat has been tasked with compiling information on legal issues of the digital economy
- Several lines of enquiry have emerged
  - rights of parties to data transactions
  - tokenization of assets using distributed ledger technology
  - legal validity of actions of artificial intelligence systems and associated liability
  - use of technology in ADR and dispute settlement in technology-related matters
- Suggestions for future work
  - taxonomy of emerging technologies and applications to facilitate a common understanding of legal issues
  - appraisal of existing UNCITRAL instruments