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**Role of Legal Harmonization in Bolstering the Digital
Economy: the Contribution of UNCITRAL**

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**The views expressed are those of the author and do
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Digital trade: the broader picture

- Electronic communications are used in all business sectors, all the time, everywhere
 - All trade is digital
 - Focus has moved from exchange of information at a distance to data reuse and analysis
- Digital trade requires:
 - coherent policy decisions;
 - a robust technical infrastructure;
 - private sector engagement;
 - an adequate legal environment
 - Need to find the right balance between enabling laws and regulations
- Law reform should be based on best international standards
 - To promote technology neutrality and technical interoperability

Which laws are relevant for digital trade?

- Digital trade law is a cross-cutting issue
 - Contract, dispute resolution, transport, financing, etc.
- Digital trade law is made of various components:
 - E-transactions and e-signatures
 - Data privacy and protection
 - Cybercrime
 - Consumer protection
- Payments and intellectual property rights are also relevant
- However, the implementation of these laws requires different types of resources
 - For example, dedicated bodies to enforce cybercrime, data privacy and protection
- Generally, model laws and treaties promote legal harmonisation

E-transactions and e-signatures law

- Foundational law that provides legal recognition to electronic transactions and removes obstacles to their use
- Applies to all types of electronic transactions, such as: e-mails; instant messaging; SMS; websites and e-commerce web platforms.
- More than 80% of the States have it
 - Source: [UNCTAD cyberlaw tracker](#)
- Global model: UNCITRAL
 - technology-neutral to promote interoperability
 - does not amend existing law
 - looks at global integration
- Regional models

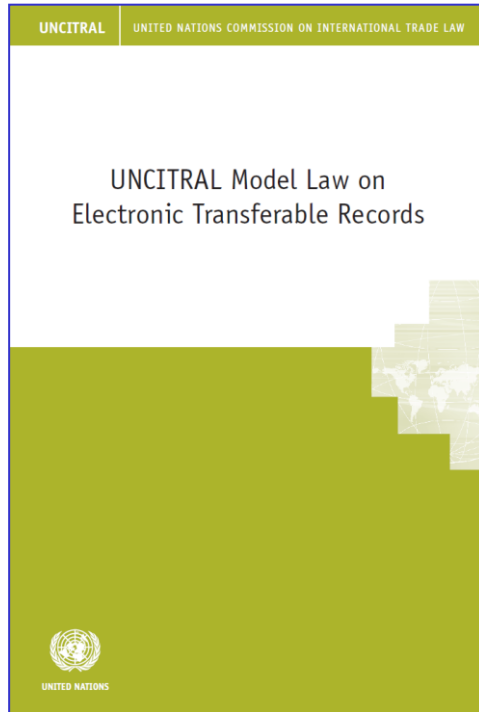
UNCITRAL and digital trade law

- UNCITRAL is the core legal body of the United Nations system in the field of commercial law
- It is tasked with modernizing and harmonizing international business rules
 - By drafting treaties and model laws
- Has operated for 50+ years based on universal membership
- UNCITRAL started working on legal aspects of electronic commerce already in the 1980s
- UNCITRAL texts on digital trade (e-commerce) have been enacted in more than 100 States
- Texts, status, preparatory and explanatory materials are available on the [UNCITRAL website](#)

UNCITRAL texts on electronic commerce

- UNCITRAL Model Law on Electronic Commerce, 1996
 - Enacted in over 80 States.
- UNCITRAL Model Law on Electronic Signatures, 2001
 - Enacted in about 40 States
- United Nations Convention on the Use of Electronic Communications in International Contracts, 2005
 - 18 signatories, 18 States parties
 - 20+ States have enacted domestically its provisions
- UNCITRAL Model Law on Electronic Transferable Records, 2017
 - Enacted in 7 jurisdictions
- UNCITRAL Model Law on the Use and Cross-border Recognition of Identity Management and Trust Services, 2022

The MLETR



Adopted in 2017, the Model Law on Electronic Transferable Records (MLETR) enables the use in electronic form of bills of lading, promissory notes, etc.

Key enabler of digital trade financing and paperless trade facilitation

Supports the use of emerging technologies developments such as blockchain, IoT and smart contracts

MLETR: the core issue

- Certain commercial documents and instruments incorporate the right to delivery of goods or payment of sums of money:
 - bills of lading
 - bills of exchange
 - promissory notes
 - warehouse receipts
 - cheques
 - insurance policies / certificates
 - (letters of credit)
- The incorporation of the right to delivery or payment presupposes the use of a tangible medium (paper)

Fundamental features of the MLETR

- Enabling law: no new regulation or prescription
 - Existing regulations continue to apply
- Technology neutral: compatible with registry-, token- and distributed ledger-based (blockchain) systems
 - Promotes interoperability and dataflows
- Built around functional equivalence rules: the same law applies to electronic and paper-based documents:
 - Interaction with third parties
 - Use as collateral
- And more:
 - Inclusion of metadata, data originating from oracles, smart contracts etc.
 - Change of medium

Requirements for an ETR (art. 10)

- ETR contains all information needed for paper document
 - Plus, dynamic information (oracles, smart contracts)
- A reliable method must be used to
 1. Identify an electronic record as ***the*** electronic ***transferable*** record
 2. Make the ETR subject to control for its whole lifecycle
 3. Retain the integrity of the ETR
- All information relating to the ETR use during its lifecycle must be recorded
- The requirements of “singularity” and “control” prevent double spending

Possession and control (art. 11)

- One key challenge is to define the equivalent of “possession”
 - Possession is a fact that refers to tangible goods
 - How to possess in a virtual environment?
- The ETR management system must:
 - Establish exclusive control over the ETR
 - Identify the person in control

Assurance of control and integrity

- Control and integrity are notions that need to be implemented through technical solutions
- Trust services may be used
 - For instance, transfer of control may be recorded with an electronic registered delivery service
- Integrity requires that information remains “complete and unaltered”
 - Blockchain / DLT may provide a higher assurance of integrity
 - Integrity does not mean immutability of the effects of the information recorded
 - It is possible to record information that has legal effect contrary to the one previously recorded

Preventing double-spending

- Need to avoid multiple requests for the same performance
 - Paper-based documents are supposed to be in original (often, a single document)
 - From experience, paper-based documents are reliable, but far from perfect
 - Documentary credit fraud is on the rise
- The MLETR combines the notions of “control” and “singularity” to prevent multiple claims
- One ETR = one claim for performance

Enacting the MLETR

- The MLETR shares the same principles and language of other UNCITRAL e-commerce texts
- Countries that have already adopted UNCITRAL texts may enact the MLETR as a new chapter of the electronic transactions law or as a separate chapter
- MLETR has been successful in Commonwealth States with 4 enactments (Belize, Kiribati, PNG, Singapore) and more in the pipeline
- UK is working on a finetuned enactment of MLETR in furtherance of the G7 endorsement

The MLIT

- UNCITRAL Model Law on the Use and Cross Border Recognition of Identity Management and Trust Services (MLIT)
- Adopted in July 2022
- Text (English language only, advanced copy) available on UNCITRAL website

The MLIT: background

- Work started in 2017 at the request of some EU States
- Broad scope:
 - establish shared principles and terminology
 - provide a uniform legal treatment for:
 - private and public IdM systems and schemes
 - a broad range of trust services
- Builds on prior UNCITRAL texts and eIDAS regulation
- Respects commercial and e-transactions law

The MLIT: scope and general principles

- Refers on use in commercial activities and trade-related services
 - May be used also in non-commercial contexts
- Use of IdM and trust services is voluntary
 - Does not introduce new requirements to identify or to use a particular IdM or trust service
- Does not affect any other law, including data privacy and protection law

The MLIT: Identity Management (IdM)

- Legal recognition of the result of electronic identification
- Identity is “a set of attributes that uniquely distinguishes a person in a particular context”
 - A person is a physical or legal person
- Identity management is made of identity proofing and electronic identification

The MLIT: Identity Management (IdM)

- Identity proofing is “the process of collecting, verifying, and validating sufficient attributes to define and confirm the identity of a person within a particular context”
- Electronic identification is “a process used to achieve sufficient assurance in the binding between a person and an identity”
 - IdM systems manage both identity proofing and electronic identification (in technical terms, “authentication”)

The MLIT: reliability in IdM methods

- The method used for electronic identification must be reliable
- Two-tier approach to determine reliability:
 - Ex post (after use):
 - Open-ended list of relevant circumstances
 - Ex ante (before use)
 - Designation of reliable IdM services

The MLIT: obligations and liability of IdM service providers

- List of obligations of IdM service providers
 - covering the IdM lifecycle
 - in case of data breach
- Liability of IdM service providers
 - Breach of obligations set in the model law gives rise to liability
 - All other sources of liability remain applicable
 - Limitation of liability may be possible

The MLIT: trust services

- A trust service is an electronic service that provides assurance of certain qualities of a data message
 - “who, what, when, where, and why of data”
 - named trust services: electronic signatures, electronic seals, electronic time stamps, website authentication, electronic archiving and electronic registered delivery services (same as eIDAS)
 - List of trust services is open-ended
- Provision on legal recognition (non-discrimination) of the result of the use of trust services

The MLIT: trust services (continued)

- Each trust service (except website authentication) has a dedicated provision drafted as a functional equivalence rule referring to the paper-based function
- Same “two tier” approach as for IdM
 - ex ante designation + ex post assessment
- List of obligations of trust service providers
- Liability of trust service providers

The MLIT: cross-border aspects

- Geographic-neutral rules on the assessment of reliability of the method used and on the designation of reliable services
 - Apply to both IdM and trust services
- Dedicated provisions on cross-border recognition and on international cooperation
 - Compatible with a centrally-managed mutual recognition mechanism
 - May be used as a template for bilateral and plurilateral agreements

Final considerations

- Enabling data flows is essential for digital trade
- This goal calls for adoption of an adequate legal environment
- Enabling legal texts should balance regulation
- UNCITRAL texts have been adopted in more than 100 States
 - Many of them are developing and least developed countries
 - Often referenced in RTAs and DEAs
- Need to support also the implementation stage
 - Awareness of legal and business actors
 - Coordination with other laws
 - Allocation of adequate resources