Trade Digitalisation - TradeTrust

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Roles of IMDA

**DIGITAL CHAMPION**

Drive digitalisation across industries
Supporting a digitally enabled workforce

**INDUSTRY DEVELOPER**

Develop the digital tech and media industries as an engine of growth for Singapore
Foster a data ecosystem for the digital economy

**ENABLER**

Master-planner for connectivity, digital infrastructure & standards
Prepare tech & media manpower, and segments of society to be digitally-ready

**REGULATOR & PROTECTOR**

Ensure resilient telecom & broadcast networks
Govern market conduct and protect consumer interest through infocomm, media, postal and data protection regulation
Background: Difficulties with Paper in Cross-Border Trade

Cost of shipping

Cost of documentation

20%*

Current State

Infom exchanges

Authority

Consignee

Exporter

Authority

Forwarder

Terminal

Authority

Authority

Carrier

Just 1 shipment involves
- Many parties across different sectors
- Many exchanges of information
- Many silo systems

Inefficient

- Manual handling
- Vulnerable to fraud

Fragmented Systems

- Costly connections
- No interoperability

This inefficiency is costly

*Maersk and IBM’s Paper Trail Research in 2014
Documentation in International Trade

1) Authenticity
(any tampering would be evident)

2) Source
(genuine creators of documents like Carriers, Govt authorities)

3) Legally-valid Performance Obligation Transfer

Normal Documents

Transferable Documents (e.g. Bills of Lading)
What is TradeTrust?

TradeTrust is a framework that comprises globally-accepted standards that connect governments and businesses to a public blockchain to enable trusted interoperability of electronic trade documents across digital platforms AND it is offered as a (digital) utility.

4 Key Components of TradeTrust

1. Legal Harmonisation
   Provide legal validity for electronic negotiable documents through compliance to MLETR

2. Standards Development
   Develop international standards that TradeTrust complies to

3. Accreditation Framework
   Certify technical solutions meet the requirements of the law

4. Software Components
   A set of open-source software code that can easily integrate backend solutions to the TradeTrust network

TradeTrust Framework is Accessible to All

Application Layer

Blockchain Layer

TradeTrust

Commercial Applications/Platforms/Ecosystems

Payload Agnostic Documents
Document Verification
MLETR Compliant Title Transfer
Distributed file store
Seamless Exchange Paperless
Identity Resolver (Verifiable Claim)
Smart Contracts
Connectors
API

Basic UI
Sample implementations via PoCs
Finance
Insurance
Logistics
Platforms
Ecosystems

UNCTAD Model Law
MLETR, MLEC, MLES
Singapore ETA

Standards Development

SG:D
INFOPRODUCTIVITY
MEDIA DEVELOPMENT AUTHORITY
Interoperability across platforms using Self-verifiable Documents

0. Issuer sets up own Decentralised ID (W3C’s DID Standard)

1. Apply for CO

2. Generates digitally-signed CO (TradeTrust document) and issues the CO to Exporter

3. Forward digitally-signed CO and other trade documents via conventional methods (e.g. as email attachment, file transfer, portal upload, data-sharing platform, API, etc..)

4. Verifies (automated or manual) digitally-signed CO w Issuer’s DID

5. Submit import Declaration and provide digitally-signed CO and other supporting documents (TradeTrust documents or PDF)

6. Verifies digitally-signed CO and extracts data from TradeTrust documents for automated processing

Start

End

TradeTrust network
TradeTrust Case Studies (Normal/Verifiable docs)

CROSS-BORDER COLLABORATION WITH AUSTRALIA

- Australia-Singapore Digital Economy Agreement
  - Australia Border Force, Singapore Customs and Infocomm Media Development Authority of Singapore

- Proof of Concepts:
  - Test Policy: Acceptance of digitally verifiable documents
  - Test Technology: Interoperability between SG TradeTrust and AU Intergovernmental Ledger

- Trial Scope
  - Certificates of Origin

- Participants
  - Issuers: Australian Chamber of Commerce and Industry and Australian Industry Group
  - Commercial users: Rio Tinto, ANZ Bank, DBS Bank and Standard Chartered Bank
  - Regulatory Authority: Singapore Customs

- Outcomes
  - Feedback were highly positive
  - Participants acknowledged value add to their business
  - Secured acceptance from regulatory authority (Singapore Customs) and commercial users
Successful TradeTrust pilots conducted under various efforts such as Government to Government collaborations, industry-led pilots and public–private partnerships.
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<th><strong>Trial</strong></th>
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<th><strong>Description</strong></th>
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<th><strong>Trade Financing Pilots under Singapore – China (Shenzhen) Smart City Initiative (SCI)</strong></th>
<th><strong>World’s first digital trade financing pilot between MLETR harmonised jurisdictions</strong></th>
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<td><strong>Singapore-Rotterdam eBL Collaboration</strong></td>
<td><strong>Trial of cross-platform interoperability of title transfer and surrender of eBL</strong></td>
<td>Use of eBL to shadow a live shipment in collaboration with Olam from Vietnam to Rotterdam via transshipment in Singapore</td>
<td><strong>Issuer/Carrier</strong>: Ocean Network Express (ONE); <strong>Commercial user</strong>: Olam; <strong>Platforms</strong>: #dltledgers (SG), NaviPorta (Netherlands)</td>
<td>Time savings from 5-10 days to under 24 hours</td>
<td>Use of eBL for trade financing and e-Presentation for businesses between Singapore and China</td>
<td>Use of eBL for digital trade financing to trial the legal harmonisation between 2 jurisdictions that have adopted MLETR</td>
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<td><strong>Trade Financing Pilots under Singapore – China (Shenzhen) Smart City Initiative (SCI)</strong></td>
<td>Use of simulated eBLS to exchange trade documents under LC terms to demonstrate digital end-to-end LC settlement across platforms and jurisdictions</td>
<td><strong>Issuer/Carrier</strong>: Pacific International Lines (PIL); <strong>Banks</strong>: UOB, DBS, MUFG <strong>Platforms</strong>: GUUD Finance, Linglogis; <strong>Commercial Users</strong>: Manufacturing Network, Guangdong Guangyun New Materials, Tri-Star Electronics, Uni-Right Industrial Trading, Makino, Advantest</td>
<td>Demonstrated the possibility of a fully paperless L/C transaction between the various transacting parties in the future</td>
<td>Validate, review and transfer of ownership of simulated eBLSs between Singapore and ADGM.</td>
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<td><strong>World’s first digital trade financing pilot between MLETR harmonised jurisdictions</strong></td>
<td><strong>Government Authorities</strong>: Financial Services Regulatory Authority (ADGM), Monetary Authority of Singapore, Infocomm Media Development Authority of Singapore; <strong>Banks</strong>: DBS, Emirates NBD, Standard Chartered</td>
<td>Handling of physical BL which can take 12-15 days, but can now be done within a few hours</td>
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