



Blockchain

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Donald Tan
Deputy-Director (Programs & Engagement),
Singapore Customs,
Networked Trade Platform Office

Introduction to Networked Trade Platform

- Operated by Singapore Customs
- One-Stop trade information management system
- Offers wide range of trade-related services
- Hub for international connectivity

<https://www.ntp.gov.sg>

Features & Benefits of Blockchain

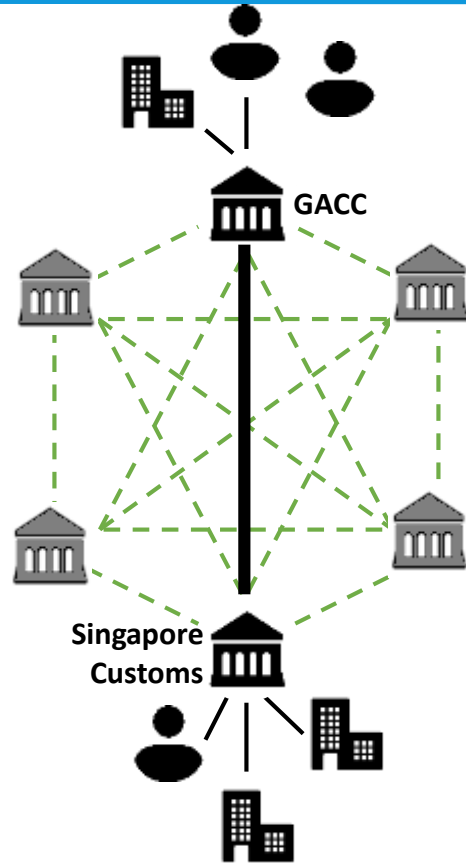
- Immutability → Increased transparency.
- Decentralized network → More resilient to failure and malicious attack + increased authenticity of stored data
- Distributed ledgers → Increased data integrity. Transactions are verified.
- Consensus → Consensus algorithm defines decision making. Allows participants to operate in a low-trust environment

What makes a good blockchain use case?

- a) The business problem at hand cannot be solved by existing technologies.
- b) Need to improve transparency of the transactions among participants.
- c) There is a need for the database to be immutable.
- d) Need to streamline and speed-up cross organizations processes.
- e) Clearly identify the participants and their data that combine to form valuable information which benefit the rest of the participants.
- f) Able to articulate the business rules of how the participants arrive at a consensus and established provenance of the transactions in the network.
- g) Participants are well aligned on the need of such a project.

The International Trade 'Single Window' Consortium Blockchain

国际贸易 '单一窗口' 联盟区块链



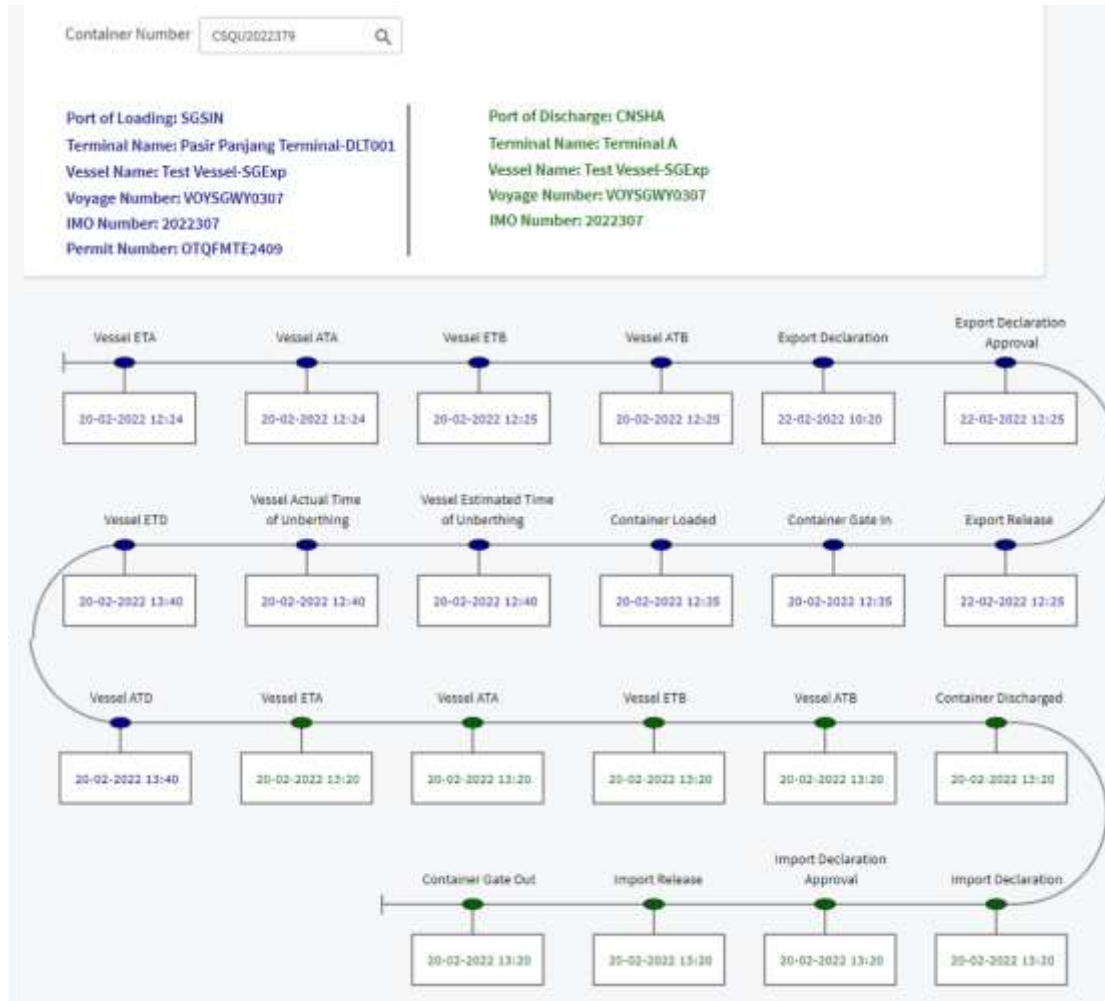
Singapore Customs and the General Administration of Customs of the People's Republic of China (GACC) have agreed to jointly build a **Government-to-Government (G2G) Consortium Blockchain** for the exchange of trade-related data and documents.

- *Founding members: SG and CN*
- *Open to expansion: Customs authorities / NSW operators*
- *Open to exploring new mutually beneficial, mutually useful use-cases with international counterparts*

Legend:

- Connection between Singapore Customs and GACC
- - - Future connection to customs of other countries

NTP's Container Trace and Trace Service (SG-China Corridor)



Phase 1: Track & Trace for Containerised Cargo between Singapore, Qinzhou and Shanghai (YangShan Port)

Key Data exchanged:

- Vessel berthing location, date & time
- Container loading / unloading date & time
- Container Gate in / out date & time
- Customs permit approval date & time,
- Customs clearance date & time

Conclusion

- Blockchain's inherent functions and characteristics provides new possibilities to:
 - Link up diverse parties to form a big picture with different pieces of data
 - Enhance trust through consensus and immutability of data
 - Enable distributed infrastructures useful for security and resilience
- Technology often not the main issue. Prior to building any system, or sharing any data, Customs Administrations need to establish:
 - What do we want to do?
 - Who do we want to do it with?
 - What are the policy levers and legal enablers?
 - What are the key positions and core interests?
 - How is the cost / effort apportioned among parties?
- Technological choices becomes more straightforward when use-case is clear
 - Technology is a means to an end, not an end in itself



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