



ISO 20022 Digital Asset *Control*

A standards-aligned control module for regulated tokenised-asset transfers. ISO 20022 context in; explainable control decision out; token movement only after approval.

sese.023

[Securities Settlement Transaction Instruction]

binding / policy / audit gaps



ONE ROLE, ONE LIFECYCLE

Clear decision ownership.

The transfer agent / registrar owns eligibility, register integrity, exceptions, and the control decision before a tokenised bond position moves.

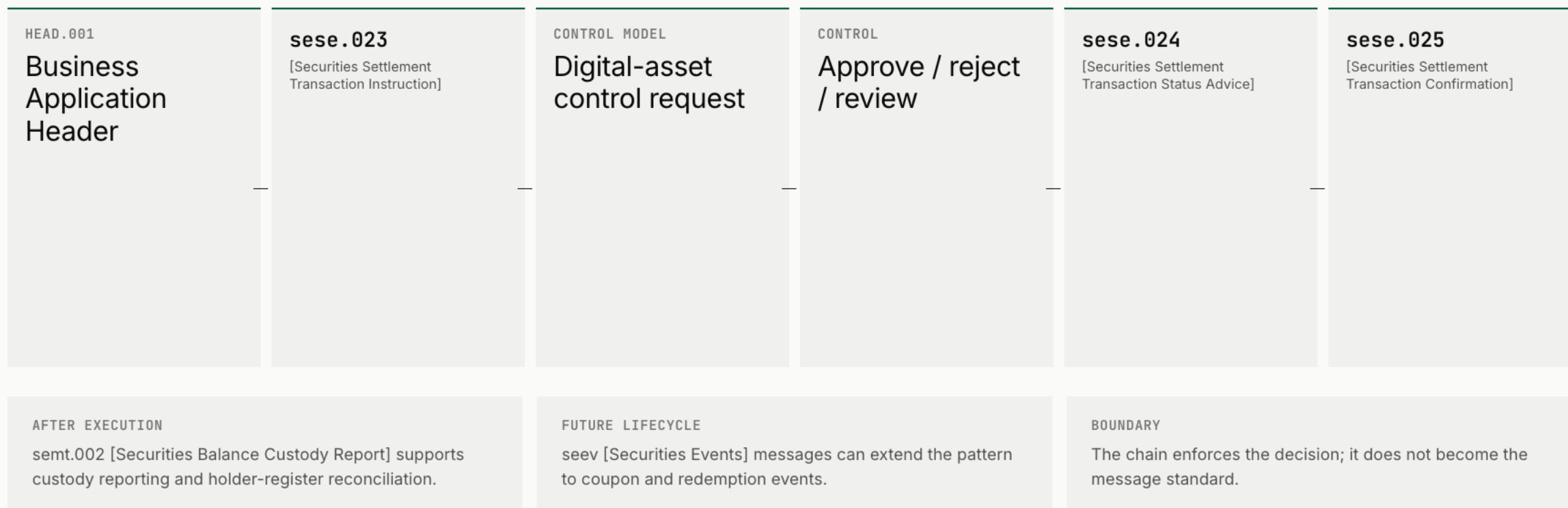
HOLDER / CUSTODIAN Initiates transfer Sends the business request and source account context.	TRANSFER AGENT / REGISTRAR Validates register outcome Owens eligibility and operating policy.	DECISION GATE Decision ownership Policy is a market-role responsibility.	CONTROL MODULE Evaluates reusable policy Identity, freeze, eligibility, lockup, and threshold logic.	TOKEN CONTRACT Moves only after approval Enforces the approved decision boundary.
ASSET Tokenised bond	LIFECYCLE Secondary transfer	DECISION Approve / reject / review	Alice 100 Alice 90	Bob 0 Bob 10



STANDARDS FIRST

ISO is visible before the network appears.

The smart contract is not ISO 20022. It enforces a decision made from normalized standards context.





GAP ANALYSIS

The gap begins where ISO coverage stops.

The current schemas already model wallets, digital-token quantity, digital-payment settlement, and ledger identity. The extensions add governed binding, not duplicate ISO fields.

ISO 20022 ALREADY COVERS

identity, parties, wallets, token units, digital-ledger ID,
payment settlement, status

sese.023/.024/.025 provide the business and digital-asset transaction context selected for this lifecycle.

CONTROL LAYER ADDS

walletBindingRef, tokenContract,
executionEnvironmentRef, ledgerBindingVersion,
policyVersion, evidenceRef

These references bind the ISO ledger ID and business context to a governed deployment, policy, evidence, and audit event.



EXPLAINABLE CONTROL

A failed transfer explains
itself in business
language.

Reason codes bridge smart-contract enforcement back to status advice and exception handling.

DECISION SEQUENCE

- Lifecycle supported?
- Parties verified?
- Party frozen?
- Receiver eligible?
- Policy active?
- Quantity under threshold?

APPROVED

APPROVED

eligible receiver, policy active, under threshold

REJECTED

ASSET_NOT_ALLOWED

receiver cannot hold this instrument

PENDING REVIEW

REVIEW_REQUIRED

quantity exceeds auto-approval limit

FROZEN PARTY

PARTY_FROZEN

sender or receiver is frozen

UNSUPPORTED_LIFECYCLE_EVENT

FROM_NOT_VERIFIED

POLICY_BLOCKED

LOCKUP_ACTIVE

The token is
the demo.
The *control
layer* is the
contribution.

This is the reusable control model regulated tokenised
assets need.



01 Business output
Transfer agent / registrar lifecycle model.

02 Technical output
Reusable control model and network-neutral API.

03 Standards output
Message mapping plus digital-asset gap analysis.



Appendix

NOTE: Complete Application Source Code available upon request – please contact the primary TD Swift Innovation team lead:
Jonathan.richards@td.com

1. Hackathon Complete Solution Overview:

- https://innoapps.centralus.cloudapp.azure.com/jonathan_richards/Swift-Hackathon-2026

2. Solidity Contract Source code:

- <https://innoapps.centralus.cloudapp.azure.com/anthony.nguyen/swift-hackathon-2026/src/branch/main>