

TWIN-005d — Identify the State Data Source

[Go to TWIN-005 — Access Twin Realization State](#)

Statement

The [DIDO-TE](#) SHALL identify the [Data Source](#) from which each accessed state value of a [Twin Realization](#) originated.

Source

- [\[DTE1\] U.S. Patent Application US20220237111A1](#), virtual and physical Twin Node concepts, baseline results, and comparison of results
- [\[DTE2\] Non-Traditional BAA Submission](#), Digital Twin concepts, monitoring, and Twin Nodes Selection
- [\[DTE9\] Distributed Immutable Data Object Reference Architecture \(DIDO-RA\)](#), distributed data and DDS publish-subscribe concepts

Rationale

A [Twin Relationship](#) may use more than one eligible [Data Source](#) for the same represented characteristic.

Identification of the Data Source preserves the origin of each accessed state value and prevents values from different sources from becoming indistinguishable after access.

Data Source identification remains distinct from source eligibility and [Source Selection](#). Eligibility defines the permitted set of Data Sources. Source Selection determines which eligible source supplies data for a defined purpose. This requirement identifies the source from which a particular accessed state value originated.

A communication endpoint, DDS DataWriter, network address, or other transport identifier does not replace Data Source identity unless the governing [Configuration](#) establishes that correspondence.

Applies To

- [DIDO-TE](#)
- [Data Source](#)
- [Source Selection](#)
- [Twin Relationship](#)
- [Twin Realization](#)
- [Twin Data Mapping](#)
- [Configuration](#)

- [DDS](#)

Verification

Verification confirms that:

1. Each accessed state value has an identifiable Data Source.
2. The identified Data Source corresponds to the origin of the accessed state value.
3. Data Sources supplying values for the same represented characteristic remain distinguishable.
4. The Data Source identity remains associated with the accessed state value.
5. A transport endpoint or communication entity does not replace Data Source identity unless the governing Configuration establishes that correspondence.
6. Identification of the Data Source remains distinguishable from Data Source eligibility and Source Selection.

Verification includes state values for the same represented characteristic obtained from at least two Data Sources and confirms that the originating Data Source of each value remains identifiable.

Traceability

Plugin Backlinks: Nothing was found.

ConOps Relationship

This requirement preserves the origin of accessed state values for subsequent synchronization, comparison, Validation, evidence generation, and Test Execution analysis.

Delivery Phase

TBD

Requirement Status

Draft

Statement Reference

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{{section>dido:03-dido-te:99-annexes:annex-c-requirements:03-functional-requirements:03-03-twin-node-requirements:twin-005-acquire-twin-state:twin-005d-identify-the-twin-state-data-source#Statement&noheader&nofooter&noeditbtn}}
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