

TWIN-010a — Identify Permitted Twin Interactions

[Go to TWIN-010 — Control Twin Interaction](#)

Statement

The [DIDO-TE](#) SHALL identify the interactions permitted among entities participating in each [Twin Relationship](#).

Source

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

Rationale

A [Twin Relationship](#) may involve multiple forms of interaction, including observation, information exchange, synchronization, simulation, invocation, or state-changing operations.

The existence of a Twin Relationship does not grant unrestricted authority to perform every technically possible interaction.

Explicit identification of permitted interactions establishes the semantic and governance boundary for interaction among participating [Twin Realizations](#), [Nodes](#), and other [Resources](#).

Technical connectivity, DDS discovery, Topic matching, API availability, or compatible [Quality of Service](#) characteristics do not establish interaction permission.

The governing [Configuration](#) provides the controlled basis for identifying the interactions permitted by the Twin Relationship.

Applies To

- [DIDO-TE](#)
- [Twin Relationship](#)
- [Twin Realization](#)
- [Node](#)

- [Resource](#)
- [Configuration](#)
- [Communication Parameter](#)
- [Quality of Service](#)
- [DDS](#)

Verification

Verification confirms that:

1. Each Twin Relationship identifies the interactions permitted among its participating entities.
2. Each permitted interaction identifies the participating entities to which the permission applies.
3. An interaction not identified as permitted is distinguishable from a permitted interaction.
4. Technical connectivity, discovery, Topic matching, API availability, or Quality of Service compatibility does not by itself establish interaction permission.
5. The identified interaction permissions are traceable to the governing Configuration.

Verification includes a Twin Relationship with at least one permitted interaction and at least one technically possible interaction that is not permitted, and confirms that the two are distinguishable.

Traceability

- [TWIN-009 — Control Twin Interaction](#)

ConOps Relationship

This requirement establishes the set of interactions permitted within a Twin Relationship before evaluating the direction, authorization, or execution of those interactions.

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-010-control-twin-
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