

STC-007 — Associate Test Events with Test Time

[Go to C.3.5 State and Time Control Requirements](#)

Statement

The [DIDO-TE](#) SHALL associate each test event identified by the governing [Test Definition](#) with its corresponding **test time**.

Source

- [\[DTE1\] U.S. Patent Application US20220237111A1](#), defined timelines, recorded points-in-time, repeatable time-sensitive testing, and virtual system time
- [\[DTE3\] Broad Agency Announcement White Paper](#), State and Time Control
- [\[DTE5\] DIDO-TE Requirements Register](#), State and Time Control source requirements

Rationale

Distributed-system behavior may depend on when an event occurs within the temporal context of a test.

Test time identifies the position on the **test timeline** associated with an event during [Test Execution](#).

Associating a test event with test time allows event occurrence to be interpreted relative to the controlled temporal context of the test rather than solely by the wall-clock time at which the event was observed.

This association supports repeatability, event ordering, comparison, and interpretation of time-sensitive behavior when Test Executions occur at different wall-clock times or when the test timeline progresses at a rate different from real time.

The governing [Test Definition](#) determines the test events for which this association is required.

This requirement does not prescribe the representation of a time value, timestamp format, clock source, event-recording mechanism, synchronization protocol, or storage technology.

Applies To

- [DIDO-TE](#)
- [Test Environment](#)

- [Test Definition](#)
- [Test Execution](#)
- [Evidence](#)
- [Traceability](#)

Verification

Verification confirms that:

1. Each test event identified by the governing Test Definition has an associated test-time value.
2. The associated test-time value identifies the event's position on the test timeline.
3. Test time can be distinguished from wall-clock time when the two differ.
4. Events occurring at different positions on the test timeline can be temporally distinguished.
5. The association between an event and its test time is traceable to the Test Execution in which the event occurred.
6. The association does not require a particular timestamp representation, clock source, synchronization protocol, or storage technology.

Verification includes multiple test events occurring at different points on the test timeline and confirms that each event can be associated with its corresponding test time.

Traceability

Plugin Backlinks: Nothing was found.

ConOps Relationship

This requirement associates events occurring during Test Execution with the **test time** established by the controlled test timeline.

The resulting temporal association supports Record and Playback, comparison, Validation, Evidence, and Traceability without assigning those separate responsibilities to the State and Time Control requirement family.

Delivery Phase

TBD

Requirement Status

Draft

Statement Reference

{{section>dido:03-dido-te:99-annexes:annex-c-requirements:03-functional-requirements:03-05-state-and-time-control-requirements:stc-007-associate-test-events-with-test-time#Statement&noheader&nofooter&noeditbtn}}

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