

Attestation Staleness Outcome and the Attestation Window Parameter: Bounding the Age of a Carried Withholding Without Recording a Rejection

The attestation staleness outcome and the attestation window parameter are disclosed in U.S. Provisional Application No. 64/117,812 as part of the cross-agent withholding architecture for persistent semantic agents. A disclosing agent that has written its authorization gate to the withheld state emits a non-execution attestation carrying an attested epoch field, and the receiving agent that admits that attestation records its own time of admission alongside the epoch as received. The two quantities are of different provenance, and an interval separates them. Paragraph [0459] declares an attestation window parameter in the receiving agent's governing signed policy object bounding that interval, and recites that an attestation presented outside the bound produces an attestation staleness outcome of the receiving agent's recorded abstention class rather than a rejection, no counter being incremented and nothing adverse being appended.

An aged disclosure is not a false one

A persistent semantic agent (100) that has written its authorization gate (300) to the withheld state (310) for an enumerated set of action classes, and has transitioned into the non-executing cognitive mode (302), constructs and emits a non-execution attestation (504) as a governed observation. Section 5.6 recites the elements of its payload, one of which is an attested epoch field carrying the epoch identifier of the dynamic agent hash chain of the disclosing agent at construction. Section 5.7 recites what the receiving agent writes upon a satisfied verification: a carried abstention entry comprising the payload elements as received, together with the identity primitive of the disclosing agent and the receiving agent's recorded time of admission.

One entry therefore holds two temporal quantities of different provenance. The epoch identifier is supplied by the disclosing agent. The time of admission is recorded by the receiver.

Age bounds on signed objects are ordinarily resolved by rejection. The presented object fails a freshness check, the failure is surfaced as an error, and the error is attributed to the party that presented it. In the architecture of this filing, that resolution is foreclosed on other grounds. Section 5.1 states the invariant that where an input required by a determination is unavailable, incomplete, or unresolvable, the determination emits an outcome entry of a recorded abstention class identifying the unavailable input, and does not emit an outcome adverse to the semantic agent (100), adverse to an asserting party (118), or adverse to a counterparty. Section 5.8 applies the conversion bar (502) across the agent boundary and forecloses conversion of a carried abstention entry into a scalar, a default, or a threshold operand; increment of any counter of the disclosing agent; and appending of anything adverse to that agent's counterparty identity record (114).

Section 10.8, paragraph [0459] supplies the bound on the interval between the two quantities, and recites the outcome that a breach of it produces.

What the window parameter bounds and what a breach produces

Section 5.6 sets out the construction of the attestation. Its payload carries a withheld action-class enumeration naming the action-class identifiers for which the authorization gate (300) stands in the withheld state (310), each entry naming that identifier and the scope-partition identifier of the partition within which the withholding applies; an enumerated evidentiary basis giving, for each accepted determination (122) of the causal set contributing to the write, the entries of the append-only lineage field (104) retrieved and tested against the corresponding conduct evaluation artifact (116), disclosing no conduct descriptor content; the attested epoch field; an abstention-class type marker drawn from the closed enumeration of abstention classes declared in the signed policy object (112) in force, carrying the type designation and not a magnitude; and an express non-determination designation recording that the attestation is not a determination of the closed set and is not a denial of any dispatch.

Of these, the attested epoch field is the one the window parameter reads. The filing recites that it carries the epoch identifier of the disclosing agent's dynamic agent hash chain at construction, and is not drawn from a clock available to an execution node hosting that agent.

Section 5.7 sets out the receiving agent's handling. It verifies the authority credential and the continuity hash field against the continuity history store held within its counterparty identity record (114) of the disclosing agent, under the trust-slope validator; it applies the successor-continuity test to confirm that the attested epoch field carries a valid successor of the epoch identifier previously attested by the disclosing agent; and it confirms that the abstention-class type marker resolves to a member of the closed enumeration declared in its own policy object in force and that the withheld action-class enumeration is non-empty. Upon a satisfied verification the attestation is written into the receiving agent's own append-only lineage field (104) as a

carried abstention entry, with a reference to that entry written into a counterparty abstention register held in the counterparty identity record (114) of the disclosing agent.

The attested epoch as received and the recorded time of admission are the endpoints the window parameter spans. Paragraph [0459] declares an attestation window parameter in the receiving agent's governing signed policy object (112) that bounds the interval between them. The bound is the receiver's own, applied to an interval one endpoint of which the receiver records and the other of which arrives in the object presented to it.

An attestation presented outside that bound produces an attestation staleness outcome of the receiving agent's recorded abstention class rather than a rejection, no counter being incremented and nothing adverse being appended. Each clause of that recitation does work.

Consider first the class of the outcome. It is the receiving agent's own recorded abstention class, not the disclosing agent's class and not a rejected determination (124). Section 5.3 gives the form of an abstention outcome entry appended to the append-only lineage field (104): the abstention class, an identifier of the stage that produced it, an identifier of the unavailable input, and a recorded time. A breach of the window parameter resolves into that record type.

Next, the negatives. The filing states them directly: no counter is incremented, and nothing adverse is appended. Section 5.8 already provides that no availability score, no health quantity, no suspicion level, and no failure rate of the receiving agent takes a carried abstention entry as an input, and that an accumulation over a set containing a value of the abstention type (506) emits an outcome of that class rather than a sum computed over the remaining members of the set.

Third, the relation to the neighboring outcome. Section 5.7 provides that where a verification conjunct fails, the receiving agent appends the attestation together with the failing element, and the attestation so appended is admitted to no consuming determination, modifies no value of its scoped integrity vector (106), and increments no counter; and that where the failure is for want of a recorded predecessor epoch, the receiving agent records a predecessor-absence abstention outcome of its own recorded abstention class, identifying the absent predecessor as the unavailable input. Paragraph [0459] holds the two outcomes apart in terms: the staleness outcome arises upon a breach of the attestation window parameter, the predecessor-absence outcome upon a missing predecessor, and neither is derived from the other.

Two conditions, two outcomes, one field. The filing states each condition separately and forbids deriving either outcome from the other.

Declared quantities and their form

The attestation window parameter is declared in the receiving agent's governing signed policy object (112), which is also the object declaring the closed enumeration of abstention classes against which the abstention-class type marker must resolve. The filed text recites no numeric value for the window parameter, and no default, floor, or ceiling for it.

Several other declared bounds operate on the same object and are distinct from it. Under paragraph [0467], the disclosing agent emits a non-execution attestation only to each counterparty holding a counterparty identity record (114) at or above a persistence tier declared in the disclosing agent's signed policy object (112), the tiers being ordered as declared in that object, and recorded as having dispatched to the disclosing agent within an emission window declared in that object. The time-to-live field is an element of the governed observation itself, and Section 5.9 makes its elapse a release condition for a carried abstention entry, an elapse the filing recites is no evidence that the class

has been restored. The attestation window parameter is neither of these: it is the receiver's bound on the interval preceding admission, and its breach produces an outcome rather than a release.

Position within the chained withholding architecture

Paragraph [0459] sits in Section 10.8, which addresses chained cross-agent withholding, anti-amplification, and introduction protocols. Its neighboring provisions operate on the same object.

Paragraph [0452] conditions admission of a carried abstention entry upon an attestation origin-equivalence gate, under which a count of carried abstention entries held from parties of one origin-equivalence class (200) exceeding a bound declared in the signed policy object (112) causes a further attestation from a party of that class to be appended under the failing-element path and not written as a carried abstention entry. Paragraphs [0449] and [0450] recite the relay non-execution attestation, a distinct object emitted by a receiving agent responsive to its own dispatch-authority predicate failing, by operation of carried abstention entries then held, across a count of action classes exceeding a declared bound; it carries a relay depth field and is subject to a relay depth ceiling that is monotonically non-increasing under the anti-rollback discipline, whereby a cycle of agents each holding an entry of the other terminates rather than re-emitting without bound. Paragraph [0465] permits the withheld action-class enumeration to be presented at a declared action-class group granularity coarser than the action-class identifier. Paragraphs [0456], [0457], and [0468] recite an attestation revocation object, the widening supersession record, and a restoration settlement reference resting on a settlement record of a matched pair (600).

The staleness outcome arises at the point of admission and produces a value of the abstention type (506). An outcome of the receiving agent's recorded abstention class propagates under Section 5.3 into consuming determinations, each emitting an outcome of its own recorded class carrying the same unavailable-input identity, the

abstention propagation chain (508) so formed being recorded in the append-only lineage field (104). The degradation map (500) of Section 5.2 enumerates, for each determination stage, the input required, the abstention outcome produced upon unavailability, and the consequence foreclosed.

Distinguishing genuine prior art

Established categories bound the age of a signed object, and each differs structurally from what paragraph [0459] recites.

Credential and token validity checking, in public key infrastructure and in delegated authorization protocols, bounds the interval between issuance and use, and a breach resolves as a validation failure: the object is rejected and the rejection is surfaced as an error attributable to the presenting party. The recitation here terminates a breach in an outcome of the receiver's recorded abstention class, with no counter incremented and nothing adverse appended.

Replay-protection windows in secure messaging bound the acceptable skew between a message timestamp and local time so that a captured message cannot be replayed later. Such windows are anchored in wall-clock time or in a sequence number maintained for that purpose. The interval bounded here runs from an attested epoch of the disclosing agent's dynamic agent hash chain, which the filing recites is not drawn from a clock available to an execution node hosting that agent, to the receiving agent's recorded time of admission.

Heartbeat and health-check staleness detection in distributed systems treats an aged signal as evidence about the sending node and feeds it into an availability metric, a failure rate, or a circuit breaker. Section 5.8 forecloses that treatment across the agent boundary, no availability score, health quantity, suspicion level, or failure rate of the receiving agent taking a carried abstention entry as an input.

Message expiry in publish and subscribe transports discards an expired message at the transport layer, with no record entering the application's reasoning. Under paragraph [0459] the breach produces an outcome entry of the receiving agent's recorded abstention class, which Section 5.3 carries forward into consuming determinations.

None of the foregoing carries a second, separately conditioned outcome for a missing predecessor epoch that the filing declares is not derived from the staleness outcome. That pairing of two independent outcomes over one field is the subject matter disclosed.

Disclosure Scope

This article describes subject matter disclosed in U.S. Provisional Application No. 64/117,812, and specifically the attestation staleness outcome and the attestation window parameter recited at Section 10.8, paragraph [0459], together with the supporting architecture of the non-execution attestation at Section 5.6, the verification and admission as a value of the abstention type at Section 5.7, the conversion bar across the agent boundary at Section 5.8, and the abstention invariant, degradation map, and propagation rule at Sections 5.1 through 5.3. Quantities described here as declared carry no value in the filing. This publication describes the disclosure named above and is not a claim construction, an opinion of counsel, or a statement concerning the conduct of any party.

Positive Abstention and the Conversion Bar (/positive-abstention)

[All 49 steps → \(/inventive-steps\)](#)

Refusing to act is a first-class, recorded outcome — and can't be laundered into acting.

Provisional application

PRIMARY TECHNICAL DISCLOSURE

- [Positive Abstention: Withholding as a First-Class, Non-Convertible Outcome \(/articles/positive-abstention/withholding-as-a-first-class-outcome\)](/articles/positive-abstention/withholding-as-a-first-class-outcome)

SECONDARY TECHNICAL

- [Relay Non-Execution Attestation With Depth and Cycle Bounds \(/articles/positive-abstention/relay-non-execution-attestation\)](/articles/positive-abstention/relay-non-execution-attestation)
- [The Anti-Amplification Bound on Propagated Determinations \(/articles/positive-abstention/anti-amplification-magnitude-bound\)](/articles/positive-abstention/anti-amplification-magnitude-bound)
- [The Attestation Revocation Object \(/articles/positive-abstention/attestation-revocation-object\)](/articles/positive-abstention/attestation-revocation-object)
- [Empty-Intersection Mutual Positive Abstention \(/articles/positive-abstention/empty-intersection-mutual-abstention\)](/articles/positive-abstention/empty-intersection-mutual-abstention)
- [Curing Counterparty Absence by Introduction Protocol \(/articles/positive-abstention/introduction-protocol-cure\)](/articles/positive-abstention/introduction-protocol-cure)
- [Recorded Counterfactual Coupling Test: Detecting When a Counterparty's Silence Moves an Agent's Own Authorization Gate \(/articles/positive-abstention/recorded-counterfactual-coupling-test\)](/articles/positive-abstention/recorded-counterfactual-coupling-test)
- [Self-Execution Intersection Conjunct: Gating Cross-Agent Determination Propagation on the Admitting Agent's Own Per-Partition Execution Record \(/articles/positive-abstention/propagation-admissibility-gate-self-execution-intersection\)](/articles/positive-abstention/propagation-admissibility-gate-self-execution-intersection)
- [Attack-Conditional Cross-Boundary Suspension of Determination Propagation Between Persistent Semantic Agents \(/articles/positive-abstention/propagation-admissibility-gate-attack-conditional-cross\)](/articles/positive-abstention/propagation-admissibility-gate-attack-conditional-cross)
- [Propagation Depth Ceilings for Cross-Agent Determination Records: A Monotonic Anti-Restore-Depth Gate Against Hop-Count Replenishment \(/articles/positive-abstention/propagation-depth-ceiling-anti-restore-depth\)](/articles/positive-abstention/propagation-depth-ceiling-anti-restore-depth)
- [Attestation Staleness Outcome and the Attestation Window Parameter: Bounding the Age of a Carried Withholding Without Recording a Rejection \(/articles/positive-abstention/attestation-staleness-outcome-attestation-window-parameter\)](/articles/positive-abstention/attestation-staleness-outcome-attestation-window-parameter)
- [Evidentiary-Basis Omission for the Receiving Counterparty: Attesting a Withholding Without Naming the Recipient as Its Occasion \(/articles/positive-abstention/evidentiary-basis-omission-receiving-counterparty\)](/articles/positive-abstention/evidentiary-basis-omission-receiving-counterparty)
- [Persistence-Tier Emission Targeting for Non-Execution Attestations: Bounding the Audience of an Agent's Recorded Withholding \(/articles/positive-abstention/non-execution-attestation-emission-targeting-persistence\)](/articles/positive-abstention/non-execution-attestation-emission-targeting-persistence)
- [Restoration Settlement Reference: Releasing a Carried Abstention Entry on a Matched-Pair Settlement Record of Gate Restoration \(/articles/positive-abstention/restoration-settlement-reference-distinct-release-condition\)](/articles/positive-abstention/restoration-settlement-reference)

APPLICATIONS · GENERAL

- [Safety-Critical Autonomy: Recording a Refusal to Act as a First-Class Outcome \(/articles/positive-abstention/safety-critical-autonomy-abstention\)](/articles/positive-abstention/safety-critical-autonomy-abstention)
- [Clinical Decision Support: When the Correct Output Is No Output \(/articles/positive-abstention/clinical-decision-support-abstention\)](/articles/positive-abstention/clinical-decision-support-abstention)

APPLICATIONS · SPECIFIC

- [NIST AI Risk Management Framework: Where Abstention Fits in Agent-to-Agent Conduct \(/articles/positive-abstention/nist-ai-rmf-abstention\)](/articles/positive-abstention/nist-ai-rmf-abstention)

TERMINOLOGY

- [abstention outcome \(/glossary#abstention-outcome\)](/glossary#abstention-outcome)
- [conversion bar \(/glossary#conversion-bar\)](/glossary#conversion-bar)
- [non-execution attestation \(/glossary#non-execution-attestation\)](/glossary#non-execution-attestation)
- [positive abstention \(/glossary#positive-abstention\)](/glossary#positive-abstention)

[Positive Abstention and the Conversion Bar overview → \(/positive-abstention\)](/positive-abstention)