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Self-Execution Intersection Conjunct: Gating Cross-Agent Determination Propagation on the Admitting Agent's Own Per-Partition Execution Record

The self-execution intersection conjunct is a conjunct of the propagation admissibility gate that conditions a second persistent semantic agent's admission of a determination propagation record on that agent's own recorded execution history, and it is disclosed in U.S. Provisional Application No. 64/117,812. The conjunct requires that the scope-partition identifier carried by the record resolve to a scope partition recorded in the second agent's own per-partition lineage record, as one within which that agent has itself executed an action of an action class enumerated in the record's implicated action-class enumeration. Evaluation proceeds by testing the entries of that lineage record for the partition against the implicated enumeration, and the conjunct is not satisfied where the intersection is empty. A record failing it is appended as an attempted propagation and given no effect.

Where a propagated determination outruns the receiving agent's own record

The filed architecture admits across the agent boundary an accepted determination (122) itself, and not only the abstention type carried by the mechanisms that precede it. Where a first semantic agent (100) produces an accepted determination (122) upon a conduct evaluation artifact (116) concerning conduct within a scope partition shared with a second semantic agent, the first agent emits a determination propagation record as a governed observation. That record comprises at least the determination class identifier of the accepted determination, the scope-partition identifier, the identity primitive of the asserting party (118), an epoch identifier of the dynamic agent hash chain of the first agent, an implicated action-class enumeration naming action-class identifiers alone, and a propagation depth field. Admission by the second agent modifies a value of its scoped integrity vector (106) only through the state modifier and only under the coupling functions, no field being updated in isolation.

Because the record carries a governance object and not a magnitude, the filing distinguishes it from a cognitive field value. That characterization concerns the object crossing the boundary. Two further conditions in the filing concern who may be moved by it, and both are framed in terms other than the admitting agent's own conduct.

The first is an origin-equivalence condition: the second agent gives the propagation record effect only where the first agent and the asserting party (118) are not assignable to a common origin-equivalence class (200) under any relation type declared in the signed policy object (112), the class being computed by the second agent from records carried in its own memory field (102). Where the two are so assignable, the record is appended and given no effect. The second is a magnitude bound: the amount by which an admitting agent's scoped integrity vector (106) is modified upon a propagation record is bounded above by a declared fraction, less than unity, of a reference displacement magnitude, that reference being computed by the admitting agent from the determination class identifier the record carries. One condition addresses the

relationship between the emitting agent and the asserting party. The other caps how far a single admission may move the admitting agent. Neither is expressed in terms of what the admitting agent has itself executed within the partition the record names.

Testing the carried partition against the admitting agent's own executions

The self-execution conjunct is a further condition upon admission of a determination propagation record by a second persistent semantic agent (100). It is stated in terms of two structures: the scope-partition identifier carried by the record, and the second agent's own per-partition lineage record.

A scope partition, as the filing defines the term, is a named division of the operation of the semantic agent having a per-partition lineage record and a per-partition cognitive state. Within the conjunct, the per-partition lineage record is characterized as that agent's record of the actions it has itself executed within each scope partition. The record consulted, therefore, is the admitting agent's record of its own executions.

The requirement runs as follows. The scope-partition identifier carried by the propagation record must resolve to a scope partition recorded in the second agent's own per-partition lineage record, and the partition so resolved must be one within which the second agent has itself executed an action of an action class enumerated in the record's implicated action-class enumeration. That enumeration is the ordered action-class identifiers of the conduct addressed by the propagated determination, and the propagation record names action-class identifiers alone.

Evaluation is stated as a set operation. The second agent tests the entries of its own per-partition lineage record for that partition against the implicated action-class enumeration, and the conjunct is not satisfied where the intersection is empty. The two operands are the action classes the admitting agent has executed within the named partition and the action classes the record implicates.

Failure carries a specified disposition: a record failing the conjunct is appended as an attempted propagation and is given no effect. Appending and effect are recited separately, so the attempt is recorded while the movement admission would have produced does not occur. The filing applies the same disposition to a record that fails the propagation depth ceiling, which carries a depth exceeding the ceiling then standing or exceeding the declared initial depth.

Direction matters to how the test is computed. The propagation record is emitted by the agent that produced the accepted determination (122); the conjunct is evaluated by the agent that would admit it. Both operands the conjunct names are local to that evaluating agent, being its own per-partition lineage entries and the resolution of the carried identifier against the partitions it records. Since the implicated enumeration names action-class identifiers alone, the intersection is taken over identifiers.

Declared quantities, and what the filing leaves to the policy object

No numeric threshold attaches to the self-execution conjunct itself. Its satisfaction condition is a non-empty intersection, and the filing states the failing case as the empty intersection. The filed text supplies no minimum count of matching action classes, no window over which the admitting agent's executions must have occurred, and no recency bound upon the entries of the per-partition lineage record consulted.

Quantities the filing does declare belong to the conditions surrounding this one, and each is declared rather than fixed as a number in the specification:

- The origin-equivalence condition turns on relation types declared in the signed policy object (112), the class being computed by the second agent from records carried in its own memory field (102).
- The attack-conditional suspension turns on a rate bound declared in the signed policy object (112). Each rate is measured over a common window also declared there and expressed as a count of successor epochs of the second agent, so that the

window is not advanced by any other party. The per-partition rate is the count admitted within the partition concerned over that window; the mean rate is the count admitted across the remaining partitions over that window divided by their number, the two being denominated alike and compared against the one declared bound.

- The anti-amplification bound is a declared fraction, less than unity, of a reference displacement magnitude, the fraction being declared in the signed policy object (112).
- The propagation depth field is bounded by a declared initial depth and by a per-determination-class, per-asserting-party propagation depth ceiling, which is the least propagation depth value the admitting agent has admitted for that determination and is monotonically non-increasing under the anti-rollback discipline.

The self-execution conjunct consumes none of those quantities. Its inputs are the carried scope-partition identifier, the carried implicated action-class enumeration, and the admitting agent's own per-partition lineage entries for the resolved partition.

Position of the conjunct within the propagation admissibility gate

Cross-agent propagation of an accepted determination sits alongside the cross-agent carriage of a withholding in the filed architecture. In that adjacent path, a disclosing agent that writes its authorization gate (300) to the withheld state (310) emits a non-execution attestation (504); a receiving agent admits it as a carried abstention entry; consuming determinations thereafter emit outcomes of the receiving agent's own recorded abstention class carrying an unavailable-input identity field, forming an abstention propagation chain (508) recorded in the append-only lineage field (104). The conversion bar (502) applies to a carried abstention entry as it applies to an abstention outcome produced within the receiving agent. Propagation of an accepted determination (122) admits a different class of matter across the same boundary, and the propagation admissibility gate governs that path.

Several conditions operate within that gate. The origin-equivalence condition addresses the relationship between the emitting agent and the asserting party (118), and a record failing it is appended and given no effect. The attack-conditional cross-boundary suspension withholds effect from every propagation record while the containment determination stands for the scope partition concerned in either agent, the suspension applying across the agent boundary as it applies across a partition boundary within a single agent; a per-partition receipt rate exceeding the declared bound while the mean rate across the remaining partitions stays below it is itself a condition of that suspension, and where no remaining partition exists the mean-rate conjunct is treated as not satisfied. The depth ceiling causes a record carrying a depth above the ceiling then standing, or above the declared initial depth, to fail the gate, be appended as an attempted propagation, and be given no effect, so that a depleted depth is not restored by re-emitting the determination at a raised value. The anti-amplification bound caps the magnitude any single admission may move.

Taken together, these conditions bear on separate attributes of one record: the relationship between its emitter and the asserting party, whether a suspension presently stands for the partition concerned, how far the record has traveled and at what depth it arrives, how much movement an admission may cause, and, through the self-execution conjunct, whether the admitting agent has itself executed an implicated action class in the partition named.

Partition structure also carries into the conjunct from elsewhere in the filing. Scope partitions hold their own lineage records and their own cognitive state, and the containment determination is recorded and stands per scope partition. The self-execution conjunct evaluates its test per partition on the same footing.

Distinguishing federated reputation, gossip transport, and access control

Reputation and trust systems compute a score for an entity from ratings or observations supplied by other entities and expose that score to parties deciding whether to transact. The filing's background describes such systems as locating the score at a registry, a scoring authority, or a shared ledger, with the scored entity neither holding the score nor participating in its computation. Propagation in that family disseminates a magnitude to querying parties. The conjunct described here governs the admissibility, at a specific agent, of a record that carries a governance object and not a magnitude, tested against that agent's record of what it has executed.

Gossip and epidemic dissemination protocols bound the spread of a message by hop count, fanout, or expiry. The filed architecture carries a structure of comparable form in the propagation depth field with its monotonically non-increasing ceiling, and keeps that structure separate from the self-execution conjunct. Depth concerns how far a record has traveled. The conjunct concerns the resolved partition and the implicated action classes, and takes no depth value as an operand.

Access control and capability systems condition an operation on a permission held by the actor, typically granted by an authority and evaluated against identity or role. The condition here consults no grant. Its operand is a record of executed actions, and the question posed is whether the action classes the admitting agent has executed in the named partition intersect the action classes the propagated determination implicates.

Federated learning and cross-organization model update pipelines aggregate parameters or gradients across participants, moving quantities admitted on the basis of membership in the federation. The propagation record is distinguished in the filing from a cognitive field value on the ground that it carries a governance object and not a magnitude, and the conjunct conditions admission on recorded execution within the resolved partition in an implicated class rather than on participation in a shared namespace.

Each of these categories serves the purposes for which it was built, and nothing stated here asserts that any implementation of them practices the mechanism described.

Disclosure Scope

The mechanism described here, the self-execution intersection conjunct of the propagation admissibility gate, is disclosed in U.S. Provisional Application No. 64/117,812, at Section 10.8, paragraph [0453], within the section addressing chained cross-agent withholding, anti-amplification, and introduction protocols. Related disclosure appears at Section 5.10, paragraphs [0190] through [0192], which specify the determination propagation record and the origin-equivalence condition upon its effect, and at Section 10.8, paragraphs [0451], [0454], and [0455], which specify the anti-amplification magnitude bound, the attack-conditional cross-boundary suspension, and the propagation depth ceiling. This article is a technical description prepared for public disclosure and is not a claim construction, an opinion of counsel, or a representation of the scope of any claim that may issue.

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)

SECONDARY TECHNICAL

- Relay Non-Execution Attestation With Depth and Cycle Bounds (/articles/positive-abstention/relay-non-execution-attestation)

- The Anti-Amplification Bound on Propagated Determinations (/articles/positive-abstention/anti-amplification-magnitude-bound)
- The Attestation Revocation Object (/articles/positive-abstention/attestation-revocation-object)
- Empty-Intersection Mutual Positive Abstention (/articles/positive-abstention/empty-intersection-mutual-abstention)
- Curing Counterparty Absence by Introduction Protocol (/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)
- **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)**
- Attack-Conditional Cross-Boundary Suspension of Determination Propagation Between Persistent Semantic Agents (/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)
- 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)
- 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)
- 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)
- 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)

APPLICATIONS · GENERAL

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

TERMINOLOGY

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

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