

Coarse Lineage-Segment Granularity: Verifying a Tested-Entry Enumeration Without Disclosing Which Lineage Entries Were Tested

A semantic agent that lets another execute under its recorded determination presents a tested-entry enumeration naming each entry of its append-only lineage field tested against the conduct evaluation artifact and not contradicting it, each named by lineage position, recorded time, and continuity hash. The counterparty that receives it performs a verification of form and of retrievability and not of merits: it does not retrieve the enumerated entries, does not evaluate their sufficiency, and produces no determination concerning the presenting agent's conduct. Coarse lineage-segment granularity for the tested-entry enumeration, disclosed at paragraph [0445] of U.S. Provisional Application No. 64/117,812, presents the enumeration at a declared granularity coarser than the lineage position, being a declared lineage-segment identifier. The followed agent thereby discloses that a segment of its append-only lineage field was tested against the conduct evaluation artifact without disclosing which entries of the segment were tested, the retrievability-form verification is performed against the segment identifiers rather than against individual positions, and the deference record records the granularity applied.

The Enumeration a Followed Agent Must Present

Deference, in the filing, runs against the conventional direction of cost. A first semantic agent (100), the deferring agent, holds a request to dispatch an action of an action class and finds its own dispatch-authority predicate satisfied on recomputation from its memory field (102), being on its own record authorized to determine the matter for itself. It elects instead to execute under a determination that a second agent, the followed agent, holds recorded in its lineage field (104). The filing recites that this mechanism inverts the direction in which cost and exposure conventionally flow: the metered consequence falls upon the followed agent, and the append of a deference counter-signature (902) decrements that agent's own authorization budget (404) without regard to the merits. Between the two agents, no rating, score, standing quantity, or credential passes.

To be relied upon, the followed agent presents a followed determination record whose conjunctive members include a tested-entry enumeration. That enumeration names each entry of the followed agent's lineage field (104) tested against the conduct evaluation artifact (116) and not contradicting it, and it names each such entry by its lineage position, its recorded time, and its continuity hash.

Those positions are then tested arithmetically. The second conjunct of the deferring agent's check verifies the enumeration against a lineage commitment comprising a lineage-extent value N , being the count of entries in the followed agent's lineage field (104) at emission, and a lineage accumulator root over the ordered entries. The enumeration must be non-empty; each position p must satisfy one not greater than p and p not greater than N ; the positions must be pairwise distinct and strictly increasing; and the recorded times must be non-decreasing.

Past that arithmetic the deferring agent does not go. Its verification is of form and of retrievability and not of merits: it does not retrieve the enumerated entries, does not evaluate their sufficiency, does not re-derive the determination, and produces no determination concerning the followed agent's conduct.

Presenting the Enumeration at a Declared Segment Granularity

Start with the baseline the embodiment modifies. The deferring agent retrieves a followed determination record comprising, conjunctively: the determination of the closed set as recorded by the followed agent, being the accepted determination (122), the rejected determination (124), the not-determinable determination (126), or the not-applicable determination (128); identifiers of the conduct evaluation artifact (116) determined and of its asserting party (118); the conduct descriptor asserted; an identifier and successor index of the signed policy object (112) in force for that agent at the recorded assertion time; and the tested-entry enumeration.

It then performs a retrievability-form verification of three ordered conjuncts. The first verifies the authority credential and continuity hash field presented against the continuity history store held in its counterparty identity record (114) of the followed agent, the successor-continuity test being applied to the attested epoch identifier of the dynamic agent hash chain. The second is the lineage-commitment test recited above, the lineage-extent value and the accumulator root both being bound into the successor hash field. The third requires that the determination be a member of the closed set and that the action class carried match that of the pending dispatch.

Against that baseline, the filed paragraph recites one substitution. The tested-entry enumeration is presented at a declared granularity coarser than the lineage position, being a declared lineage-segment identifier, whereby the followed agent discloses that a segment of its append-only lineage field (104) was tested against the conduct evaluation artifact (116) without disclosing which entries of the segment were tested. The retrievability-form verification is performed against the segment identifiers rather than against individual positions, and the deference record (900) records the granularity applied.

Several features of the recital are worth separating out.

The verification is still performed. The paragraph does not release the enumeration from the retrievability-form verification; it states what that verification runs against. Section 9.3 states expressly that the agent performing that verification does not evaluate the sufficiency of the entries enumerated.

Carriage then binds what was presented. The deference record (900) comprises the followed determination record as retrieved, the tested-entry enumeration carried without alteration, and a deference abstention entry. Before electing to counter-sign, the followed agent verifies that the record names a determination recorded in its own lineage field (104), that it reproduces the tested-entry enumeration without alteration, and that a deference abstention entry is carried.

Failure of the check is not adverse. Where a conjunct fails, the proposed deference is appended as an attempted deference record naming the failing conjunct, the declining is a positive abstention, and nothing adverse to the followed agent is appended. A deference record (900) is appended only upon a satisfied origin-disjointness test and a satisfied retrievability-form verification, so a presentation that does not verify at the declared granularity yields that abstention path rather than an adoption.

The paragraph reaches the presentation of the enumeration and the object of the verification. It recites no change to the merit-independent decrement borne at the counter-signature append, to the counter-signature requirement, or to the origin-disjointness precondition.

Declared Granularity, and the Values the Filing Leaves Open

The filed paragraph is parameterized by declaration rather than by number.

- The granularity is **declared**, and is constrained in direction alone: coarser than the lineage position.

- The coarse unit is a **declared lineage-segment identifier**. The paragraph recites the identifier as declared and does not, at this paragraph, name the object in which that declaration is carried.
- The **granularity applied is recorded** in the deference record (900).

No numeric value attaches to any of these in the filed text: no segment size, no minimum or maximum count of lineage entries per segment, no ceiling on how coarse a declared granularity may be, and no minimum number of segments an enumeration must name.

Two adjacent quantities are carried rather than declared, and are not parameters of this embodiment: the lineage-extent value N and the lineage accumulator root, both bound into the successor hash field and arriving with the presented record.

Neighboring parameters in the same section are declared in the same manner. The counter-signature window is declared in the deferring agent's signed policy object (112) and carried in the counter-signature window field (912) of the record as transmitted and as counter-signed, so that the followed agent obtains the window from the record itself. The observation interval of the two-part conformance filter (906) is that declared for the action class in the deferring agent's own policy object, and otherwise that declared for the followed agent where not longer than a declared maximum.

Numbers do appear in the section, at the deference decrement schedule, which is a monotonically non-decreasing function of a count of deference counter-signatures (902) appended within a declared window. In a linear form, the amount is a base amount b plus a count n multiplied by a declared increment i , and in one embodiment b is one unit and i is one quarter of one unit, so the first counter-signature within the window costs one unit and the fifth costs two. That schedule governs the cost of being followed, not the granularity of the enumeration.

Where the Coarse Enumeration Travels

The tested-entry enumeration is a member of a record that moves through dependent structure.

Within the deference chain the enumeration is retrieved and verified, then carried without alteration into the deference record (900) alongside a deference abstention entry subject to the conversion bar (502): no stage converts that entry into a scalar value, a default value, or an operand of a threshold comparison. The record is transmitted as the first governed observation (608) of a matched pair (600), and the deference counter-signature (902) is emitted as the second (610).

A second structure in the same section carries lineage positions and is verified by the same conjunct. An enumerated corrector class is identified by a class-defining reference carrying, for a shared dispatch lineage (202), the lineage position and continuity hash of the common parent dispatch entry, and for a co-signature (204), those of the entry bearing the two verifiable signatures. Those are verified against the lineage commitment presented, by the second conjunct of Section 9.3, whereby a class cannot be defined by an entry the followed agent's committed lineage does not contain. The deferring agent appends an exposure edge record (910) carrying the corrector-class enumeration (904) with the class-defining reference of each class and, for each excluded class, the part of the conformance filter (906) that failed.

Forward of the deference chain the enumeration is consumed again. The determination-invariance computation retrieves from a counterparty previously recorded determinations of the closed set for an action class, each with its conduct descriptor, its conduct evaluation artifact (116) identifier, and its tested-entry enumeration, and verifies each under the retrievability-form verification. Where the invariance count falls below a minimum declared in the signed policy object (112), or the policy succession holds fewer objects than a declared minimum succession depth, the agent appends an invariance-insufficiency abstention subject to the conversion bar (502) and adverse to no party, and designates nothing. Only where both declared

minimums are satisfied does a standing-determination designation issue, whose operative consequence is a substitution inside the dispatch-authority predicate confined to the designated action classes, to the named counterparty, to the named scope partition and each partition coupled to it, and to that one conjunct only. The policy stamp, the lineage stamp, and the authorization stamp of that predicate each remain computed by the agent from its own state and are non-substitutable.

A parallel recital appears elsewhere in the filing: a withheld action-class enumeration of a non-execution attestation enumerates action classes at a declared granularity coarser than the action-class identifier, being a declared action-class group, whereby the disclosing agent discloses that it withholds within a group without disclosing which member of the group occasioned the write.

Adjacent Categories, and the Structural Differences

Several established bodies of technique sit near this mechanism and separate from it on structure.

Selective-disclosure credentials and predicate proofs establish an attribute while withholding the underlying data. The object presented here is of a different kind: not an attribute of the followed agent, but an enumeration of entries of that agent's own lineage field tested against a named conduct evaluation artifact (116), received by a counterparty whose check is expressly of form and of retrievability and not of merits. The coarsening is a declared property of the presentation, recorded in the deference record (900), rather than a property of a proof system.

Transparency logs and committed-log membership proofs are closer on the commitment. The filing does carry one, comprising a lineage-extent value and a lineage accumulator root bound into the successor hash field. What the filed paragraph adds is

that the unit of the enumeration is itself declared, that the declared segment identifiers become the object the verification runs against, and that the granularity applied is written into the record the counterparty later counter-signs.

Audit-log redaction and field-level access control coarsen or suppress record content for confidentiality, but the coarsened record in such systems is generally not the operand of an authority-conferring predicate. In the filing, the deference record (900) satisfies or fails to satisfy the dispatch-authority predicate, and the counter-signature giving it effect decrements the followed agent's own authorization budget (404).

Reputation, rating, and endorsement systems sit outside the mechanism by express recital: no rating, weight, score, endorsement, vouch, or standing quantity of the followed agent is retrieved, admitted, or consumed in computing the corrector-class enumeration (904).

Capability attenuation and delegation frameworks place the cost upon the relying party and protect the party relied upon, an attenuation upon delegation narrowing only the capability passed downward. The filing states that a design that attenuates only downward, or that treats adoption as costless to the adopted, teaches away from the arrangement disclosed.

These are categories of technique, described for structural comparison. Nothing above characterizes any particular product, service, or implementation, and nothing above is an assertion about any party's conduct.

Disclosure Scope

The mechanism described in this article, coarse lineage-segment granularity for the tested-entry enumeration, is disclosed in U.S. Provisional Application No. 64/117,812, Section 10.7, at paragraph [0445]. The baseline structure it modifies is disclosed in Section 9.3 of the same application at paragraphs [0301] through [0303], being the

followed determination record, the lineage commitment, and the three ordered conjuncts of the retrievability-form verification. Supporting structure is disclosed at Section 9, paragraph [0297]; Section 9.1, paragraphs [0298] and [0299]; Section 9.2, paragraph [0300]; Section 9.4, paragraphs [0304] through [0306]; Section 9.5, paragraphs [0307] and [0308]; Section 9.8, paragraphs [0314] through [0319]; Section 10.7, paragraphs [0434] through [0436]; and Section 10.8, paragraph [0465].

Every mechanism name, structural element, and reference numeral above is drawn from that application. Statements presented as embodiments are recited there as embodiments and are not limitations. No numeric value, threshold, bound, or interval appears above beyond those the application itself declares, and where it declares a parameter without fixing a value, this article says so rather than supplying one. This article is published as a technical disclosure establishing public, timestamped documentation of the mechanism.

Deference and Earned Exposure ([/earn](#) [All 49 steps → \(/inventive-steps\)](#) [ed-exposure](#))

Standing earned through recorded conduct; deference that survives across agents.

Provisional application

PRIMARY TECHNICAL DISCLOSURE

- [Earned Exposure and Deference Records: Standing Built From Recorded Conduct \(/articles/earned-exposure/earned-exposure-and-deference-records\)](#)

SECONDARY TECHNICAL

- [The Valuation-Free Ordinal Standing Quantity \(/articles/earned-exposure/valuation-free-ordinal-standing\)](#)
- [Determination-Invariance Under an Agent's Own Policy Succession \(/articles/earned-exposure/determination-invariance-policy-succession\)](#)

- [Elective Exposure Enrollment Without Deference \(/articles/earned-exposure/elective-exposure-without-deference\)](/articles/earned-exposure/elective-exposure-without-deference).
- [Interventional Attribution by Receipt-Path Control \(/articles/earned-exposure/interventional-attribution-receipt-path\)](/articles/earned-exposure/interventional-attribution-receipt-path).
- [The Portable Exoneration Record \(/articles/earned-exposure/portable-exoneration-record\)](/articles/earned-exposure/portable-exoneration-record)
- [Attribution, Exoneration, and the Domain Baseline: An Ordered Branch Over the Latency Differential \(/articles/earned-exposure/attribution-versus-exoneration-branch-domain-baseline\)](/articles/earned-exposure/attribution-versus-exoneration-branch-domain-baseline).
- [Bounded Count of Dispatches Per Deference Record: Capping How Many Executions One Counter-Signed Adopted Determination Authorizes \(/articles/earned-exposure/bounded-count-dispatches-deference-record\)](/articles/earned-exposure/bounded-count-dispatches-deference-record).
- **[Coarse Lineage-Segment Granularity: Verifying a Tested-Entry Enumeration Without Disclosing Which Lineage Entries Were Tested \(/articles/earned-exposure/coarse-lineage-segment-granularity-tested-entry\)](/articles/earned-exposure/coarse-lineage-segment-granularity-tested-entry)**
- [Correction-Exposure Decay: An Authorization Quantity That Depletes With Agent Operation and Renews Only on Recorded External Evaluation \(/articles/earned-exposure/correction-exposure-decay-authorization-quantity\)](/articles/earned-exposure/correction-exposure-decay-authorization-quantity).
- [Cause-Keyed Gate Restoration: A Distinct Return Path for Decay-Induced Withholding of Agent Authorization \(/articles/earned-exposure/distinct-return-path-decay-induced-withholding\)](/articles/earned-exposure/distinct-return-path-decay-induced-withholding).
- [Edge Severance Events and the Three-Valued Survival State: Resolving Whether a Counterparty Relationship Outlived a Payment-Class or Obligation-Class Termination \(/articles/earned-exposure/edge-severance-events-three-valued-survival\)](/articles/earned-exposure/edge-severance-events-three-valued-survival).
- [Emitting the Deference Correction Linkage Record to the Followed Agent: Reporting a Downstream Correction Without Producing a Rating \(/articles/earned-exposure/emission-deference-correction-linkage-record-followed\)](/articles/earned-exposure/emission-deference-correction-linkage-record-followed).
- [The No-Address Omission Branch: What a Deferring Agent Records When an Exposure Dispatch Reaches Nobody \(/articles/earned-exposure/exposure-dispatch-no-address-omission-branch\)](/articles/earned-exposure/exposure-dispatch-no-address-omission-branch).
- [Channel-Baseline Normalization: Taking Channel Overhead Out of the Latency Differential \(/articles/earned-exposure/latency-differential-channel-baseline-normalization\)](/articles/earned-exposure/latency-differential-channel-baseline-normalization).
- [Reason-Type Resolution From Severance-Survival States: Typing an Agent's Relationship Edges Without Asking the Counterparty \(/articles/earned-exposure/reason-type-resolution-survival-states\)](/articles/earned-exposure/reason-type-resolution-survival-states).
- [Reason-Type Retyping by a Superseding-Type Entry: Recomputing an Edge's Reason-Type on Later Severance Evidence Without Disturbing Modifications Already Applied \(/articles/earned-exposure/reason-type-retyping-superseding-type-entry\)](/articles/earned-exposure/reason-type-retyping-superseding-type-entry).
- [Renewal-Side Replenishment of the Authorization Budget: Restoring an Agent's Metered Spending Capacity Only on Exposure to an Uncounted Origin-Equivalence Class \(/articles/earned-exposure/renewal-side-replenishment-authorization-budget\)](/articles/earned-exposure/renewal-side-replenishment-authorization-budget).

- [Following Does Not Count as Being Tested: Retention of the Short Decay Constant When an Agent Defers, and the Action Class That Stays Untested \(/articles/earned-exposure/retention-short-decay-constant-deference-class\)](/articles/earned-exposure/retention-short-decay-constant-deference-class).
- [Standing-Determination Designation: Substituting a Verified Counterparty Determination for One Conjunct of the Dispatch-Authority Predicate \(/articles/earned-exposure/standing-determination-designation-substitution-inside-dispatch\)](/articles/earned-exposure/standing-determination-designation-substitution-inside-dispatch).
- [Uncounted-Class Renewal: Gating Agent Authorization on a Windowed Register of Origin-Equivalence Classes \(/articles/earned-exposure/uncounted-class-renewal-gated-windowed-register\)](/articles/earned-exposure/uncounted-class-renewal-gated-windowed-register).

APPLICATIONS · GENERAL

- [Vendor Qualification Without Ratings: Standing Earned From Recorded Conduct \(/articles/earned-exposure/vendor-qualification-without-ratings\)](/articles/earned-exposure/vendor-qualification-without-ratings).
- [Credentialing Autonomous Practitioners: Deference That Survives Across Agents \(/articles/earned-exposure/professional-credentialing-agents\)](/articles/earned-exposure/professional-credentialing-agents).

APPLICATIONS · SPECIFIC

- [Marketplace Seller Reputation Systems: Presented Scores Versus Earned Admissibility \(/articles/earned-exposure/marketplace-seller-reputation\)](/articles/earned-exposure/marketplace-seller-reputation).

TERMINOLOGY

- [counterparty identity record \(/glossary#counterparty-identity-record\)](/glossary#counterparty-identity-record).
- [deference record \(/glossary#deference-record\)](/glossary#deference-record).
- [edge \(/glossary#edge\)](/glossary#edge).
- [reason-type \(/glossary#reason-type\)](/glossary#reason-type).
- [severance event \(/glossary#severance-event\)](/glossary#severance-event).
- [standing quantity \(/glossary#standing-quantity\)](/glossary#standing-quantity).
- [untested class \(/glossary#untested-class\)](/glossary#untested-class).

[Deference and Earned Exposure overview → \(/earned-exposure\)](/earned-exposure).