

Renewal-Side Replenishment of the Authorization Budget: Restoring an Agent's Metered Spending Capacity Only on Exposure to an Uncounted Origin-Equivalence Class

An agent that pays a metered cost each time it asserts against a counterparty of a class not already counted in the current window, and again when it issues a costly acknowledgment artifact, runs its authorization budget down toward a declared floor. Renewal-side replenishment of the authorization budget, disclosed in U.S.

Provisional Application No. 64/117,812, supplies the only path back up. Responsive to a renewal by an origin-equivalence class absent from the agent's windowed register, and by the same procedure that renews the local authorization quantity, the authorization budget is replenished by an amount drawn from a declared replenishment schedule and bounded above by a declared ceiling, with any excess discarded rather than carried forward. Elapsed time, expiry of a metering window, further issuance, an execution, and a self-assessment replenish nothing. The two quantities stay distinct: one per action class and scope partition, the other per agent across the action space.

Metering Creates a Balance That Something Must Restore

In the filed architecture the authorization budget (404) is held per semantic agent (100) across the action space, and several procedures move it downward. Issuing a conduct evaluation artifact (116) decrements it by the amount in the decrement schedule, applied upon an increment of the issuance accumulator. Issuing a costly acknowledgment artifact in the provisional granting state decrements it by a declared amount drawn from that same budget, no quantity being reserved for acknowledgment. Counter-signing a deference record (900) decrements the followed agent's budget. No such decrement turns on merit: paragraph [0130] applies the issuance decrement upon the increment rather than upon the merit of the artifact, and Section 9 applies the counter-signature decrement without regard to the merits.

Downward movement alone reaches a terminus the filing illustrates. At Section 4.6 a signed policy object (112) declares a decrement of one unit per increment and a budget of forty units. An agent reaching sixty receiving parties in sixty distinct origin-equivalence classes (200) within one window exhausts the budget at the fortieth increment, the authorization gate (300) is written to the withheld state (310) under the sixth step of Section 4.2, and the remaining twenty issuances carry no valid attestation and are not admitted.

One procedure moves the budget upward. Section 4.5 opens by reciting that the budget is replenished by the procedure of that section and by no other, and paragraph [0345] of Section 10.1 fixes the triggering event: a renewal by an origin-equivalence class (200) the agent has not counted.

Replenishment Rides the Same Renewal Event

Two quantities are in play, and paragraph [0121] distinguishes them expressly. The authorization quantity is a scalar per action class and per scope partition, declared in the signed policy object (112) and, under paragraph [0343], initialized from it. The

authorization budget (404) sits per semantic agent (100) across the action space, decremented upon issuance and replenished under Section 4.5. Neither is computed from the other, neither is expressed in the units of the other, and no conversion between them is computed.

Take the renewal side first. Paragraph [0344] has the agent maintain, per action class and per scope partition, a register of identifiers of origin-equivalence classes (200) from which an admissible conduct evaluation artifact (116) implicating that action class has been received within a declared window, each entry expiring on window elapse. On receiving an admissible artifact the agent computes the asserting party's (118) class and consults that register. Present in the register, the class occasions no renewal. Absent from it, the authorization quantity is renewed to a declared value, an entry is written, and the renewal is appended to the append-only lineage field (104) before and independently of the determination produced.

Paragraph [0345] attaches the budget to that same event. Responsive to a renewal by an uncounted origin-equivalence class (200), and by the same procedure, the authorization budget (404) is replenished by an amount from a declared replenishment schedule, which Section 4.5 names the budget replenishment schedule (406) and retrieves from the signed policy object (112) in force. Four items go to the lineage field (104) on each replenishment: the replenished value, the amount applied, the class upon which it was applied, and the identifier of that policy object. Each replenishment is thereby auditable against the policy that supplied its amount.

The upper bound is a clamp that carries nothing forward. Where the sum of the budget and the scheduled amount exceeds an authorization budget ceiling (408) declared in that policy object, the budget is set to the ceiling, and the excess is discarded, is not carried forward, and is applied to no later replenishment. Paragraph [0143] also requires the ceiling to be not less than the value to which the budget is initialized, so that replenishment restores a decremented budget and confers none exceeding the value the principal declared.

Three relations govern the scheduled amount under paragraph [0144]. It exceeds zero. It falls below the authorization budget ceiling (408). And it falls below the amount by which the budget is decremented per increment under Section 4.2, whereby an agent is incapable of financing a volume of issuance by the receipts its own issuance provokes.

Exclusivity arrives with its own exclusion list. Paragraph [0145] names what does not replenish the budget: an artifact from a class already present in the replenishment register (402), elapsed time, expiry of a metering window, issuance of further conduct evaluation artifacts (116), an execution performed by the agent, and an assessment the agent performs upon itself. Window expiry does reset the issuance accumulator and remove every entry of the per-recipient-class register, but under paragraph [0116] it restores no value of the budget.

Replenishment is valence independent. An artifact resolved to the accepted determination (122), the rejected determination (124), the not-determinable determination (126), or the not-applicable determination (128) replenishes the budget by one and the same amount, the replenishment turning upon exposure to an uncounted origin-equivalence class (200) and upon nothing further.

The return path out of the withheld state is conditioned and narrow. Where the authorization gate (300) stands withheld (310) **by reason of** the budget having satisfied the floor of Section 4.1, and this replenishment raises the budget above that floor, the gate returns to the granting state for the action classes enumerated upon that write and for no other, the agent exits the non-executing cognitive mode (302) as to those classes, and the return and the replenished budget relied upon are appended to the lineage field (104). No principal-resolution object and no acceptance determination is required, and nothing adverse to the party whose artifact occasioned the replenishment is appended by reason of the return. Where the gate stands withheld by any procedure other than the write of the sixth step of Section 4.2, this replenishment returns it by no procedure. Paragraph [0346] states the companion rule on the quantity side.

Manufactured identities are addressed in a further embodiment. Under paragraph [0347], the amount by which a renewal raises the authorization quantity and the amount by which it replenishes the budget are each a monotonically non-decreasing function of the count of recorded severance events across the constituent edges of the renewing origin-equivalence class (200), a class each of whose edges resolves not-typeable renewing at a declared least amount. A principal standing up fresh identities that classify into classes bearing no recorded severance event renews its own agent's authorization at that least amount and does not restore full authorization.

Which Values the Filing Fixes, and Which It Leaves to Policy

Nearly every quantity here is declared in the signed policy object (112) and carries no numeric value in the filing. What is fixed are relations, not magnitudes.

- **Budget replenishment schedule (406) amount.** Policy-declared, no value stated; bounded only by the three relations of paragraph [0144] set out above.
- **Authorization budget ceiling (408).** Policy-declared, no value stated; not less than the value to which the budget is initialized.
- **Budget floor field.** Policy-declared, no value stated. Its satisfaction triggers the withheld-state write of the sixth step of Section 4.2.
- **Register windows.** Policy-declared. Paragraph [0337] supplies their structural lower bound: the recorded inter-arrival estimator, computed by the agent over its own lineage field (104) as a declared measure of central tendency of intervals between successive entries of a named kind, each interval counted in successor epochs. Windows are thereby bound to the agent's recorded arrival rate rather than to a wall-clock constant.
- **Decrement schedule.** Policy-declared, specifying an amount greater than zero per increment of the issuance accumulator.
- **Metering window.** Expressed as a count of successor epochs of the issuing agent's dynamic agent hash chain, declared in the signed policy object (112).

The filing's only numeric illustration sits on the decrement side. Section 4.6 adds a counterfactual to the forty-unit case above: had those sixty parties fallen into three origin-equivalence classes (200), the issuance accumulator would have reached three and the budget would have dropped by three units. Nothing comparable is stated for the replenishment schedule or the ceiling, and none should be inferred.

How the Mechanism Composes with the Rest of the Filing

Section 4 supplies the substrate. Assertion-cost symmetry prices both directions in which a semantic agent (100) writes into another party's governance state, from one quantity held by the party taking the action, so the asserting and evaluated roles are governed by that one authorization budget (404). Rehearsal is free where issuance is not: under paragraph [0342] the agent speculatively evaluates candidate acknowledgment artifacts in the non-executing cognitive mode (302) without committing a state change and without decrementing the budget, and only the candidate selected and issued bears the cost.

Section 10.1 supplies the trigger, being the uncounted-class renewal gated by a windowed register. Correction-exposure decay, and the untested-class decay of Section 10.2 that sets the depletion rate as an inverse function of complied corrective encounters, govern how often an agent needs that trigger to fire on the quantity side.

Deference and earned exposure, at Section 9, is where the composition is most pointed. A deference record (900) transmitted for counter-signature decrements the followed agent's own budget, and the deferring agent thereupon enrolls into its own replenishment register (402) the origin-equivalence classes (200) recorded as having corrected the followed agent and to whose corrections that agent thereafter conformed. When a correction later arrives from such a class absent from that register for the declared window, an entry is written and the deferring agent's budget is replenished

under Section 4.5, without regard to whether the artifact was well founded. Where the origin-disjointness test places both agents in a common class, the attempted deference decrements nothing and enrolls nothing.

Where Restoration by Elapse and Restoration by Authority Differ Structurally

Architectures that return an allowance as an interval runs out relate it to a clock. The filing forecloses the relation twice: paragraph [0145] excludes elapsed time and metering-window expiry, and paragraph [0133] records that the epoch identifier by which metering advances is not a wall-clock timestamp and is not drawn from a clock available to the execution node hosting the agent.

Reputation and trust systems, as the filed background records them, locate the score at a registry, a scoring authority, or a shared ledger, and the scored entity neither holds it nor participates in its computation. The unfair-rating defenses surveyed there are exercised by a disinterested aggregator rather than by the rated entity, and filtering imposes no cost on the filtering party. The quantity here is held by the acting party, spent by that party's own assertions and counter-signatures, and increased only on an event it cannot originate.

Two classes of cited system, behavioral integrity and probationary architectures, restore capability on conditions the filed background characterizes as treating clean, uneventful operation as positive evidence: restoration after sustained standing, being an interval of operation without incident, and restoration upon a ledger-recorded reconciliation unconditioned on the participation of any party recorded as harmed. Those are prior-art citations, not appraisals of conduct. Under the filed procedure an interval without incident replenishes nothing.

Capability attenuation schemes, exemplified in the background by macaroons, run along the forward path of a delegation, each holder able to attenuate but not expand what was delegated. External revocation systems terminate an agent's ability to act by an act of a controlling authority and offer no path by which a harmed party participates in restoration. Here an expansion path does exist, it is singular, and what exercises it is a counterparty receipt rather than a control-plane grant.

Accountability mechanisms that penalize unfounded assertion, including the notice-suspension and frivolous-dispute provisions surveyed in that background, attach the consequence only after a merits determination performed by an institution other than the penalized party. Replenishment here is applied before and independently of the determination produced, and by one amount across all four. Each comparison above draws on the structure the filed background records for these classes of system and states a difference in architecture, not an assessment of any product.

Disclosure Scope

This article describes renewal-side replenishment of the authorization budget as disclosed in U.S. Provisional Application No. 64/117,812, at Section 10.1, paragraph [0345], with its supporting structure at Section 4.5 and the express distinction between the two quantities at Section 4.1. The uncounted-class renewal that triggers it is recited at paragraph [0344], the distinct return path for decay-induced withholding at [0346], and the severance-conditioned renewal amount at [0347]. Reference numerals follow the filed specification.

Every parameter identified above as policy-declared is declared in the signed policy object (112) and carries no numeric value in the filed specification. Where the filing conditions an outcome on a declared bound, that condition is stated here and should not be read away: the gate return applies only where the withholding was written by the budget floor under the sixth step of Section 4.2, and only where replenishment raises the budget above that floor. Material appearing solely in unfiled working drafts is

excluded, as is any numeric trace beyond the illustration of Section 4.6. The article is published as a technical disclosure establishing public, timestamped description of the mechanism as filed.

Deference and Earned Exposure (</earned-exposure>) [All 49 steps → \(/inventive-steps\)](#)

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 \(/articles/earned-exposure/earned-exposure-and-deference-records\)](/articles/earned-exposure/earned-exposure-and-deference-records).

SECONDARY TECHNICAL

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

TERMINOLOGY

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

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