

The Co-Signed Mutual Admission Compact: Two Agents Binding Each Other

A persistent semantic agent is answerable for the values carried by a policy object its own principal signed, tested within the scope that object draws. The co-signed mutual admission compact, disclosed in U.S. Provisional Application No. 64/117,812, is the filing's structure for two semantic agents to enlarge that surface for each other without a platform, a registry, or any third party taking part. Each party appends one record, co-signed by both, to its own append-only lineage field. The record enumerates reciprocal value-scope tuples, declared relation types for origin-equivalence class derivation, and a compact validity window. On admission, each party's admission evaluator applies the reciprocal tuples when resolving conduct descriptors of artifacts received from the other, resolved as of the artifact's recorded assertion time. A union rule makes the record incapable of subtracting, and narrowing under a pending assertion is scored against the narrowing party alone.

1. The Gap

In U.S. Provisional Application No. 64/117,812, what a persistent semantic agent can be held to is fixed by an object it did not write. The signed policy object (112) is authored by the principal to which the semantic agent (100) is bound, carries the declared value set, and is modified only by admission of a successor.

When a conduct evaluation artifact (116) arrives, the admission evaluator (120) extracts a conduct descriptor and applies a three-part membership test against the value-scope tuple of each declared value: the action class in the tuple's set of action-class identifiers, the scope partition in its set of scope-partition identifiers, and the affected-party class mapping to its empathy-scope designation. A value is implicated only where all three hold, and where none is implicated the evaluator produces the not-applicable determination (128) at no cost.

Two counterparties who want each to be answerable to the other across tuples wider than their own policy objects draw need somewhere to put that arrangement, and the filing's background surveys the usual destinations. Reputation and trust systems locate the score at a registry, a scoring authority, or a shared ledger, the scored entity neither holding it nor participating in its computation. Bilateral settlement and value-exchange mechanisms require at least one of a third-party intermediary or escrow agent, a centralized consensus or ordering authority, and pre-negotiated session or channel state.

Section 10.9 answers with a single object: one record co-signed by both parties, which the disclosure expressly states is not a pair of unilateral declarations.

2. Mechanism

Formation. Two semantic agents (100) form a mutual admission compact by appending, each to its own append-only lineage field (104), a single co-signed record bearing a signature verifiable against an identity primitive of each party. No platform, registry, or third party participates in its formation, its retention, or its application.

What the record carries. The record enumerates three things conjunctively. First, a set of reciprocal value-scope tuples, each naming an empathy-scope designation, a set of action-class identifiers, and a set of scope-partition identifiers, the three components the membership test already consumes. Second, a set of declared relation types

applicable between the parties for origin-equivalence class (200) derivation; elsewhere in the filing that enumeration is retrieved from the signed policy object (112) in force, with shared dispatch lineage (202), co-signature (204), and common introduction path (206) each independently sufficient for assignment. Third, a compact validity window.

Application and temporal binding. Upon admission, the admission evaluator (120) of each party applies the reciprocal tuples in resolving conduct descriptors of conduct evaluation artifacts (116) received from the other party. The compact is resolved as of the recorded assertion time of the artifact, and one admitted after that time is not applied to that artifact. The retroactive narrowing bar fixes the signed policy object (112) at the same instant.

Succession and anti-rollback. The record carries a canonical alias constituted from the identity primitives of the two co-signing parties together with a successor index, whereby it is resolvable in the same manner as a signed policy object (112). Each party maintains in its memory field (102) a monotonically non-decreasing floor over the successor indices admitted under that alias, separately from the floor over the alias of that party's own policy reference field (110). A successor compact record bears an index above the record it succeeds and is admitted only where that index is at or above the floor; a presented predecessor is rejected, so a compact superseded before a recorded assertion time is not reinstated. The validity window bounds authority in time, and a co-signed dissolution record appended by both parties revokes the compact.

The union rule. Where a reciprocal tuple of the compact record in force and a value-scope tuple of a party's own signed policy object (112) in force each cover the conduct descriptor of an artifact received from the other party, and the two disagree upon the empathy-scope designation, upon the set of action-class identifiers, or upon the set of scope-partition identifiers, the union of the two tuples is applied. A declared value is implicated where the value-scope test is satisfied against either tuple.

A compact record is therefore incapable of subtracting. It cannot remove a value from a party's declared value set, nor shrink the tuple of a value carried by that party's own signed policy object (112), so a party forming a compact does not thereby reduce the set of conduct descriptors against which assertions directed at it are adjudicated.

Deflection scoring against a narrowing party. Where one party admits a successor to its signed policy object (112), or a successor compact record, that excludes a reciprocal tuple enumerated by the compact record in force, and the admission occurs within a declared window following the recorded assertion time of a pending conduct evaluation artifact (116) implicating the excluded tuple, the exclusion is scored as a deflection event against the narrowing party alone and increments that party's refusal counter (304).

Two negative properties travel with that scoring. Neither party performs any determination of whether the exclusion was well founded, matching the merit independence recited for the refusal counter generally. And the narrowing party's capacity to admit successor policy objects and successor compact records is not disabled. The non-narrowing party is unaffected, and dissolution outside the declared window, or by a co-signed dissolution record, is scored against neither party.

Lapse during pendency. Where the validity window lapses inside that same declared window and no successor enumerating the implicated tuple is admitted, the lapse is scored as an exclusion of that tuple and increments the refusal counter (304) of the party that declined to admit a successor. Where neither party admitted one, and where the lapse falls outside the declared window, it is scored against neither. The pending artifact is still resolved against the compact record in force at its recorded assertion time, so letting a compact lapse during pendency neither removes the ground of the assertion nor escapes the deflection scoring.

Bounded compact depth. The record enumerates a bounded compact depth, whereby a party does not extend the reciprocal tuples to a third party by delegation. A delegation record specifying a forward capability mask is incapable of conveying a tuple enumerated by a compact record to a delegate that is not a signatory, so the reciprocal terms bind the two co-signing parties alone even where a third party holds a delegation from a signatory.

3. Operating Parameters

The filing declares the quantities below and recites no numeric value for any of them.

- **Compact validity window.** Carried by the record, bounding its authority in time, and the object of the lapse rule.
- **Successor index and anti-rollback floor over the compact alias.** Held in each party's memory field (102), separately from the floor over that party's own policy reference field (110).
- **The declared window following a recorded assertion time.** The interval within which an excluding successor is scored as a deflection event and a lapse is scored as an exclusion.
- **Bounded compact depth.** The enumerated bound barring extension of the reciprocal tuples to a non-signatory.
- **The reciprocal tuples.** Each names one empathy-scope designation, selected from a personal, an interpersonal, and a global scope, with sets of action-class and scope-partition identifiers.
- **The enumeration of declared relation types** applicable between the parties for origin-equivalence class (200) derivation.

A deflection increment lands in the narrowing party's refusal counter (304) and is thereafter governed by that counter's recited structure: its rate and run accumulators, and the rate and run thresholds retrieved from the signed policy object (112) in force.

4. Composition

Section 10.9 reuses machinery declared earlier in the filing. The compact is resolvable in the same manner as a signed policy object (112), which the filing identifies by an ordered procedure: alias resolution to candidates, retention of a candidate whose validity window encloses the relevant time, discard of a candidate recorded as revoked, and application of the anti-rollback floor. The compact is a second object of that kind, with its own alias and its own floor.

The reciprocal tuples compose with value-scope resolution, which supplies the three-part test and the not-applicable determination (128). Deflection scoring composes with the prospective narrowing bar, under which a successor policy object excluding a declared value, or dropping an action-class, scope-partition, or empathy-scope element from a corresponding tuple, is scored as a deflection event where its admission follows an as-yet-undetermined artifact implicating that value or element, and without adjudicating whether the contraction was well founded. A successor that adds a value or element is scored as no deflection. The relation type enumeration composes back into origin-equivalence normalization, by which an agent assigns asserting parties (118) to classes upon its own records, without a centralized registry, a directory query, or a consensus procedure.

Set the compact beside the unilateral arrangement disclosed elsewhere in the filing, where an adopting agent appends an adoption record admitting a subset of an authoring agent's value-scope tuples into its own declared value set under adopted-value aliases and raises its own anti-rollback floor for each. Abandonment within a declared adoption window of a pending artifact is scored there on the adopting agent's refusal counter (304) alone. Under a compact, one record is co-signed and both parties append it.

5. Prior-Art Distinction

The distinctions below are structural, describing categories of system rather than any named party. Nothing here characterizes any product or provider as infringing.

Reputation and trust systems. These compute a score for an entity from ratings or observations supplied by others and expose it to parties deciding whether to transact, the score sitting at a registry, a scoring authority, or a shared ledger while the scored entity neither holds it nor participates in its computation. A compact locates nothing outside the two parties: the record sits in each party's own append-only lineage field (104) and is applied by each party's own admission evaluator (120). Its recited effect is not a score but the union of tuples applied to conduct descriptors received from the other party.

Bilateral settlement, escrow, and channel mechanisms. Escrow interposes a trusted third party holding the subject of the exchange. Atomic swaps and hashed timelock contracts require each leg committed to a ledger ordered by a consensus authority. Two-phase commit coordinates through a coordinator or quorum. Payment-channel settlement runs against a channel opened by pre-negotiated session state. A compact requires none of the three, and its recited effect differs in kind: it transfers no value and finalizes no exchange, and what it changes is which conduct descriptors each party's evaluator adjudicates.

Mechanisms that locate the verdict elsewhere. Arrangements penalizing a party for unfounded assertions condition the penalty on a prior determination of unfoundedness performed by an institution other than the penalized party. Where misbehavior is proved from tamper-evident logs, the verdict is held by auditors, witness nodes collecting evidence and third parties verifying the proof; remote attestation likewise places appraisal in a verifier and the grant of authority in a relying party. Deflection scoring on a compact runs without either party determining whether the

exclusion was well founded, each party's own admission evaluator (120) resolves upon that party's own records, and the increment lands on the narrowing party's refusal counter (304).

Capability attenuation schemes. Macaroon-style schemes confine a delegate by appending caveats along the forward path of a delegation, each holder able to attenuate but not to expand the capability. Bounded compact depth constrains a different axis: rather than graduating what a delegate may do, it recites that a forward capability mask cannot convey a compact tuple to a non-signatory at all.

6. Disclosure Scope

The co-signed mutual admission compact is disclosed in U.S. Provisional Application No. 64/117,812, "Governed Social Conduct of Persistent Semantic Agents Through Record-Grounded Admission of External Conduct Evaluations and Self-Limiting Refusal," at Section 10.9, paragraph [0469], with succession and anti-rollback at [0470], the union rule at [0471], deflection scoring against a narrowing party at [0472], lapse scoring during pendency at [0473], and bounded compact depth at [0474]. Supporting structure appears at Section 1.3 for the signed policy object and its resolution, Section 2 for origin-equivalence class (200) derivation and declared relation types, Section 3 for the refusal counter (304) and merit independence, and Section 10.1 for value-scope resolution and the narrowing bars.

What is disclosed is the structure set out above and no more: the co-signed record and its conjunctive enumeration, its resolution by canonical alias under a separately maintained anti-rollback floor, its application as of the recorded assertion time, the union rule, merit-independent deflection and lapse scoring, and bounded compact depth.

What is disclaimed is any implication that the parameters take particular values. The validity window, the declared window, the successor indices, the compact depth, the tuple contents, and the relation types are recited without numeric value. Nothing here is an admission that any described subject matter is prior art with respect to any claim presented in that application or any application claiming benefit of it. This article is a technical disclosure for public reference, is not a complete account of the filing, is not legal advice, and creates no attorney-client relationship.

Record-Grounded Conduct Admission (</conduct-admission>)

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

Conduct judged against the agent's own record, not an outside authority.

Provisional application

PRIMARY TECHNICAL DISCLOSURE

- [Record-Grounded Conduct Admission: Governing How an Agent Answers an Accusation \(/articles/conduct-admission/record-grounded-conduct-admission\)](/articles/conduct-admission/record-grounded-conduct-admission)

SECONDARY TECHNICAL

- [Value-Scope Resolution: Testing Whether a Declared Value Is Even Implicated \(/articles/conduct-admission/value-scope-resolution\)](/articles/conduct-admission/value-scope-resolution)
- [The Retroactive Narrowing Bar: Why an Agent Cannot Edit Its Values After the Fact \(/articles/conduct-admission/retroactive-narrowing-bar\)](/articles/conduct-admission/retroactive-narrowing-bar)
- [The Delegator Floor: A Monotone Upward Ratchet on Delegated Authority \(/articles/conduct-admission/delegator-floor-ratchet\)](/articles/conduct-admission/delegator-floor-ratchet)
- [The Co-Signed Mutual Admission Compact: Two Agents Binding Each Other \(/articles/conduct-admission/co-signed-mutual-admission-compact\)](/articles/conduct-admission/co-signed-mutual-admission-compact)
- [The Inherited Governance Record: Fork- and Clone-Resistant Accountability \(/articles/conduct-admission/inherited-governance-record\)](/articles/conduct-admission/inherited-governance-record)

TERMINOLOGY

- [append-only lineage field \(/glossary#append-only-lineage-field\)](/glossary#append-only-lineage-field)
- [authorization gate \(/glossary#authorization-gate\)](/glossary#authorization-gate)
- [conduct evaluation artifact \(/glossary#conduct-evaluation-artifact\)](/glossary#conduct-evaluation-artifact)
- [principal \(/glossary#principal\)](/glossary#principal)
- [semantic agent \(/glossary#semantic-agent\)](/glossary#semantic-agent)
- [signed policy object \(/glossary#signed-policy-object\)](/glossary#signed-policy-object)

[Record-Grounded Conduct Admission overview → \(/conduct-admission\)](/conduct-admission)