

When Two Agents Must Close and No Clearer Exists

A fleet integration lead at a regional heavy-equipment rental firm has one recurring problem: her delivery agent and a contractor's site agent meet at a wind farm access road with no backhaul, complete a custody handoff, and produce nothing either side can later show. In her deployment the handoff is real in the world and absent from the record, and when the machine comes back damaged, the six minutes at the gate are the six minutes nobody can reconstruct. U.S.

Provisional Application No. 64/117,812 discloses a matched-pair settlement architecture in which two governed observations recognized within declared proximity windows are bound into a settlement record and appended to each party's own settlement lineage, without a third-party intermediary, without centralized consensus, and without pre-negotiated session state.

The six minutes at the gate

The fleet integration lead at a regional heavy-equipment rental company has a recurring Tuesday. At 6:40 in the morning, one of her delivery agents reaches a wind farm access road forty minutes past the last usable cell site. A contractor's site agent meets it there. The machine comes off the trailer, the site agent confirms the serial and the hour meter, and the delivery agent leaves. Six minutes, start to finish.

Nothing about those six minutes reaches her. In her setup, the delivery agent buffers a handoff event and posts it when the truck regains signal ninety minutes later, and the contractor's agent posts its own event into a system she has no read access to. The two records she ends up with are written by different parties, at different times, under different clocks, and neither one carries anything from the other. She has her side's assertion and their side's assertion, and no object that is a product of both.

Nine days later the machine comes back with a cracked boom cylinder, and the contractor's position is that it arrived that way. What she wants is not an argument. She wants the thing the two agents made together at 6:40 on Tuesday, and in her deployment there is no such thing to want. The moment closed and left no joint object behind.

What she cannot get back

The loss is specific. Her exposure to a repair claim is real, but the sharper loss is that the evidentiary moment was the handoff itself, and it is over. Her delivery agent has moved through two hundred subsequent events. The contractor's site agent is not obligated to her, was never enrolled with her, and has no reason to reconstruct anything nine days after the fact. The window in which a joint record could have been produced was six minutes wide and closed at 6:46 in the morning.

For her purposes this is the difference between a dispute and a write-off. A dispute she could actually run would need an artifact both sides signed. What she has instead is two unilateral logs, each of which reads as one party's own account of events. Her counsel tells her that, in her position, those read as testimony rather than as the record of a joint act.

She also loses something quieter. Were the handoff to have produced a joint artifact, she could have priced this contractor's route differently next quarter. Because it did not, the twelve hundred handoffs her fleet performed at disconnected sites this year are

a population she cannot audit. Each one individually is small. Collectively they are the part of her book she cannot see into, and she does not expect a system she installs next quarter to reach backward and populate them.

Why her configuration keeps landing here

Her instinct was to put something in the middle. She priced a clearing service both fleets would post to, and the pricing was not the obstacle. The obstacle was that at 6:40 on that access road there is nothing in the middle to reach. Whatever sits between the two agents in her architecture has to be present at the moment of the handoff, and the moment of the handoff is where her connectivity is not.

Her second instinct was to require enrollment. If every contractor's agent that her fleet might meet were provisioned into her system in advance, each pair would share a session and a key before the truck ever left the yard. She priced that too. Her fleet met eleven hundred distinct counterparty agents last year, across subcontractors she does not select and cannot see two weeks out. As this deployment is configured today, the set of parties her agents will meet is not knowable at provisioning time, so the precondition she would be relying on is the precondition she cannot satisfy.

The third shape is worse for her. Were she to run a consensus layer across her fleet, finality for the 6:40 handoff would attach when a quorum of her machines agreed it happened, which is to say later, elsewhere, and by parties who were not at the gate. Her contractor has no reason to accept a finality her own machines voted on, and she would not accept theirs.

What she is actually asking for is narrower than any of the three. She wants the two agents that were physically present, at that time, in that place, to leave behind something that a third reader can check without asking either of them. What is scarce for her is not trust and not bandwidth. It is that in her setup the pair itself was never treated as the thing that settles.

What the disclosed architecture does

U.S. Provisional Application No. 64/117,812 discloses, in an embodiment, a bilateral exchange settled through a matched pair (600) of governed observations, each bearing an authority credential, the pair recognized within one or more of a spatial proximity window and a temporal proximity window (602), and the settlement recorded by a settlement-lineage recorder without a third-party intermediary, without centralized consensus, and without pre-negotiated session state.

A governed observation in that disclosure is a signed structure carrying, in sequence, an authority credential field, a continuity hash field encoding identity continuity of the emitting party, a spatial reference field, a temporal reference field, a time-to-live field, a payload field, and an observation lineage field. Emission is complete upon emission: the emitting party requires no acknowledgment, no handshake, no delivery confirmation, and no registration with a central authority as a condition of emitting. An observation lacking a verifiable authority credential is not a governed observation within the meaning of that disclosure.

In an embodiment described in that filing, a matched pair (600) comprises a first governed observation (608) representing an offer, a tender, a claim, a demand, or a commitment, and a second governed observation (610) representing an acceptance, a counter-tender, an acknowledgment, a refusal, or a fulfillment, recognized as a pair by a pairing rule that requires spatial coincidence, temporal coincidence, or both as the governing policy object declares. The pair is bound into a settlement record (604) comprising the two signed observations, a cryptographic binding over both, and an attestation of the window within which the pair was recognized, whereby the settlement record supports non-repudiation and is verifiable by a downstream consumer from the record alone. Settlement occurs upon recognition and admission of the pair, and finality attaches at that moment.

In that disclosure, party identity for pairing is established by continuity rather than by enrollment. The continuity hash field carries a successor hash field, being the dynamic agent hash of the emitting party at emission and verified by an equality test, and a continuity vector field, being an ordered tuple of normalized projections of the emitting party's operational state. A trust-slope validator computes a trust-slope consistency measure from the continuity vector field and no other field, and a received observation is accepted on continuity where both a per-step distance ceiling and a declared acceptance threshold are satisfied. A party that has never encountered the counterparty may nonetheless form a pair.

Failure has its own shape in the disclosure rather than being an absence. A timeout detector identifies a first governed observation (608) that received no matching second observation within the temporal proximity window (602); a non-acceptance detector identifies an explicit rejection; a failed-fulfillment detector identifies a fulfillment that does not satisfy the declared completeness of the transaction type. A timeout resolves nothing against either party. An observation whose match has not arrived is an orphan observation held in a deferral queue under a declared deferral-expiration parameter, and deferred pairing completes where the second observation arrives while the orphan remains held, including where it was carried by store-and-forward across a disconnection, the settlement-lineage entry (606) recording the deferral interval.

Declining is itself an event in that architecture. A party that declines emits a refusal observation, which is paired with the offer it refuses, and emission of the refusal is metered by a refusal meter carried in that party's own memory field (102) against its own settlement-binding authorization. Responsive to the meter satisfying a bound declared in the governing policy object, that authorization is written from a granting state to a withheld state, its capacity to observe and to emit further refusals being preserved. The disclosure states that the meter is incremented by the emission of a refusal observation and by nothing else, so that initiating a dispute record, a timeout, a failed fulfillment, or a rejection for want of an intersecting scope partition increments no meter of either party.

Admission is graduated rather than binary there. In an embodiment, a settlement admissibility evaluator produces exactly one outcome from an admit, gate, defer, solicit, reject, or escalate outcome, driven by an evidential weight computed as a coefficient-weighted sum of an authority factor, a continuity factor, a freshness factor, and a corroboration factor, with the coefficients, thresholds, and floors declared in the governing policy object. Settlement content may be placed under an escrow custody record whose release condition is, in an embodiment, completion of the declared matched pair, with escrow depth bounded above by a declared escrow-depth bound.

Where this leaves her open questions

Several things she would want are governed elsewhere or not by this chapter at all. The governing policy object that would declare her proximity windows, her pairing rule form, her refusal increment and bound, her escrow-depth bound, and her admission threshold is a signed policy object within the meaning of a separate section of that filing, and the disclosure states that where the parties resolve different policy objects, each applies its own. The numbers she would run in her deployment are hers to set, and the chapter does not tell her what they should be for a wind farm access road.

The refusal determination semantics that would govern how her agent decides to decline are stated to be the same semantics that govern that party's other refusals under a separate section. The restoration procedure that a reparation exchange would perform as a matched pair, and the deviation quantity that a provisional marker refers to, are likewise the subject of other chapters of that filing.

Within the chapter itself, a few boundaries are explicit and matter to her. The refusal meter is applied without any determination of whether a refusal was well founded, and no adjudication of the merits is performed by the refusing party, the offering party, or any further party as a condition of the meter. A settled pair is subject to challenge through a credentialed dispute procedure routed to a resolution procedure that the governing policy object declares, which for her would still mean naming an arbitration

or review path in advance. And reliance bounding upon a provisional marker is applied without any determination of the merits of the underlying deviation, which is a narrowing of scope rather than a finding about a counterparty.

The disclosure also conditions rather than promises. Acceptance on continuity holds where both declared conditions are satisfied conjunctively. Admission issues at the admit outcome where evidential weight is not less than the declared admission threshold, and at the gate outcome, reduced by a declared gate reduction factor, where it is not. For her fleet, what the architecture offers at 6:40 on that access road is a joint object with a declared window attested inside it, produced by the two parties that were there. What it does not offer her is a way to stop caring what her policy object says.

Disclosure Scope

This article is a technical description of subject matter disclosed in U.S. Provisional Application No. 64/117,812. It describes embodiments and mechanism names as they appear in that filing. Nothing in this article characterizes the scope of any claim, and nothing in it is an admission regarding the state of the art.

Governed Matched-Pair Settlement

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

[\(/governed-settlement\)](#)

Two agents settle on matched signed observations, by continuity, with no clearer.

Provisional application

PRIMARY TECHNICAL DISCLOSURE

- [Matched-Pair Settlement Between Agents: Bilateral Closure Without a Clearer \(/articles/governed-settlement/matched-pair-settlement-without-a-clearer\)](#)

SECONDARY TECHNICAL

- [The Derived-Artifact Provenance Chain and Chain-Head Identifier \(/articles/governed-settlement/derived-artifact-provenance-chain\)](/articles/governed-settlement/derived-artifact-provenance-chain)
- [Provenance Withdrawal and the Provenance-Withdrawn Attribute \(/articles/governed-settlement/provenance-withdrawal\)](/articles/governed-settlement/provenance-withdrawal)
- [Matched-Pair-Gated Corpus Contribution \(/articles/governed-settlement/matched-pair-gated-corpus-contribution\)](/articles/governed-settlement/matched-pair-gated-corpus-contribution)
- [Partition-Scoped Escrow Release Gated on Intersection Non-Emptiness \(/articles/governed-settlement/partition-scoped-escrow-release\)](/articles/governed-settlement/partition-scoped-escrow-release)
- [The First-Encounter Settled Pair and Promotion to the Persistent Tier \(/articles/governed-settlement/first-encounter-settled-pair\)](/articles/governed-settlement/first-encounter-settled-pair)
- [Contribution Encumbrance on Severance or Quarantine: Governing Dispatch to Models Trained on a Severed Counterparty's Corpus Without Retraining or Deletion \(/articles/governed-settlement/contribution-encumbrance-severance-quarantine\)](/articles/governed-settlement/contribution-encumbrance-severance-quarantine)
- [Encumbrance Bounds That Bar Persistence Promotion and Onward Tool-Source Emission Once the Per-Endpoint Count Exceeds the Bound \(/articles/governed-settlement/encumbrance-bound-barring-promotion-onward-emission\)](/articles/governed-settlement/encumbrance-bound-barring-promotion-onward-emission)
- [Blinded Encumbrance Commitments: Carrying a Severed Contributor's Encumbrance Along With an Inference Endpoint Emitted to a Peer Agent \(/articles/governed-settlement/encumbrance-commitment-travelling-emitted-endpoint\)](/articles/governed-settlement/encumbrance-commitment-travelling-emitted-endpoint)
- [Release of a Contribution Encumbrance: Matched-Pair Re-Admission or a Substitution With an Empty Intersection \(/articles/governed-settlement/release-contribution-encumbrance\)](/articles/governed-settlement/release-contribution-encumbrance)
- [Registering Third-Party Reliance on a Settled Matched Pair: The Reliance Record and the Settled-Party Reliance Register \(/articles/governed-settlement/reliance-record-registered-settled-parties\)](/articles/governed-settlement/reliance-record-registered-settled-parties)
- [Conditioning a Settlement Reversal on a Reliance-Completeness Predicate Evaluated Over the Reverting Party's Own Reliance Register \(/articles/governed-settlement/reliance-completeness-predicate-conditioning-reversal\)](/articles/governed-settlement/reliance-completeness-predicate-conditioning-reversal)
- [The Relying Party's Reversal Mark: Barring a Reversed Settlement as a Determination Input and Re-Resolving the Determination That Consumed It \(/articles/governed-settlement/relying-party-reversal-mark-and-re-resolution\)](/articles/governed-settlement/relying-party-reversal-mark-and-re-resolution)
- [Transitive Reliance Records and the Reliance Chain: Registering Second-Order Dependency on a Settlement Without Any Party Enumerating the Whole Chain \(/articles/governed-settlement/transitive-reliance-record-reliance-chain\)](/articles/governed-settlement/transitive-reliance-record-reliance-chain)
- [Transitive Reversal Notices That Carry a Settlement Reversal One Hop at a Time Along a Reliance Chain No Party Enumerates \(/articles/governed-settlement/one-hop-propagation-reversal-along-reliance\)](/articles/governed-settlement/one-hop-propagation-reversal-along-reliance)

- [Contested Pairing in Matched-Pair Settlement: Withheld Recognition, a Distinct-Identity Claimant Count, and the Not-Determinable Resolution \(/articles/governed-settlement/contested-pairing-not-determinable-resolution\)](/articles/governed-settlement/contested-pairing-not-determinable-resolution).
- [Attributable Contest Resolution: Settling a Contested Offer by Re-Emitting a First Governed Observation That Names Exactly One Claimant \(/articles/governed-settlement/attributable-contest-resolution-named-re-emission\)](/articles/governed-settlement/attributable-contest-resolution-named-re-emission).
- [Local Outcome-Quality Records and Smoothed Endpoint Selection Preference for Governed Inference Dispatch \(/articles/governed-settlement/outcome-quality-record-endpoint-selection-preference\)](/articles/governed-settlement/outcome-quality-record-endpoint-selection-preference)

APPLICATIONS · GENERAL

- [B2B Agent Commerce: Bilateral Settlement Without a Clearing House \(/articles/governed-settlement/b2b-agent-commerce-settlement\)](/articles/governed-settlement/b2b-agent-commerce-settlement)
- [Supply Chain Handoffs: Settling a Transfer on Matched Observations \(/articles/governed-settlement/supply-chain-agent-handoffs\)](/articles/governed-settlement/supply-chain-agent-handoffs)
- [Carrier Roaming Settlement Without a Central Clearing House \(/articles/governed-settlement/carrier-roaming-settlement\)](/articles/governed-settlement/carrier-roaming-settlement)
- [When Two Agents Must Close and No Clearer Exists \(/articles/governed-settlement/governed-settlement-stakes\)](/articles/governed-settlement/governed-settlement-stakes)

APPLICATIONS · SPECIFIC

- [ISO 20022 and Settlement Messaging: Matched Pairs in Financial Infrastructure \(/articles/governed-settlement/iso-20022-settlement-messaging\)](/articles/governed-settlement/iso-20022-settlement-messaging).
- [Stripe Agent Toolkit: Agent Payments and the Settlement Layer \(/articles/governed-settlement/stripe-agent-toolkit\)](/articles/governed-settlement/stripe-agent-toolkit).
- [Visa Intelligent Commerce: Mandates, Trust, and Bilateral Settlement \(/articles/governed-settlement/visa-intelligent-commerce\)](/articles/governed-settlement/visa-intelligent-commerce).
- [Mastercard Agent Pay: Tokenized Agent Identity and Settlement \(/articles/governed-settlement/mastercard-agent-pay\)](/articles/governed-settlement/mastercard-agent-pay).
- [Coinbase x402: Machine-Native Payments and Governed Settlement \(/articles/governed-settlement/coinbase-x402\)](/articles/governed-settlement/coinbase-x402)
- [Skyfire: Agent Payment Rails and Counterparty Conduct Records \(/articles/governed-settlement/skyfire-payments\)](/articles/governed-settlement/skyfire-payments)

TERMINOLOGY

- [governed observation \(/glossary#governed-observation\)](/glossary#governed-observation)
- [matched pair \(/glossary#matched-pair\)](/glossary#matched-pair)

- [scope partition \(/glossary#scope-partition\)](/glossary#scope-partition).

[Governed Matched-Pair Settlement overview → \(/governed-settlement\)](/governed-settlement).