

Contested Pairing in Matched-Pair Settlement: Withheld Recognition, a Distinct-Identity Claimant Count, and the Not-Determinable Resolution

Contested pairing is the handling a semantic agent applies where two or more counterparties each answer one offer inside the same settlement window. Disclosed in U.S. Provisional Application No. 64/117,812, it addresses a condition that plain matched-pair settlement leaves open: which of several qualifying second observations pairs. Under the filed embodiment, no matched pair is recognized upon a first governed observation until its temporal proximity window has elapsed, each qualifying second observation being held pending and appended as received with its emitter's identity, epoch, and receipt time. On elapse a contested-pairing detector counts the distinct emitter identities held pending. Zero resolves as a timeout, one pairs and settles, and two or more identifies a contest, whereupon no observation of the plurality pairs, no settlement-lineage entry is written, no meter of any party is incremented, and the first observation resolves to a not-determinable outcome of the offering party's abstention class.

When two parties answer the same offer

Matched-pair settlement under the filing binds a first governed observation (608) from one party, representing an offer, a tender, a claim, a demand, or a commitment, to a second governed observation (610) from another, representing an acceptance, a counter-tender, an acknowledgment, a refusal, or a fulfillment. The two are recognized as a matched pair (600) by a pairing rule within one or more of a spatial proximity window and a temporal proximity window (602), the rule requiring spatial coincidence, temporal coincidence, or both as the governing policy object declares. Settlement occurs upon recognition and admission of the pair, and finality attaches at that moment, without a third-party intermediary, without centralized consensus, and without pre-negotiated session state.

Emission of a governed observation 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 emission. The spatial proximity window is defined by one or more of a signaling-range bound, a declared boundary, a radius from a point, a topology-node membership, and a scope-partition form satisfied by a non-empty intersection of the scope-partition identifiers the two observations declare where the parties operate without physical co-location.

The filing addresses the plural case in its own paragraph, and the neighboring cases are resolved elsewhere in Section 6. A timeout detector identifies a first observation receiving no matching second observation within the temporal proximity window (602), and a timeout resolves nothing against either party, neither the party whose observation went unanswered nor the party that did not answer incurring any adverse consequence. A non-acceptance detector identifies a second observation that explicitly rejects the pairing, and emission of that refusal observation is metered against the refusing party's own settlement-binding authorization.

The consequences of recognition are what the plural case has to reckon with. A settlement writes the settlement record (604), writes the settlement-lineage entry (606) into the append-only lineage field (104) of each party, writes the settled state into the counterparty identity record (114) each party holds of the other, releases any content held under an escrow custody record conditioned upon that pair, and effects the state transition the pair was formed to effect.

Recognition held back, then a count of distinct identities

In accordance with the filed embodiment, no matched pair (600) is recognized upon a first governed observation (608) until its temporal proximity window has elapsed. During the window, each second observation (610) satisfying the pairing rule is held pending and appended as received, carrying its emitter's identity, its epoch, and its receipt time.

On elapse a contested-pairing detector counts the distinct emitter identities held pending. The filing recites three cases over that count:

- **Zero** resolves as a timeout, taking the Section 6.5 handling that resolves nothing against either party.
- **One** pairs and settles.
- **Two or more** identifies a contest.

A plurality of observations bearing one identity counts as one claimant.

What a contest produces. On a contest no observation of the plurality pairs. No settlement-lineage entry is written. The first observation resolves to a not-determinable outcome (126) of the offering party's abstention class. Every second observation stands appended, no meter of any party is incremented, and the offering party appends a contested-offer record enumerating each claimant's identity, epoch, and receipt time. The settlement does not occur; the enumeration of who answered does.

The weight the not-determinable outcome carries. Not-determinable (126) is one member of the closed set of determination classes recited in Section 1.8, alongside the accepted determination (122), the rejected determination (124), and the not-applicable determination (128), from which exactly one determination is selected and outside which no determination is produced. Section 5.4 attaches a conversion bar (502) that forecloses a consuming determination from converting an abstention outcome into a scalar value, into a default value, into an operand of a threshold comparison (510), or into a consequence adverse to any party. The foreclosure is affirmative: the abstention outcome is represented in a form disjoint from the domain of values a consuming determination is capable of consuming as a magnitude, so a threshold comparison of the outcome entry emits an outcome of the recorded abstention class rather than a Boolean. Consequently no counter of the architecture is incremented by an abstention outcome, no authorization quantity is decremented by one, no value of the scoped integrity vector (106) is modified by one, and no write of the authorization gate (300) is caused by one.

Resolution by named re-emission. The filing supplies an attributable resolution path at the following paragraph. The offering party resolves a contested-offer record by re-emitting a fresh first governed observation (608) whose named-claimant field names exactly one identity primitive drawn from the record's claimant enumeration; a field naming none, several, or an unenumerated party is appended as attempted and given no effect. The re-emitted observation's pairing rule is satisfied only by a second observation (610) from the named claimant, so any other party's observation does not pair. The offering party appends a contest resolution entry recording the selection, which is thereby attributable to it and independent of arrival order, emits to each non-named enumerated claimant a non-selected claimant notice that is not a refusal, increments no meter, and leaves that claimant's credentials and pairing capacity unimpaired. Where the named claimant is silent within the window, the offering party may re-emit naming a different enumerated claimant, subject to a re-emission count bound.

Metering. Under Section 6.7 the refusal meter is incremented by the emission of a refusal observation and by nothing else. A timeout, a holding of an orphan observation, a rejection for want of an intersection, and a failed fulfillment each increment no refusal meter of either party and are adverse to neither. The contest handling is consistent with that recital: no meter of any party is incremented on a contest, and the non-selected claimant notice is expressly not a refusal.

Which quantities the filing fixes, and which it declares

Three counts are fixed by the filed text, and they are the detector's own cases: over distinct emitter identities held pending, zero resolves as a timeout, one pairs and settles, and two or more identifies a contest, a plurality of observations bearing one identity counting as one claimant. No other numeric quantity of this mechanism is fixed by the filing.

The temporal proximity window is declared rather than derived. The governing policy object of Section 6 is a signed policy object (112) resolved for the settlement context, issued by a deploying authority, bearing a policy identifier and a successor index, and resolved by the policy reference field (110) of the party applying it. It declares that section's settlement parameters, among them the proximity and time windows, the pairing rule form, the refusal-meter increment and bound, the retry bound, the solicitation bound, and the deferral-expiration parameter. Where the parties resolve different policy objects, each applies its own.

The window (602) itself is defined by one or more of an absolute duration measured from the first governed observation (608), a declared relative event, a multi-event condition, a credentialed authority timing, an operational-context window, an adaptive window, a count of epochs of the dynamic agent hash chain, and any temporal-window form declared in the governing policy object. The filing states no numeric duration, no default, and no permitted range for it, and nothing here supplies one.

The re-emission count bound is likewise named without a value. Its consequence is stated conditionally: further re-emission naming a different enumerated claimant is available where the named claimant is silent within the window, and is subject to that bound.

How the mechanism composes with the rest of the filing

Contested pairing sits in Section 10.5, headed for tool provenance, reliance, and contested pairing, and operates upon the matched-pair settlement of Section 6.

Because recognition is withheld until elapse, the mechanism sits alongside the deferral machinery of Section 6.8, where a first governed observation (608) whose matching second observation has not arrived is an orphan observation held in a deferral queue under a declared deferral-expiration parameter, settling nothing, binding no party, and incrementing no meter of either party while orphaned. Deferred pairing there completes identically to an immediately recognized pair where the second observation (610) arrives while the orphan remains held, and upon expiry without pairing it resolves as a timeout. The contested case ends the window on a count instead, and at two or more the pairing does not complete.

The absence of a settlement-lineage entry bears on two constructions of the same section that key upon one. Matched-pair-gated corpus contribution admits a counterparty's training-corpus contribution only as the second governed observation (610) of a matched pair (600) whose first observation (608) is a contribution-scope offer, and computes the settled contribution identifier as a digest over the settlement-lineage entry appended on recognition. Third-party reliance binds a reliance record to a settlement identifier that each settled party resolves to a settlement-lineage entry of its own before entering the record in a reliance register.

Escrow covers what was staged against the offer. Release occurs upon satisfaction of the escrow condition specification, which in an embodiment is completion of the declared matched pair (600), and upon failure the content is returned unchanged. An authorization escrow record placed under dual-lock escrow is returned on failure to the party that placed it, no authorization being created, destroyed, or transferred by the failed pairing.

The outcome-quality record of the same section keeps a contest out of endpoint scoring. It counts the accepted determinations (122) and rejected determinations (124) produced from an endpoint's responses along with the corrections, reversals, and dispatch failures recorded against them, and not-determinable (126) and not-applicable (128) counts enter neither term of the endpoint selection preference, consistent with the conversion bar (502).

Everything written here sits under the append-only discipline of Section 6.6, a settlement-lineage entry (606) being neither removed nor modified and a subsequent reversal or amendment being itself appended.

Distinguishing contention handling in adjacent art

The filing's background sets out the bilateral settlement and value-exchange mechanisms nearest this subject matter, each of which locates the handling of contention somewhere the filed mechanism does not.

Escrow arrangements interpose a trusted third party or escrow agent that holds the subject of the exchange and releases it upon a release condition. Atomic swaps and hashed timelock contracts effect a cross-ledger exchange conditioned upon disclosure of a preimage within a timelock, and require each leg to be committed to a distributed ledger whose ordering is established by a consensus authority. Two-phase commit and

distributed-consensus commit protocols coordinate the parties to an exchange through a coordinator or a quorum that establishes a single agreed ordering before the exchange is made final.

Payment-channel settlement, exemplified by bidirectional payment channels, settles a sequence of exchanges against a channel funded and opened by pre-negotiated session state established between the parties before any exchange occurs, and closes against the same channel. As the background states it, each such mechanism requires at least one of a third-party intermediary or escrow agent, a centralized consensus or ordering authority, and pre-negotiated session or channel state established before exchange.

Reputation and trust systems address a different problem. They compute a score for an entity from ratings or observations supplied by other entities and locate that score at a registry, a scoring authority, or a shared ledger, the scored entity neither holding the score nor participating in its computation.

Structurally, the difference lies in where plurality is decided and what the decision leaves behind. Under the filed mechanism a contested-pairing detector takes the count on elapse over second observations appended as received, with no coordinator polled, no quorum computed, and no ledger ordering consulted. A contest does not select a winner by that count. It produces a recorded not-determinable outcome (126) of the offering party's abstention class, keeps every second observation appended, increments no meter of any party, and writes an enumeration of the claimants. Selection, where it follows, comes from a separate re-emission naming exactly one enumerated identity primitive, recorded as an entry attributable to the offering party and independent of arrival order. This description is structural and comparative; it is not an assertion that any system, product, or party practices the filed subject matter.

Disclosure Scope

This article describes subject matter disclosed in U.S. Provisional Application No. 64/117,812, at Section 10.5, paragraph [0413], titled "Contested pairing and the not-determinable resolution," with the attributable resolution path at paragraph [0414] and the underlying matched-pair architecture at Section 6. That provisional application is the operative disclosure; this article is a public technical description of the filed subject matter, published to establish a timestamped record of it.

Every element stated here is drawn from the filed text, and reference numerals follow the filed specification. Where the filing declares a quantity without fixing a value, this article says so rather than supplying one, and conditioned outcomes are stated together with their conditions. Nothing here is a claim of coverage or an assertion about any product or party.

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 \(/articles/governed-settlement/derived-artifact-provenance-chain\)](#)
- [Provenance Withdrawal and the Provenance-Withdrawn Attribute \(/articles/governed-settlement/provenance-withdrawal\)](#)

- [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).

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).

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)