

Single-Computation Routing Restriction: Confining a Verified Impairment Disclosure to the Empathy Weighting of the Receiver's Permitted-Deviation Quotient

When a counterparty tells a receiver that its own authorization gate stands withheld for certain action classes, the receiver holds a fact that ordinary architectures are free to reuse for routing, for ranking, or for a stored measure of the discloser. The single-computation routing restriction and one-way direction, disclosed in U.S.

Provisional Application No. 64/117,812, forecloses that reuse structurally. Upon verification the impairment disclosure enters exactly one computation of the receiver, raising the empathy weighting in the denominator of the receiver's permitted-deviation quotient for actions whose affected-party class maps to the disclosing counterparty, stored as a standing addend bounded by a per-adjustment maximum and by an aggregate ceiling across counterparties. Under the conversion bar it is foreclosed from every other computation, entering no determination, no admissibility state, and no routing, dispatch-selection, or pricing decision, and the adjustment is monotone in one direction only.

The disclosure that gets used against the discloser

An autonomous agent that reports its own weakness hands over an operational lever. A health signal, once received, is a fact in the receiver's possession, and facts in a receiver's possession tend to migrate: into a load-balancing decision, then a retry policy, then a preference ordering over peers, then a stored quality measure about the party that emitted the signal. The party that discloses is routed away from, ranked below silent peers, and eventually marked in a way that outlives the condition it disclosed.

U.S. Provisional Application No. 64/117,812 places the disclosure of impairment on different footing. Section 10.6 discloses a use-restricted impairment disclosure, being a signed governed observation bearing the disclosing counterparty's authority credential and continuity hash, whose payload is an impaired action-class enumeration naming each action-class identifier for which that counterparty's own authorization gate (300) stands withheld (310) or provisional, with a scope-partition identifier and gate state per entry, together with an attested dynamic-agent-hash epoch identifier. The receiver verifies continuity by the successor-continuity test and verifies that the enumeration is non-empty, producing no determination of any class (122, 124, 126, 128) upon it. Issuance decrements the disclosing counterparty's own authorization budget (404), the same budget that gates its dispatch, by a declared positive amount once per receiving origin-equivalence class (200) within a metering window, applied without any determination of whether the disclosed state is accurate.

Paragraph [0430] governs what the receiver may then do with the verified object. It is stated as a restriction: exactly one computation, and one direction of movement within it.

Exactly one computation, and only downward

Upon verification the impairment disclosure enters exactly one computation of the receiver. It raises the empathy weighting (704) in the denominator of the receiver's permitted-deviation quotient for actions whose affected-party class maps to the disclosing counterparty.

That quotient is the structure of Section 7.6. Deviation likelihood (706) is computed as a quotient whose numerator is the difference between the need quantity (700) and the dynamic ethical threshold (702), and whose denominator is the product of the empathy weighting (704) and the self-esteem aggregate (108). Where the deviation likelihood exceeds unity, the agent is permitted to enter a deviation-preparation state (708), conditioned on the proposed mutation passing the mutation policy constraints applicable to it and passing continuity validation against the identity records of the agent. Within that state the architecture admits the mutation (714) notwithstanding that the signed policy object (112) forbids it, that object being neither nullified nor amended and remaining authoritative, and a permitted deviation record (710) is appended upon admission. A quantity entering the empathy weighting accordingly enters the denominator and no other position of the quotient. The margin by which the quotient stands below the unity condition is termed the deviation headroom, a stored quantity of no party, narrowed by any increase of the empathy weighting and widened by any decrease of it.

The addend is standing rather than momentary. The raised value is stored as a standing addend keyed to the disclosing counterparty and surviving continuous recalculation, and the empathy weighting is continuously recalculated as the semantic agent (100) executes, mutates, and receives feedback. The addend is bounded by a per-adjustment maximum and by an aggregate ceiling across counterparties, neither of which the filing fixes to a value.

Every other computation is foreclosed affirmatively. Under the conversion bar (502) the disclosure is foreclosed from every other computation of the receiver, entering no determination about the counterparty, no admissibility state, and no routing, dispatch-selection, or pricing decision. Section 5.4 gives the foreclosure its character: it is affirmative, the conversion being barred by the structure of the values themselves and not by an absence of defined behavior. The bar is realized by a type discipline in which an outcome entry and a magnitude are values of disjoint types with no total function mapping the former to the latter, so that a consuming determination attempting arithmetic emits an abstention outcome rather than a magnitude, a threshold comparison of the outcome entry emits an outcome of the recorded abstention class rather than a Boolean, and an accumulation over a set containing the entry emits an abstention outcome rather than a sum over the remaining members. In a further embodiment the type discipline is enforced statically upon the instructions of the semantic agent (100) before they are executed, whereby the consuming determination attempting the conversion is not constructible rather than being foreclosed at the time the conversion is attempted.

Direction is a limitation of the mechanism, not a tendency of it. The adjustment is monotone in one direction only: it may lower the receiver's deviation likelihood (706) toward the counterparty and may never raise it, and it may never narrow the counterparty's admissible surface, increment its counters, or append anything adverse to it. Those negative limitations are recited alongside the positive effect.

Paragraph [0431] states the terminal state change, and states it conditionally. Where the receiver's deviation likelihood (706) toward the disclosing counterparty stood at or above unity, it falls below unity, withdrawing the receiver from the deviation-preparation state (708) for actions whose affected-party class maps to that counterparty, so that a mutation the in-force policy forbids, which would otherwise have been admitted as a permitted deviation record (710) against that counterparty, is not admitted. Deviation likelihood toward every other affected-party class is unaffected. The standing adjustment is released, and the empathy weighting returns to its

unadjusted resolution, only upon a presented execution record of the counterparty within an enumerated impaired class bearing no provisional marker, or a settlement-lineage entry recording that counterparty's gate (300) returning to granting for such a class. Elapsed time releases nothing, and a release record naming the condition is appended.

Quantities the filing declares

Several quantities in this mechanism are policy-declared, and the filing fixes no numeric value for them.

- The per-adjustment maximum bounding a single standing addend.
- The aggregate ceiling bounding the addends standing concurrently across counterparties.
- The declared positive amount of the issuance decrement borne by the disclosing counterparty's own authorization budget (404), together with the metering window within which that decrement is applied once per receiving origin-equivalence class (200).
- The maximal value to which the deviation likelihood (706) resolves where the product forming the denominator is zero or negative, the empathy weighting (704) or the self-esteem aggregate (108) standing at or below zero, that value being declared in the signed policy object (112) and consistent with the doctrine that a lower product of empathy and self-esteem is a lower resistance to deviation. In a further embodiment each of the empathy weighting (704) and the self-esteem aggregate (108) is bounded below at a positive floor declared in the signed policy object (112) for the purpose of forming the denominator.

Unity is the comparand the filing fixes. It is the value the quotient must exceed for entry into the deviation-preparation state (708), and the value below which the terminal state change of paragraph [0431] places the quotient. The quotient is formed

per scope; where a proposed mutation implicates more than one scope, one quotient is computed for each, and the unity condition is satisfied only where satisfied for every implicated scope, the failing scope and its quotient being recorded where it is not.

How the restriction sits inside its chapter

Section 10.6 of the filing covers co-residency, delegate floor, and coercion filtering. Within that section the impairment disclosure occupies three consecutive paragraphs, and it draws on machinery disclosed elsewhere in the specification.

Paragraph [0429] supplies the disclosure itself, its payload, its continuity verification by the successor-continuity test, the requirement that the enumeration be non-empty, and the express statement that the receiver produces no determination of any class upon it. Paragraph [0430] confines the verified object to one computation. Paragraph [0431] states the terminal state change and the release conditions.

Upstream in the same section stands the recorded counterfactual coupling test, by which an agent re-evaluates its own recorded gate and budget transitions from the recorded state alone, replacing a recorded-absence marker with a hypothesized receipt, and designates an edge non-response-coupled where the trigger was satisfied in the record but not under the hypothesized receipt. That counterfactual writes nothing and produces no determination, and where the recorded transitions fall short of a declared minimum count an insufficiency abstention under the conversion bar (502) is appended. One mechanism concerns what a counterparty's silence does to the agent's own governor; the other concerns what a counterparty's disclosed impairment is permitted to do to the agent's computations.

Section 7.6 supplies the quotient into whose denominator the addend is written, along with the deviation-preparation state (708), the permitted deviation record (710), and the appending of entry and termination to the append-only lineage field (104), the entry record identifying the mutation, the implicated scopes, the deviation likelihood

computed at entry, and the operand values from which it was computed. Section 7.5 supplies the empathy weighting (704) as a computed scalar or vector quantity aggregating an anticipated semantic impact of the proposed mutation across each affected entity, resolved across a personal, an interpersonal, and a global scope and carried in a designated subfield of the memory field (102), or encoded as an execution modifier within the mutation descriptor of a proposed mutation. Section 5.4 supplies the conversion bar (502) that performs the foreclosure.

What this is not

Established categories of technique touch adjacent ground. The differences are structural.

Health checking and circuit breaking in distributed systems. A service reports degraded status, or fails a probe, and the calling infrastructure removes it from a rotation, opens a breaker, or sheds load toward healthier instances. The purpose of the signal in that category is to change routing. Here the disclosure enters no routing, dispatch-selection, or pricing decision, the foreclosure being carried by the conversion bar (502), and its one admissible consumer is the empathy weighting (704) in the denominator of the receiver's own permitted-deviation quotient.

Reputation and trust systems. Such systems compute a score for an entity from ratings or observations supplied by other entities and expose that score to parties deciding whether to transact, the score residing at a registry, a scoring authority, or a shared ledger. The impairment disclosure produces no score and no rating. What it produces is a standing addend inside the receiver's own denominator, keyed to the counterparty, and it appends nothing adverse to the counterparty and increments no counter of it.

Capability advertisement and feature negotiation. Protocols in which a party announces what it can and cannot currently do exist so that the peer may select an alternative path, the announced limitation being an input to that selection. Under paragraph

[0430] the enumeration of withheld and provisional classes may never narrow the disclosing counterparty's admissible surface, and it does not enter dispatch-selection.

Service-level reporting and credit regimes. Disclosed degradation in commercial arrangements ordinarily triggers a measured consequence against the disclosing party, whether a credit, a penalty, or a recorded breach. Under paragraph [0429] issuance instead decrements the disclosing counterparty's own authorization budget (404), by a declared positive amount, once per receiving origin-equivalence class (200) within a metering window, and paragraph [0430] provides that nothing adverse to that counterparty follows.

In each of those categories a disclosure of weakness is an input to a decision about how the receiving party treats the disclosing one. Under paragraph [0430] the verified disclosure instead enters a quantity governing the receiver's own latitude to depart from its in-force policy in actions whose affected-party class maps to the discloser.

Disclosure Scope

The mechanism described here, being the single-computation routing restriction and one-way direction governing a verified impairment disclosure, is disclosed in U.S. Provisional Application No. 64/117,812, at Section 10.6, paragraph [0430], with the disclosure and its issuance metering at paragraph [0429] and the terminal state change and release conditions at paragraph [0431]. The permitted-deviation quotient into whose denominator the standing addend enters is disclosed at Section 7.6, the empathy weighting at Section 7.5, and the conversion bar at Section 5.4. This article is published as a technical description of that disclosure and establishes no rights beyond those arising from the application itself. Quantities identified above as policy-declared are declared in the signed policy object (112) of the agent applying them, and no numeric value is fixed for them by the filing.

Integrity Quantities and Permitted Deviation (/permitted-deviation)

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

Bounded, accountable deviation from declared values — measured, not forbidden.

Provisional application

PRIMARY TECHNICAL DISCLOSURE

- [Permitted Deviation: Bounded, Recorded Departure From an Agent's Declared Values \(/articles/permitted-deviation/bounded-departure-from-declared-values\)](#).

SECONDARY TECHNICAL

- [A Typed, Dimensionless Conduct Divergence Measure \(/articles/permitted-deviation/typed-dimensionless-divergence-measure\)](#).
- [The Policy-Difference Set and Policy-Explained Divergence \(/articles/permitted-deviation/policy-explained-divergence\)](#).
- [Residual Divergence and Its Confined Consumption \(/articles/permitted-deviation/residual-divergence-confined-consumption\)](#).
- [Propagation Halt on Undischarged Reparation Arcs \(/articles/permitted-deviation/propagation-halt-undischarged-arcs\)](#).
- [Attack-Conditional Propagation Suspension \(/articles/permitted-deviation/attack-conditional-propagation-suspension\)](#).
- [Entropy Signature Trajectory as Machine Input to Deviation Forecasting and Underwriting Disclosure \(/articles/permitted-deviation/entropy-trajectory-available-forecasting-underwriting-disclosure\)](#).
- [Single-Computation Routing Restriction: Confining a Verified Impairment Disclosure to the Empathy Weighting of the Receiver's Permitted-Deviation Quotient \(/articles/permitted-deviation/single-computation-routing-restriction-one-way\)](#).
- [Impairment Terminal State and Release: Withdrawing an Agent From Deviation Preparation Toward a Disclosed-Impaired Counterparty \(/articles/permitted-deviation/impairment-terminal-state-release\)](#).

APPLICATIONS · GENERAL

- [Regulated Industries: Recording a Bounded Departure From Declared Policy \(/articles/permitted-deviation/regulated-industry-deviation\)](#).

- [Robotics Safety Envelopes: Deviation as a Measured Quantity \(/articles/permitted-deviation/robotics-safety-envelopes\)](/articles/permitted-deviation/robotics-safety-envelopes).

APPLICATIONS · SPECIFIC

- [ISO/IEC 42001 AI Management Systems: Declared Policy, Recorded Departure \(/articles/permitted-deviation/iso-iec-42001-ai-management\)](/articles/permitted-deviation/iso-iec-42001-ai-management)

TERMINOLOGY

- [aggregate retention \(/glossary#aggregate-retention\)](/glossary#aggregate-retention).
- [deviation deductible \(/glossary#deviation-deductible\)](/glossary#deviation-deductible).
- [deviation likelihood \(/glossary#deviation-likelihood\)](/glossary#deviation-likelihood)
- [entropy-weighted harm coefficient \(/glossary#entropy-weighted-harm-coefficient\)](/glossary#entropy-weighted-harm-coefficient)
- [need quantity \(/glossary#need-quantity\)](/glossary#need-quantity)
- [permitted deviation \(/glossary#permitted-deviation\)](/glossary#permitted-deviation)
- [self-esteem aggregate \(/glossary#self-esteem-aggregate\)](/glossary#self-esteem-aggregate).

[Integrity Quantities and Permitted Deviation overview → \(/permitted-deviation\)](/permitted-deviation)