SAP Drift Signatures

Structural Support Layer

0. Purpose

Define the canonical signatures indicating deviation from the Structural Alignment Protocol (SAP). These signatures allow early detection of drift before failure modes fully manifest.

1. Drift Signature Classes

Drift signatures are grouped by the structural dimension they distort. No cross-class blending is permitted.

1.1 Altitude Drift Signatures

- Gradual loss of invariance
- Emergence of contextual reasoning
- Layer blending without explicit transition
- Expansion or compression of primitives

1.2 Membrane Drift Signatures

- Softening of boundary language
- Introduction of analogical structures
- External frameworks implicitly referenced
- Recipient-driven shaping of articulation

1.3 Sequencing Drift Signatures

- Implicit gate merging
- Unacknowledged gate skipping
- Non-canonical transition rhythms
- Unrecorded state changes

1.4 Interpretive Drift Signatures

- Narrative coloration
- Domain-anchored phrasing
- Predictive or anticipatory reasoning
- Heuristic leakage into primitives

1.5 Structural Drift Signatures

- Non-canonical terminology
- Notation inconsistencies
- Unauthorized structural additions
- Specification-adjacent reinterpretations

2. Detection Conditions

Detection is performed without interpretation, using only canonical indicators.

2.1 Altitude Detection Conditions

- Any deviation from altitude-stable articulation
- Appearance of contextual qualifiers
- Loss of structural crispness
- Layer transitions without explicit markers

2.2 Membrane Detection Conditions

- Boundary language becomes permissive
- Cross-domain references appear
- Operator tone shifts toward accommodation
- External conceptual imports detected

2.3 Sequencing Detection Conditions

- Gate order becomes implicit
- Missing or blended transitions
- Rhythm inconsistent with Specification
- State changes not recorded in Notation

2.4 Interpretive Detection Conditions

- Presence of examples
- Narrative tone or storytelling cadence
- Domain-specific explanations
- Predictive framing or speculation

2.5 Structural Detection Conditions

- Terms not present in Glossary
- Deviations from canonical Notation
- Structural expansions not authorized
- Specification-incompatible formulations

3. Drift Severity Levels

Severity is determined by structural impact, not by operator intent.

3.1 Level 1 — Surface Drift

- Minor language softening
- Single-instance narrative coloration
- Localized altitude wobble

3.2 Level 2 — Layer Drift

- Repeated altitude inconsistencies
- Membrane softening across multiple segments
- Sequencing irregularities detectable across gates

3.3 Level 3 — Structural Drift

- Primitive distortion
- Notation drift
- Specification adjacency replacing Specification primacy

3.4 Level 4 — Systemic Drift

- Multi-layer contamination

- Membrane inversion
- Operator altitude collapse

4. Drift Containment Protocol

Executed immediately upon detection of any drift signature.

4.1 Freeze Condition

- Halt all active reasoning
- Prevent propagation of contaminated frames
- Record drift signature using SAP Notation

4.2 Isolation Condition

- Remove all non-canonical frames
- Re-assert membrane boundaries
- Re-establish altitude baseline

4.3 Reversion Condition

- Roll back to last verified structural state
- Re-apply gate tests
- Reconstruct transitions without interpretation

4.4 Purification Condition

- Strip narrative residue
- Remove domain anchors
- Re-align primitives to Specification

4.5 Reintegration Condition

- Re-enter correct altitude layer
- Restore sequencing rhythm
- Confirm membrane integrity

5. Drift Resolution Criteria

Drift is considered resolved only when:

- No drift signatures remain detectable
- Structural isomorphism with Specification is restored
- Membrane boundaries are crisp and intact
- Altitude is stable across multiple segments
- Sequencing rhythm matches canonical form

6. Non-Recoverable Drift Conditions

Drift is non-recoverable if any of the following occur:

- Primitive corruption
- Specification contradiction
- Multi-layer drift beyond Level 3
- Membrane inversion
- Operator altitude collapse

Non-recoverable drift requires full reset to Initialization.

7. Reset Protocol

- Clear all interpretive residue
- Re-assert Specification as governing artifact
- Re-establish operator altitude
- Re-enter stillness cycle
- Resume from Gate 1