6.4.3 Data, Structure, Semantics, and Interpretation

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The proposed Reference Architecture separates and coordinates Data, Structure, Semantics, and Interpretation. It also governs the definition, versioning, lifecycle, and application of structural, semantic, and interpretive Artifacts independently of particular implementation systems.

Requirements

- **SIP-049 — Architectural Concern and Lifecycle Description:** The Submission SHALL describe the separation and coordination of Data, Structure, Semantics, and Interpretation and the independent definition, versioning, and lifecycle Governance of structural, semantic, and interpretive Artifacts
- **SIP-050 — Implementation-Independent Interpretive Logic:** The proposed Reference Architecture SHALL define architectural mechanisms that separate interpretive logic from implementation environments

Required Coverage

The description required by SIP-049 includes the architectural information governed by the following requirements:

Requirement	Required Architectural Information
SIP-004 — Separation of Architectural Concerns	Data, Structure, Semantics, and Interpretation as separable but coordinated architectural concerns
SIP-010 — Structural Artifact Lifecycle Governance	Lifecycle controls for structural Artifacts
SIP-011 — Semantic Artifact Lifecycle Governance	Lifecycle controls for semantic Artifacts
SIP-012 — Interpretive Artifact Lifecycle Governance	Lifecycle controls for interpretive Artifacts
SIP-013 — Reproducible Interpretation	Reproduction of an Interpretation using identified, version-controlled conditions
SIP-023 — Governance Evolution and Operational Execution	Separation of Governance Artifact evolution from execution of the operational processing flow

Notes for Editors

The links to SIP-049 and SIP-050 provide temporary access to their individual Annex C requirement pages while those records are being created and reviewed.

After those records are complete, replace each locally maintained Statement with a transclusion of its authoritative Statement.

SIP-049 governs the required description. The requirements listed under Required Coverage govern the underlying architectural capabilities and constraints.

SIP-010 through SIP-012 govern the lifecycles of structural, semantic, and interpretive Artifacts. Their detailed requirement records should address formal definition, identification, versioning, authority, status, applicability, and change control.

SIP-013 already requires reproducible Interpretation under identified, version-controlled conditions. It is not repeated or renumbered in this section.

SIP-050 adds the distinct requirement that interpretive logic remain architecturally separate from the implementation environments that execute or otherwise apply it.

The Required Coverage table provides a nonnormative summary. The corresponding Annex C requirement records remain authoritative.

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