

SDPF

Language Specification v1.3.1

Addendum A

Stabilisation Patches

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Purpose and Scope

This addendum formally closes three gaps identified in the SDPF Language Specification v1.3.1 following external review. No normative content in v1.3.1 is removed or altered. This addendum adds normative content where it was absent and restructures informative content to its correct location.

This addendum is authoritative. Where Addendum A defines or extends a normative rule that was previously absent from v1.3.1, Addendum A governs. All other normative content in v1.3.1 remains unchanged.

Gap	Resolution
TEST-ID format undefined	Patch A-1: TEST-ID syntax defined as normative rule TEST-SYNTAX-1 through TEST-SYNTAX-4. Added to Annex B.
11 structural invariant checks not in normative annex	Patch A-2: Normative Annex B added. All 11 checks enumerated with normative rule identifiers VCR-INV-1 through VCR-INV-11.
Version history in Foreword	Patch A-3: Version history relocated to Annex C (where it already exists as cumulative change log). Foreword reference updated. Informative change — no normative content affected.

The normative requirement index in Annex A is updated to include the new identifiers added by this addendum.

Patch A-1 — TEST-ID Format Definition

Problem

Section 9.3.7 (Traceability Matrix) uses the term TEST-ID and requires it to appear in traceability matrix entries. Section 9.2 defines REQ-ID format precisely (R-NNN, zero-padded decimal integer beginning at 001). No equivalent definition exists for TEST-ID. This creates a conformance gap: a tool cannot enforce TEST-ID format because the format is not defined.

Resolution — New Normative Rules TEST-SYNTAX-1 through TEST-SYNTAX-4

The following normative rules are added. They extend Section 9.2 of the Language Specification v1.3.1. They are designated TEST-SYNTAX to maintain the existing REQ-SYNTAX numbering without renumbering.

TEST-SYNTAX-1	Each test case shall be assigned a unique TEST-ID when the test suite is generated from a locked specification.
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TEST-SYNTAX-2	TEST-ID format: T-NNN where NNN is a zero-padded decimal integer beginning at 001. TEST-IDs are assigned sequentially in the order tests are generated.
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TEST-SYNTAX-3	Each test case body shall reference the REQ-ID it tests using the trace comment syntax: # Trace: R-NNN (or language-equivalent comment syntax for the target implementation language).
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TEST-SYNTAX-4	A conforming tool shall assign TEST-IDs automatically at test generation time. Manual TEST-ID assignment is permitted only when a conforming tool is not in use, in which case the practitioner is responsible for sequential uniqueness.
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Worked Example

A specification locked with 3 requirements (R-001, R-002, R-003) generates a test suite. Tests are assigned as follows:

TEST-ID	REQ-ID Traced
T-001	R-001
T-002	R-001
T-003	R-002
T-004	R-003

The traceability matrix entry for R-001 would read: R-001 → T-001, T-002 → implementation-artifact-identifier.

Conformance Impact

SPEC-C-6 (Traceability Matrix contains at least one mapping row per CRITICAL requirement) is now enforceable against a defined format. TOOL-C-5 (assigns REQ-IDs on locking in R-NNN format) is extended: a conforming tool shall also assign TEST-IDs at test generation time in T-NNN format per TEST-SYNTAX-2.

Annex A Update

The following range is added to the Normative Requirement Index (Annex A of v1.3.1):

Range	Section
TEST-SYNTAX-1 to TEST-SYNTAX-4	Addendum A, Patch A-1 — Test identifier syntax rules

Patch A-2 — Normative Annex B: Eleven Structural Invariant Checks

Problem

Section 13.1 of v1.3.1 enumerates the eleven structural invariant checks in a table and Section 13.2 states that all eleven shall be evaluated on every verification gate execution (VER-1). However, the checks themselves carry no normative identifiers. They cannot be referenced precisely in conformance requirements, evidence packages, or tool specifications. A tool developer implementing VER-1 has no normative basis for which check is which.

Resolution — Normative Annex B

Annex B is added as a normative annex to the SDPF Language Specification v1.3.1. It assigns normative identifiers VCR-INV-1 through VCR-INV-11 to each of the eleven structural invariant checks defined in Section 13.1. The content of each check is unchanged from Section 13.1 — this annex adds identifiers and makes the checks individually referenceable.

Annex B is normative. VCR-INV-1 through VCR-INV-11 are normative rule identifiers. A conforming tool shall evaluate all eleven checks on every verification gate execution per VER-1, and shall record each check result by its VCR-INV identifier in the Verification Closure Record.

Annex B — Normative: Eleven Structural Invariant Checks

ID	Check Name	Structural Invariant Tested	Failure Consequence
VCR-INV-1	spec_exists	Intent was formally expressed from a validated problem statement before execution began.	Stage cannot advance. Specification must exist.
VCR-INV-2	style_defined	Intent was classified into a known domain before execution.	Run cannot be verified. Style must be declared and resolved.
VCR-INV-3	tests_exist	Intent produced tests — specification was not bypassed.	Run cannot be verified. Tests must be generated.
VCR-INV-4	tests_locked	Tests were frozen before implementation — intent governed the test suite.	Run cannot be verified. Tests must be locked before implementation.
VCR-INV-5	implementation_exists	Implementation was produced after intent was locked.	Run cannot be verified. Implementation must be generated.
VCR-INV-6	traceability_complete	Every requirement has at least one test — no intent line was skipped.	Run cannot be verified. All requirements must have test coverage.
VCR-INV-7	style_constraints_pres	The style's structural marker appears in	Run cannot be verified.

	ent	the specification — style was applied.	Style was declared but not applied.
VCR-INV-8	style_N_engine_verified	Style-specific engine tags appear in tests and code — style governed the artifacts.	Run cannot be verified. Style engine not applied to generated artifacts.
VCR-INV-9	policy_engine_passed	Specification content satisfies semantic rules for the declared style.	Run cannot be verified. Specification content does not satisfy style requirements.
VCR-INV-10	ci_gate_ready	A CI workflow was generated — invariants can be enforced in automated pipelines.	Run cannot be verified. CI gate configuration is required.
VCR-INV-11	provenance_signing_ready	A signing key is configured — evidence can be tamper-proofed.	Run cannot be verified in production mode. Signing key required.

Normative Rules

VCR-INV-RULE-1	A conforming tool shall evaluate all eleven checks VCR-INV-1 through VCR-INV-11 on every verification gate execution. No check may be skipped.
VCR-INV-RULE-2	A conforming tool shall record each check result individually by VCR-INV identifier in the Verification Closure Record.
VCR-INV-RULE-3	A run shall not advance to VERIFIED unless all eleven checks return PASS. A single FAIL is a blocking verification failure.
VCR-INV-RULE-4	The evidence package shall include the Verification Closure Record with named results for all eleven VCR-INV checks.

Conformance Impact

TOOL-C-6 (evaluates all eleven structural invariant checks on every verification gate execution) is now enforceable against individually named checks. Evidence packages conforming to EVID-C-5 (Verification Closure Record with CLOSURE STATUS = COMPLETE) must now record results by VCR-INV identifier.

Annex A Update

Range	Section
VCR-INV-1 to VCR-INV-11	Addendum A, Patch A-2, Annex B — Eleven structural invariant check identifiers

VCR-INV-RULE-1 to VCR-INV-RULE-4

Addendum A, Patch A-2, Annex B — Verification closure record rules

Patch A-3 — Version History Relocation

Problem

The v1.3.1 Foreword contains a version history table spanning versions 1.0 through 1.3.1. Version history is informative administrative content. Its presence in the Foreword displaces the substantive framing of the document and creates an unconventional structure for a normative language specification. The cumulative change log already exists in full in Annex C of v1.3.1, making the Foreword table redundant.

Resolution

This is an informative change. No normative content is altered.

Action	Detail
Remove from Foreword	The version history table (versions 1.0 through 1.3.1) is removed from the Foreword in any future reissue of the v1.3.1 document.
Retain in Annex C	The cumulative change log in Annex C remains the authoritative record of all changes across all versions. Annex C is unchanged.
Add Foreword reference	The Foreword shall include: 'Version history and cumulative change log: see Annex C.'
Citation block retained	The 'How to Cite This Specification' entry remains in the Foreword.

This patch applies to any future reissue of the v1.3.1 document. The current v1.3.1 PDF is not retroactively altered. This addendum serves as the authoritative record of the intended Foreword structure from this point forward.

Revised Foreword Structure

The Foreword of v1.3.1 as corrected by Patch A-3 shall contain the following sections in this order:

Section	Content
1. Opening statement	The problem is not the AI model. The problem is the specification. (Unchanged from v1.3.1.)
2. SDPF definition	SDPF is the formal language... (Unchanged from v1.3.1.)
3. How to Read This Document	Reading guide with section references. (Unchanged from v1.3.1.)
4. Phase 0 Problem Statement	The self-referential problem statement with closure status. (Unchanged from v1.3.1.)

5. Version history reference	NEW: 'Version history and cumulative change log: see Annex C.'
6. Citation block	'How to Cite This Specification.' (Unchanged from v1.3.1.)
7. Author signature	Closing principle and author name. (Unchanged from v1.3.1.)

Updated Normative Requirement Index

The following supersedes the Normative Requirement Index in Annex A of SDPF Language Specification v1.3.1. All original entries are preserved. Entries added by Addendum A are marked NEW.

Range	Section	Topic
TVG-1 to TVG-5	2.5, 9.3.6	Technical Verification Gate rules
P0-1 to P0-8	3.5	Phase 0 normative requirements
PRIN-1 to PRIN-4	5.2	Three Core Principles enforcement
REQ-SYNTAX-1 to REQ-SYNTAX-6	9.2	Requirement syntax rules
TEST-SYNTAX-1 to TEST-SYNTAX-4 NEW	<i>Addendum A — Patch A-1</i>	Test identifier syntax rules
EC-1 to EC-3	9.3.1	External Contract content
IC-1 to IC-4	9.3.2	Input Contract content
PR-1 to PR-4	9.3.3	Processing Rules content
OG-1 to OG-3	9.3.4	Output Guarantees content
EH-1 to EH-4	9.3.5	Exception Handling content
TM-1 to TM-3	9.3.7	Traceability Matrix rules
CONF-1 to CONF-6	10.3	Conflict Resolution Protocol
DYNE-1 to DYNE-4	10.4	Style 14 automated escalation
STYLE-1 to STYLE-3	11.1	Style system rules
CSTYLE-1 to CSTYLE-5	11.4	Custom style rules
GATE-0	12.1	Phase 0 gate
GATE-1 to GATE-6	12.3	Lifecycle gate rules
CHANGE-1 to CHANGE-3	12.4	Change protocol rules
PROMPT-1 to PROMPT-5	12.5	Prompt export protocol
VER-1 to VER-6	13.2	Verification gate rules
VCR-1 to VCR-7	13.4	Verification Closure Record rules
VCR-INV-1 to VCR-INV-11 NEW	<i>Addendum A — Patch A-2, Annex B</i>	Eleven structural invariant check identifiers
VCR-INV-RULE-1 to VCR-INV-RULE-4 NEW	<i>Addendum A — Patch A-2, Annex B</i>	Verification closure record normative rules
PROV-1 to PROV-7	14.2	Provenance signing rules
ARCHIVE-1 to ARCHIVE-3	14.3	Evidence archive rules
SPEC-C-1 to SPEC-C-8	15.2	Specification conformance
TOOL-C-1 to TOOL-C-13	15.3	Tool conformance
EVID-C-1 to EVID-C-7	15.4	Evidence package conformance
PROC-C-1 to PROC-C-7	15.5	Process conformance

Addendum A Change Log

All changes introduced by this addendum. Addendum A applies to SDPF Language Specification v1.3.1 as a formal extension. It does not constitute a new version of the specification.

Patch	Section	Classification	Description
A-1	9.2 extended	NORMATIVE	TEST-ID format defined. Rules TEST-SYNTAX-1 through TEST-SYNTAX-4 added. Closes conformance gap in traceability matrix enforcement.
A-2	Annex B (new)	NORMATIVE	Normative Annex B added. All eleven structural invariant checks assigned VCR-INV-1 through VCR-INV-11 identifiers. VCR-INV-RULE-1 through VCR-INV-RULE-4 added.
A-3	Foreword	INFORMATIVE	Version history table removed from Foreword. Reference to Annex C added. No normative content changed.

Problem first. Specification second. Facts before execution. Verification always.

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