

UNNS-ADM-B: Empirical Candidate Registry Normative Specification

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Abstract

This document specifies UNNS-ADM-B, the Empirical Candidate Registry governed by the UNNS Admissibility Framework (UNNS-ADM). UNNS-ADM-B is a normative, non-executable registry whose sole function is to record admissibility outcomes for candidate recursive structures. It does not evaluate structures, execute operators, or produce interpretations. Its role is archival, audit-oriented, and methodologically protective, ensuring transparency, traceability, and non-circularity across UNNS analyses.

1 Scope and Purpose

UNNS-ADM-B serves as the empirical registry layer of the UNNS admissibility system. It records which candidate recursive structures have been assessed for admissibility under UNNS-ADM, together with the outcome of that assessment and the supporting documentation.

UNNS-ADM-B exists to:

- preserve a permanent historical record of admissibility decisions,
- prevent retrospective selection, tuning, or omission of candidates,
- support auditability and reproducibility,
- legitimize both positive and negative admissibility outcomes.

UNNS-ADM-B is not an analytical instrument and does not participate in operator evaluation.

2 Normative Position

UNNS-ADM-B is strictly subordinate to UNNS-ADM and strictly antecedent to all instrumental analyses (e.g. chambers XII–XXXII).

UNNS-ADM (theory) → UNNS-ADM-B (registry) → instrumental analysis

No admissibility criteria may be altered, inferred, or overridden within UNNS-ADM-B.

Implementation Neutrality

This specification is implementation-agnostic. Compliant realizations of UNNS-ADM-B may use any data format, storage technology, or access mechanism, provided the following conditions are met:

- **Schema completeness:** all required fields defined herein are present.
- **Immutability:** entries cannot be modified or deleted without creating a new superseding entry.
- **Identifier persistence:** entry identifiers remain stable across system migrations and version changes.
- **Query capability:** entries can be retrieved by identifier and filtered by admissibility status.

Reference implementations may be specified separately under UNNS-ADM-A.

3 Non-Goals

UNNS-ADM-B explicitly does not:

- determine admissibility,
- execute recursive generators,
- apply operators or metrics,
- rank, score, or optimize candidates,
- suggest interpretations or significance.

Any such functionality belongs outside UNNS-ADM-B.

4 Registry Entry Schema

Each candidate structure s recorded in UNNS-ADM-B shall be represented by a single immutable registry entry $\text{Entry}(s)$.

Identification

- **ID:** unique, persistent identifier
- **Registry version:** UNNS-ADM-B.vX.Y
- **Timestamp:** time of entry creation

Structure Specification

- **Generator class:** symbolic, numeric, hybrid, or stochastic
- **Rule description (\mathcal{R}):** finite specification
- **Initial data (s_0):** including declared bounds
- **Parameter set (θ):** complete enumeration of all free parameters, including:
 - numerical values with declared precision,
 - units where applicable,
 - explicit designation of fixed versus searched parameters,
 - declared parameter interdependencies or constraints.

Discovery Protocol (A6 Compliance)

- Search objective C_A
- Search domain
- Stopping rule
- Procedure version and timestamp
- Independence statement declaring downstream properties not targeted
- Verifier: name or role certifying A6 compliance
- Verification method: pre-registration, timestamped documentation, independent review, or computational audit

Admissibility Assessment

For each UNNS-ADM axiom A1–A7:

- verdict: pass / fail / borderline
- justification consisting of 1–3 sentences stating:
 - evidence type (proof, numerical test, analytical argument),
 - key supporting fact,
 - reference to supporting documentation if applicable.

Verdict Summary

- **Admissibility status:** admissible / provisionally admissible / inadmissible
- **Failure profile** (if applicable): $\{A_i : \text{reason}\}$

Notes

Permitted content:

- cross-references to external documentation,
- correction notices linking to superseding entries,
- technical specifications too detailed for primary fields.

Prohibited content:

- claims about downstream operator performance,
- assessments of significance or promise,
- comparisons between candidate structures.

Entry Creation and Submission

Entries may be created by:

- manual submission by researchers,
- automated discovery protocols with audit logs,
- hybrid workflows combining automated generation and human verification.

Each submission must include:

- submitter identification,
- creation timestamp (preceding any instrumental analysis),
- declaration of conflicts of interest if applicable.

Submission does not imply admissibility; all entries are recorded regardless of verdict.

5 Verdict Semantics

UNNS-ADM-B recognizes exactly three admissibility statuses.

Admissible

All axioms A1–A7 are satisfied robustly.

Provisionally Admissible

One or more axioms are satisfied only marginally.

Inadmissible

At least one axiom is structurally violated.

Marginality Criteria

An axiom is marginally satisfied if:

- it passes under default thresholds but fails under stricter variants,
- satisfaction depends on numerical tolerances,
- it passes for declared parameters but shows sensitivity to small perturbations.

Provisionally admissible entries must specify:

- which axioms are marginal,
- sensitivity analyses demonstrating threshold dependence,
- parameter ranges over which axiom satisfaction is stable.

6 Immutability and Versioning

Registry entries are immutable once recorded.

Entry Linking

Superseding entries must include:

- Supersedes: list of prior entry IDs,
- Reason: correction, re-evaluation, or parameter refinement.

Registry queries shall:

- default to the most recent non-superseded entry,
- preserve full version history,
- visibly flag superseded entries.

Registry Versioning

Version increments are required for:

- schema field additions or removals,
- changes to verdict semantics,
- documentation requirement modifications.

Version format: UNNS-ADM-B.vX.Y, where:

- X denotes backward-incompatible changes,
- Y denotes backward-compatible extensions.

7 Failure Preservation Principle

UNNS-ADM-B preserves inadmissible candidates as first-class records. Failure is methodologically informative and must not be erased, hidden, or replaced.

8 Relation to Instrumental Analysis

Only candidates recorded as admissible or provisionally admissible in UNNS-ADM-B may be subjected to instrumental analysis.

Enforcement Protocol

Instrumental outputs shall be rejected from publication or archival unless:

- a valid UNNS-ADM-B entry ID is referenced,
- the referenced entry is admissible or provisionally admissible,
- the analysis timestamp postdates the registry entry timestamp.

Violation constitutes methodological non-compliance.

9 Guarantees and Non-Guarantees

UNNS-ADM-B guarantees:

- transparency of admissibility decisions,
- auditability of discovery protocols,
- protection against circular validation.

UNNS-ADM-B does not guarantee:

- observability,
- stability,
- physical relevance,
- analytical success.

10 Dispute Resolution

In cases of conflicting admissibility assessments:

1. all assessments are retained as separate entries,
2. entries are cross-linked with a `disputed` flag,
3. resolution proceeds via an independent review panel (minimum three members) evaluating UNNS-ADM axioms only.

Resolutions are recorded as new superseding entries. Disputes over axiom interpretation escalate to the UNNS-ADM revision process.

11 Access Control and Archival

Access rights:

- Read: public,
- Write: restricted to authorized submitters,
- Modify: prohibited.

Archival requirements:

- persistent identifiers (e.g. DOI),
- redundant storage across at least three geographic locations,
- format migration protocols,
- annual integrity verification via checksums.

12 Conclusion

UNNS-ADM-B establishes a permanent, auditable boundary between admissibility theory and instrumental analysis. By recording admissibility outcomes independently of downstream success, it safeguards the methodological integrity of the UNNS research program.