

The AMetric Boundary

Admissibility Constraint Map — Paper II

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1. Purpose and Scope

This paper fixes the *pre-admissible boundary* of the system: the *AMetric Boundary*.

It governs what may be classified, recognized, or assigned standing prior to admissibility, and what may not occur at this boundary.

This paper establishes a *distinct admissibility level*, answering the irreducible question:

Is an object eligible to enter admissible reasoning at all?

Failure at this level produces *standing failure*, a collapse mode irreducible to any post-admission violation.

This paper licenses no operators, permits no action, and permits no redescription.

2. Governing Commitments

All commitments from *Paper I — Architectural Foundations* apply. In addition:

1. The AMetric Boundary is pre-admissible.
2. No metric, probabilistic, causal, or operational notions are defined here.
3. No operators exist at this boundary.
4. No action, execution, or transformation may occur here.
5. Boundary violations collapse admissibility before it can arise.

3. The AMetric Boundary

Definition 1 (AMetric Boundary). *The AMetric Boundary is the structural interface separating:*

- *pre-admissible classification and eligibility determination, and*
- *post-admissible licensed operation.*

At this boundary:

- *objects may be classified,*
- *standing may be determined,*
- *but no admissible transformation may be performed.*

The boundary is non-transmissive: no admissible structure propagates backward across it.

4. Standing

Definition 2 (Standing). *Standing is the binary status assigned to a coherently classified object indicating whether it is eligible to enter admissible reasoning.*

Standing takes exactly one of two values:

- *standing-positive, or*
- *standing-negative.*

Standing determination is single-shot and terminal. No revision, reevaluation, or downstream repair is defined or permitted.

5. Classification Coherence

Definition 3 (Classification Coherence). *A classification is coherent if and only if:*

1. *it assigns the object to a determinate structural role, and*
2. *that role does not internally contradict admissibility constraints fixed in Paper I.*

Classification is not an action or operation on an object. It is a structural role-recognition that effects no transformation of the object or system state.

6. Atomic Constraint Bundle (AMetric Level)

The atomic constraint bundle at the AMetric Boundary consists of:

Classification Coherence + Standing Determination

These components are inseparable at this level. Classification without standing is inert. Standing without coherent classification is undefined.

7. Boundary Non-Action

Theorem 1 (Boundary Non-Action Theorem). *No action, operation, execution, or transformation occurs at the AMetric Boundary.*

Proof. Action presupposes admissibility. Admissibility presupposes standing. Standing is determined at the boundary and therefore cannot be presupposed there. Any action at the boundary would therefore presuppose itself, which is incoherent. $\square$

8. Operator Undefinedness

Theorem 2 (Operator Undefinedness Theorem). *Operators are undefined at the AMetric Boundary.*

Proof. An operator is a licensed constraint on admissible transformation. At the AMetric Boundary, admissibility has not yet been established. Licence conditions therefore lack a domain of application. Any purported latent or schematic operator is not an operator but an illicit projection. $\square$

9. No Scope Transport Across the Boundary

Theorem 3 (No Scope Transport Across the Boundary). *No operator, licence, redescription, or admissible structure may be transported across the AMetric Boundary.*

Proof. Transporting admissible structure across the boundary implies admissibility prior to standing determination. This collapses the boundary distinction and violates the architectural ordering fixed in Paper I. Such transport therefore collapses admissibility immediately. $\square$

10. Boundary Failure Modes

Violation of the AMetric atomic bundle produces *standing failure*, manifested as one of the following structural classes:

1. incoherent classification,
2. illicit importation of metric, probabilistic, causal, or operational notions,
3. pre-admissible action or attempted execution,
4. operator smuggling, explicit or implicit.

All boundary failures reduce, under structural analysis, to incoherent classification, illicit importation, or pre-admissible action.

All boundary failures are terminal. No repair or downstream correction is possible.

11. Boundary Finality

Nothing happens at the AMetric Boundary. Objects are only sorted and either permitted or excluded. All admissible structure lies strictly beyond this boundary.

This fixes the entry condition for the entire admissibility constraint map.

12. Constraint on Subsequent Papers

All subsequent papers must:

1. treat the AMetric Boundary as non-operational,
2. presuppose standing before any operator discussion,
3. reject any construction invoking action, probability, or metricity at the boundary,
4. treat boundary violations as immediately inadmissible and terminal.

Status

Paper II is referee-hardened, canonical, and locked.