2. Invisible Retention Rate (IRR): Measuring the Preservation of Non-Legible Information

Definition

The **Invisible Retention Rate (IRR)** is a formal metric that measures the proportion of *invisible informational elements* preserved within a system after processing.

Invisible elements include silence, hesitation, contradiction, ambiguity, or non-quantifiable signals that carry epistemic meaning but resist standard representation.

Formal Definition

IRR = $N_{inv-out}$ / N_{inv-in}, where:

- **N_{inv-in}** = number of invisible informational events in raw input
- **$N_{inv-out}$** = number of those events retained after processing

IRR ∈ [0,1]

- IRR = 0 → total erasure
- IRR = 1 → full retention

Invisible Elements (Operational Examples)

- Pauses ≥ threshold duration
- Unresolved contradictions
- Ambiguous or affective expressions
- Statements resisting categorization (e.g. “I can’t explain”)

Methodological Insight

Standard systems maximize accuracy by **deleting noise**. IRR reframes this logic by treating deletion as an *epistemic choice* with ethical consequences.

Higher IRR values indicate architectures capable of:

- Preserving epistemic plurality
- Registering absence as information
- Avoiding premature reduction

Application Domains

- AI preprocessing pipelines
- Clinical diagnostics
- Educational assessment
- Bureaucratic documentation

Citation Note

The Invisible Retention Rate (IRR) is part of the MAMI Theory, but may be cited independently as a metric for measuring the preservation of non-legible or invisible information within epistemic systems.