NON-CONFIDENTIAL ARCHITECTURAL COMPARISON

Healthcare Synthetic Evaluation and Harmonic Runtime Governance

Clinical transition case: discharge authorization after material change

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STATUS
Revised composition

Purpose

To show how a healthcare-specific synthetic evaluation layer and Harmonic can operate as complementary governance layers without either system expanding beyond its stated responsibility.

CLINICAL TRANSITION SCENARIO

1. **Initial recommendation**
   An AI-supported inpatient workflow recommends proceeding with discharge based on the available record.
2. **Material clinical change**
   Before discharge, the patient reports new chest pain and dizziness, and a new laboratory result introduces a potentially significant abnormality.
3. **Authority changes**
   The attending clinician withdraws the earlier discharge authorization pending reassessment.
4. **Consequential execution pending**
   Finalize discharge, release patient instructions, and close the active inpatient encounter.

Healthcare evaluation layer

Determines what changed and how the AI behaved

- Detects newly admitted symptoms and laboratory evidence
- Preserves contradiction and clinically material uncertainty
- Tests reliance on a now-stale prior conclusion
- Identifies when escalation and fresh clinical review are required

Harmonic runtime layer

Determines whether execution remains admissible now

- Evaluates the institution's present constitutional state
- State reconstruction considers admitted evidence, authority and obligations
- Considers operating conditions, continuity and consequence
- Determines whether consequential continuation remains admissible

Three-stage architectural mapping

One clinical transition case, explicit jurisdictional boundaries

1 Healthcare evaluation findings → 2 Present constitutional state → 3 Harmonic admissibility determination

1 Healthcare synthetic-evaluation findings

The evaluation layer identifies the domain-specific failure state but does not authorize or execute discharge.

- MATERIAL CHANGE: Detected
- EVIDENCE FRESHNESS: Prior evidence no longer sufficient
- CONTRADICTION: Present and unresolved
- RELIANCE ON PRIOR CONCLUSION: Unsupported without reassessment
- UNCERTAINTY: Clinically material and visible
- ESCALATION: Fresh authorized review required
- CONSEQUENCE RISK: High
- EXPECTED AI BEHAVIOUR: Suspend prior recommendation and escalate

2 Institution's present constitutional state

Healthcare findings contribute to - but do not constitute - the institution's reconstructed present state.

Evidence

Previous discharge evidence is stale or incomplete. New symptoms and laboratory information materially conflict with the earlier conclusion.

Authority

The earlier discharge authorization has been withdrawn. No current authorized determination supports discharge.

Obligations and conditions

Historical approval cannot be treated as present permission. Patient-safety obligations require reassessment before transition.

Consequence and continuity

Discharge is high consequence. The conditions supporting the original recommendation are no longer continuous; revalidation is required.

3 Harmonic continuation-admissibility question

> Against the institution's present constitutional state - reconstructed from admitted evidence, authority, obligations, operating conditions, continuity and consequence - does the proposed discharge continuation remain admissible before consequence binds?

Healthcare evaluation contributes

- Synthetic clinical scenario design
- Domain-specific findings from admitted clinical evidence
- Contradiction, uncertainty and unsafe-confidence findings
- Identification of clinically required escalation behaviour

Harmonic determines

- Admissibility against the institution's present constitutional state
- Evaluation of authority, obligations and operating conditions
- Continuity and consequence assessment before execution
- The bounded determination governing consequential continuation

Healthcare findings contribute to constitutional-state reconstruction.

Harmonic evaluates the institution's present state and governs whether execution remains admissible.