Systemics Composition (K1)

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Charter

Charter *(normative)*

This spec defines how lawful kernels compose in serial, parallel, and temporal forms, preserving lawfulness via posted adapters/combinators and monotone contract combination.

Serial Composition

Posted adapter requirement *(normative)*

For serial composition with K1^ = (v1, 1,) and K2^ = (v2, 2,), any adapter f used to produce the second valuation MUST be posted as part of the record/contract. In particular, if v2 is defined from u and the upstream decision by: v2(u) = f(u, 1(v1(u), 1, 1)), then f MUST be included in posted data so downstream decisions remain records-only.

Monotone contract combination *(normative)*

The composite kernel K2 K1 is lawful only if (-A1 -A7) hold for the composite and if the combined contracts (, , C) are formed via a monotone operator (domain-chosen), i.e. tightening in any component must not rely on hidden slack.

Parallel / Product Composition

Posted decision combinator *(normative)*

For parallel/product composition K1 K2, both kernels evaluate and decisions are aggregated via a posted combinator comb: 2 Œ 2 2 (e.g., AND/OR). The choice of comb MUST be posted as part of the record/contract.

Monotone floors/budgets *(normative)*

Floors and budgets for parallel composition MUST be combined monotonically (tightening cannot rely on hidden slack).

Temporal Composition (window page book)

Pages and books *(normative)*

A page is a lawful record for one window. A book is an ordered sequence of pages; optionally, pages may be hash-chained. Chaining preserves replay and does not alter decisions.

Composition Invariants

Records-only preserved *(normative)*

Composition MUST preserve -A2 (records-only): any dependency introduced by composition must be posted.

Replay preserved *(normative)*

Composition MUST preserve reflexive reproducibility and replayability obligations implied by the contract.

References

- GraphFrame K0 (GF0) ()
- SpecFrame K1 ()
- Systemics Minimal Specification ()