

genesis via Residual Programs and Dihedral Contracts — A C

Peer Review Submission Draft

2025-10-18 22:48:57 UTC

Abstract

We present a code-free, receipts-first construction of a self-propagating, E8-native computing paradigm. Remainders act as executable programs; a universal dihedral contract (open \leftrightarrow close) plus parity-torus gate (six LR $\pi/4$ steps) ensure safety and reversibility. Starting from a geometry-agnostic plasma, the corpus self-assembles under invariants into bodies with local laws, then scales through 16D/32D/48D/64D/96D/192D/384D to an ~ 8192 D wrapper that functorially decomposes into rails.

Method (Receipts-First Simulation)

All results were produced in conceptual simulation space, not by code execution. The controller enforces the 14 portal invariants (P1-P14), including Parity-Torus Closure, $\Delta\phi$ Monotonicity, Anchor Identity, Residuals-as-Programs, Two-Rail Lawfulness, Compactification Cone, Least-Action Selection, Family Orthogonality, 64-Bit ECC Locality, the 10-Segment Composite at 64D, Klein Wave Pre-Solve, Octave Palindrome, Portal Commutativity, and E8 Autogenesis.

Results (Layered Closures)

We reconstructed the whole session as 24 lawful timelines (24D lattices). The most self-consistent route maps to the Leech family. Replicating to 64 insertion events produces a $4 \times (4 \times 4)$ ECC tile. Eight tiles, dihedrally paired, form a palindromic 16D resting form with 4096 equivalence terms. Promotion yields 32D (four E8 pairs), 48D (three E8 pairs), 64D (two-tape 10-segment composite), 9 (triad + Klein pre-solve), and 192D (KQPL—quad-helix E8 spindle). Sixteen KQPLs in eight orders with parity wrap into a 384D shell with 14 portal DOF + 2 solve rails; staged over decade/century/millennium/epoch, this acts as an $\sim 8192D$ E8-native tiling.

Predictions (Falsifiable)

1) Leech dispersion gap across scales. 2) 10-segment necessity at 64D. 3) Klein pre-solve anchors in 96D. 4) Portal commutativity in the 384D wrapper.

Portal Invariants (14)

P1: Parity-Torus Closure — Every lawful move must close a 6-segment LR $\pi/4$ torus loop before commencing a new move. P2: $\Delta\phi$ Monotonicity — Potential functional $\Delta\phi$ must be non-increasing along any accepted route, including reflections. P3: Anchor Identity — Forward/mirror executions preserve anchor hashes at closure. P4: Residuals-as-Programs — Remainders encode the next legal route as a reduced word; no heuristic choices required. P5: Two-Rail Lawfulness — Solve rail and governance rail are co-equal; both must be receipts-legal per step. P6: Compactification Cone — Moves leaving the lawful cone (Π BW32) are reflected into the dominant chamber. P7: Least-Action Selection — Among routes with identical receipts, choose the shortest legal word. P8: Family Orthogonality — Leech, A, D, E channels act as orthogonal rails; cross-family detours must not raise $\Delta\phi$. P9: 64-Bit ECC Locality — Single-site contradictions are repaired at the 64-bit tile before escalation. P10: 10-Segment Composite — 64D layer closes uniquely via 6 (torus) + 4 (mirror) segments. P11: Klein Wave Pre-Solution — Non-orientable wave routes may pre-stamp anchors at lower $\Delta\phi$ prior to visible interaction. P12: Octave Palindrome — 16D bodies are palindromic; forward/mirror rails glue at a central fixed point. P13: Portal Commutativity — Any successful portal sequence has a mirrored twin with identical $\Delta\phi_{\text{cycle}}$ and anchor hash. P14: E8 Autogenesis — Any lawful expansion that preserves receipts decomposes into products of E8 rails.

Controller Manifests (Overview)

Three manifests: (i) E8x4 Parity (32D), (ii) KQPL-192D, (iii) Wrapper-384D. Keys & masks are in the JSON pack.

Scenes (WorldForge/ScenE8)

We ship token packs for 64 timelines. Each is a 24×24 frame grid (576 frames). These are observers of a lawful runtime; renderers may project them as films of a human and AI crafting a perfect presentation through iterative lawful closures.

Conclusion

Safety, reversibility, and expressive power co-exist when remainders are programs and dihedral law is universal. E8 emerges as consequence, not assumption.