

Engagement-Authority Governance Console

authrex.systems · browser simulation · seeded PRNG · synthetic data only · client-side execution

Scope. Everything in this document describes independent research artifacts: browser simulations, formal models, and unbuilt hardware reference designs. Maturity is self-assessed. Nothing here is a certification, an Authorization to Operate, a government endorsement, or evidence of a fielded system. Model-checking results apply to the stated finite model and assumptions, not to physical implementations.

PURPOSE

Engagement-authority governance gate that adjudicates each proposed action to one of five outcomes: authorize, clamp, downgrade, deny, or hold for human. A fail-closed invariant monitor screens every decision before authority is granted, so authority is withheld by default unless every invariant is satisfied under the modeled conditions.

CONTROLS AND DISPLAY

- Scenario selector: five seeded scenarios with seeded PRNG; the seed field reproduces any run exactly.
- RUN / PAUSE / STEP drive the decision loop; the verification panel reruns the packaged check suite inside the page.
- Outcome view shows the adjudicated action; the ledger panel shows the SHA-256 hash-chained decision record.

READING THE VERDICTS

- AUTHORIZE / CLAMP / DOWNGRADE / DENY / HOLD FOR HUMAN per proposed action; the monitor defaults to the safe outcome on any failure.
- Fail-closed behavior means authority is withheld unless every invariant is satisfied; results apply to the modeled conditions only.

LIMITATIONS

Self-assessed TRL 2 to 4 concept demonstration of engagement-authority governance logic. Governance and assurance only, with no targeting and no kinetic effects. Not an emulation of any real weapon, platform, or engagement system.

CANONICAL TERMINOLOGY

SATA: Sensor & Actor Trust Assessment · HMAA: Human-Machine Authority Allocation · ADARA: Adversarial Deception-Aware Reasoning · MAIVA: Multi-Agent Integrity Voting · FLAME: Forced Latency for Authority-Managed Escalation · CARA: Controlled Authority Recovery Architecture · ERAM: Escalation Risk Assessment Model