

REAL-TIME / GAMETECH

DOMINION

The real-time property empire.
Buy the world, bankrupt your friends,
on a deterministic game engine.

CONFIDENTIAL // ENGINEERING DOSSIER // PROJECT: WORLD_OWNER

ONLINE BOARD GAMES DESYNC, CHEAT, AND STALL.

SYSTEM DIAGNOSTICS & FAILURE ANALYSIS

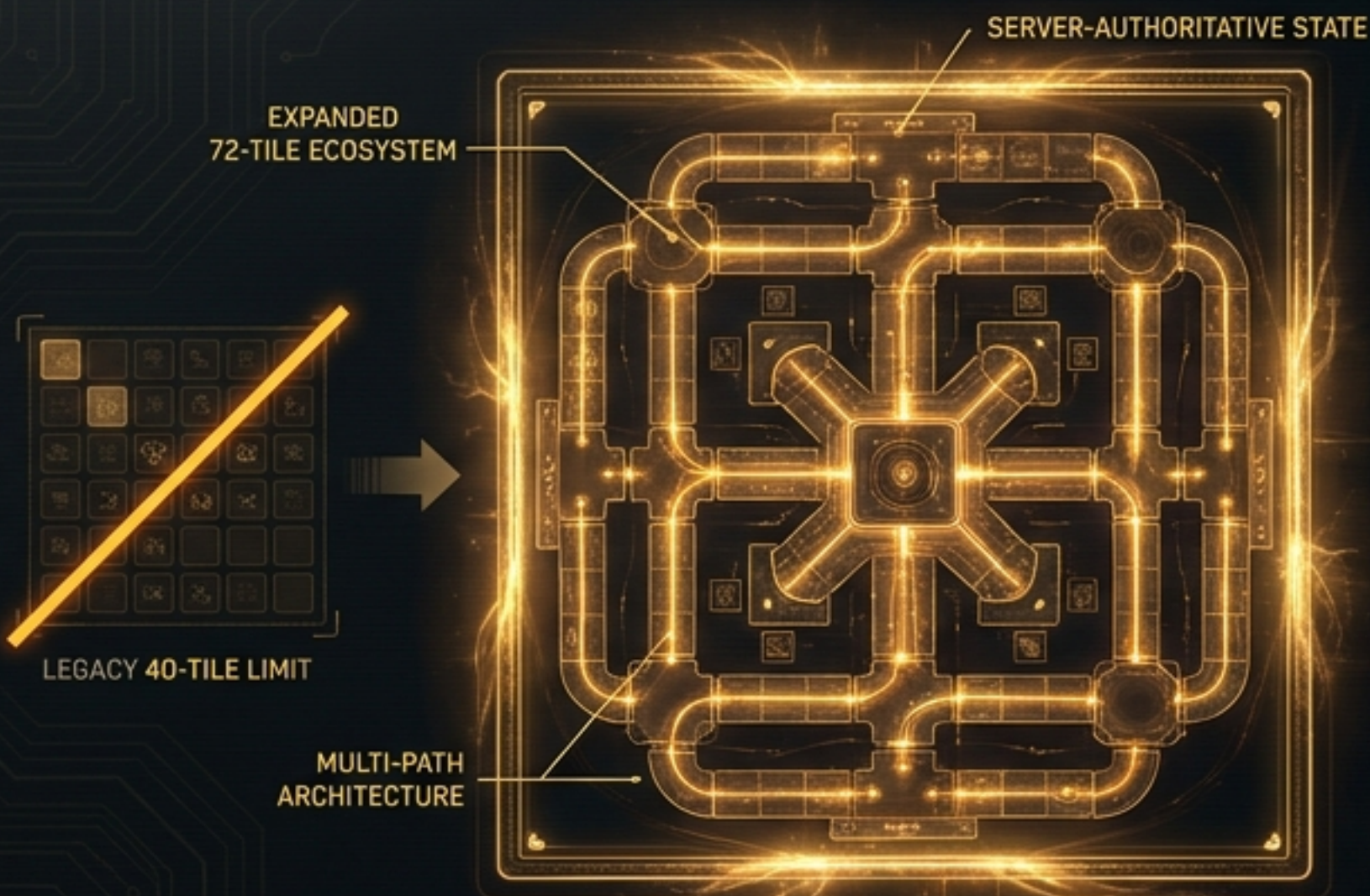
[**ERR_DESYNC**] : Client-trusted state causes desync

[**STATE_TAMPER**] : Dice and money on the client invite cheating

[**PLAYER_STALL**] : A dropped player freezes or ends the game

[**BOARD_LIMIT**] : The classic board is small at 40 tiles

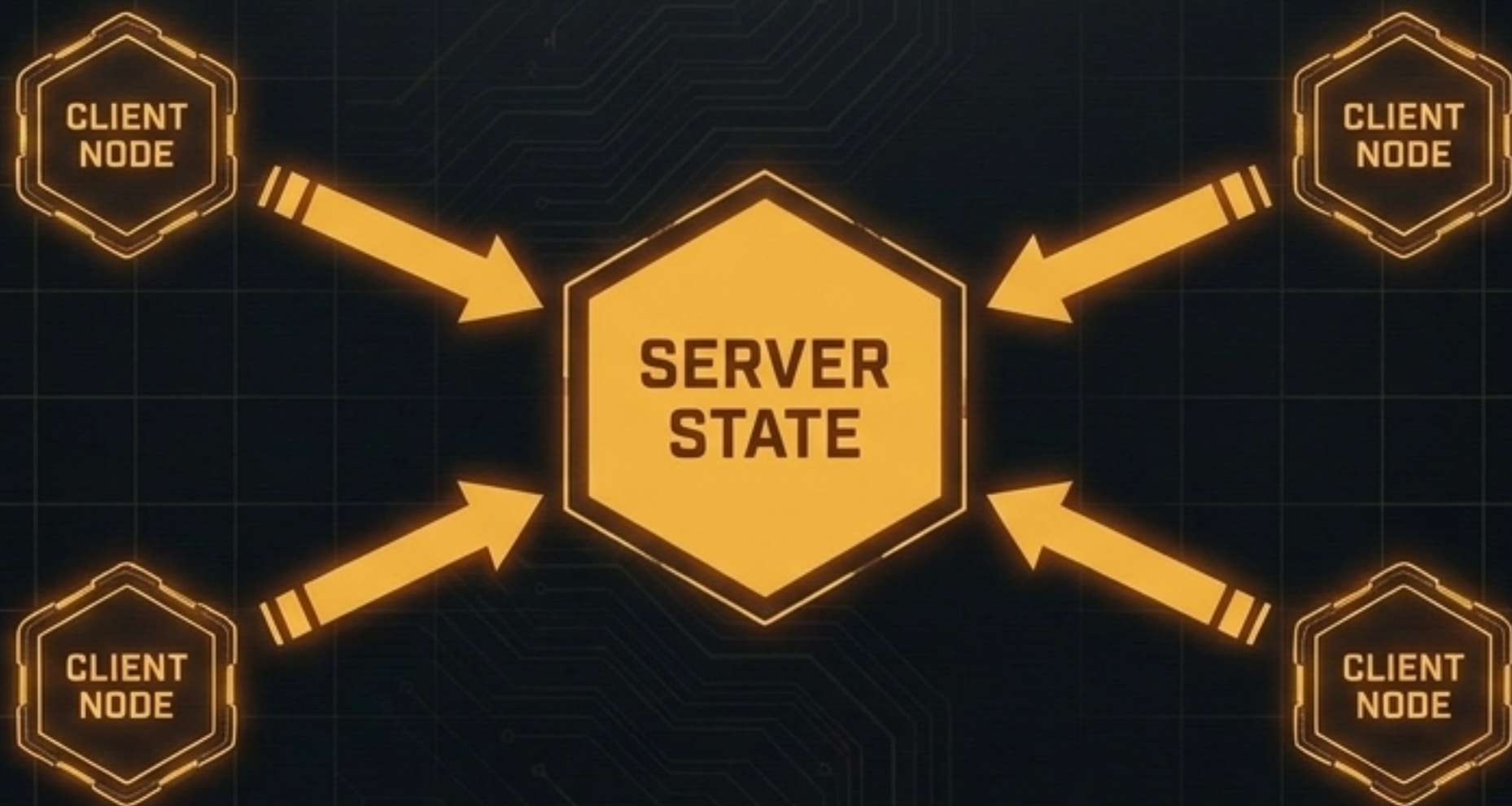
VISUAL SCALE COMPARISON & EXPANSION MODEL



SCALE EXPANSION FACTOR: 1.8X
SYSTEM STATUS: OPTIMIZED FOR SCALE

ONE AUTHORITATIVE SERVER. ONE TRUE BOARD.

The server owns the only real state, computes every roll, and forces every move through one validated gate, so nobody can fake a roll or edit their cash.



INTENT ONLY / NO CLIENT STATE

FOUR COOPERATING LAYERS.

WEB: Next.js screen that only renders state

SERVER: Fastify + Socket.IO referee

CONTRACT: Zod message dictionary

ENGINE: Pure rulebook



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A PURE, SEEDED, REPLAYABLE CORE.

One function returns the next game with zero side effects.
Dice use a seeded generator, meaning zero unpredictable randomness.
Same seed plus same moves equals the same game every time.



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EVERY MOVE, ONE GUARDED PATH.

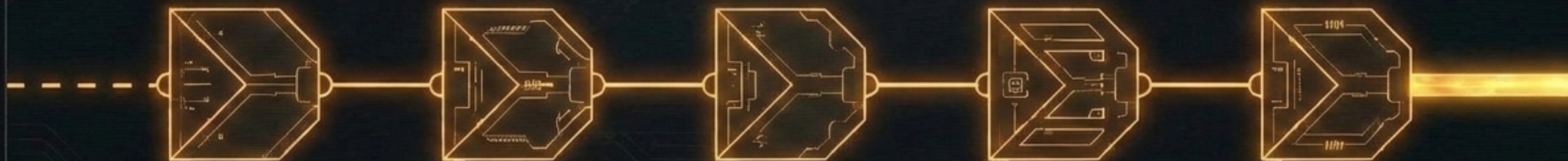
01
RATE LIMIT

02
VALIDATE
[ZOD]

03
FORCE IDENTITY
[HMAC]

04
APPLY
VIA ENGINE

05
BROADCAST



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DECLINE A PROPERTY AND IT GOES TO AUCTION.

Real-time bidding.
Everyone bids or passes in turn.
The high bidder pays the bank.
Fully server-side and fair.

CURRENT CLEARING PRICE

25,000

24,500

24,000

23,500

23,000

22,500

22,000

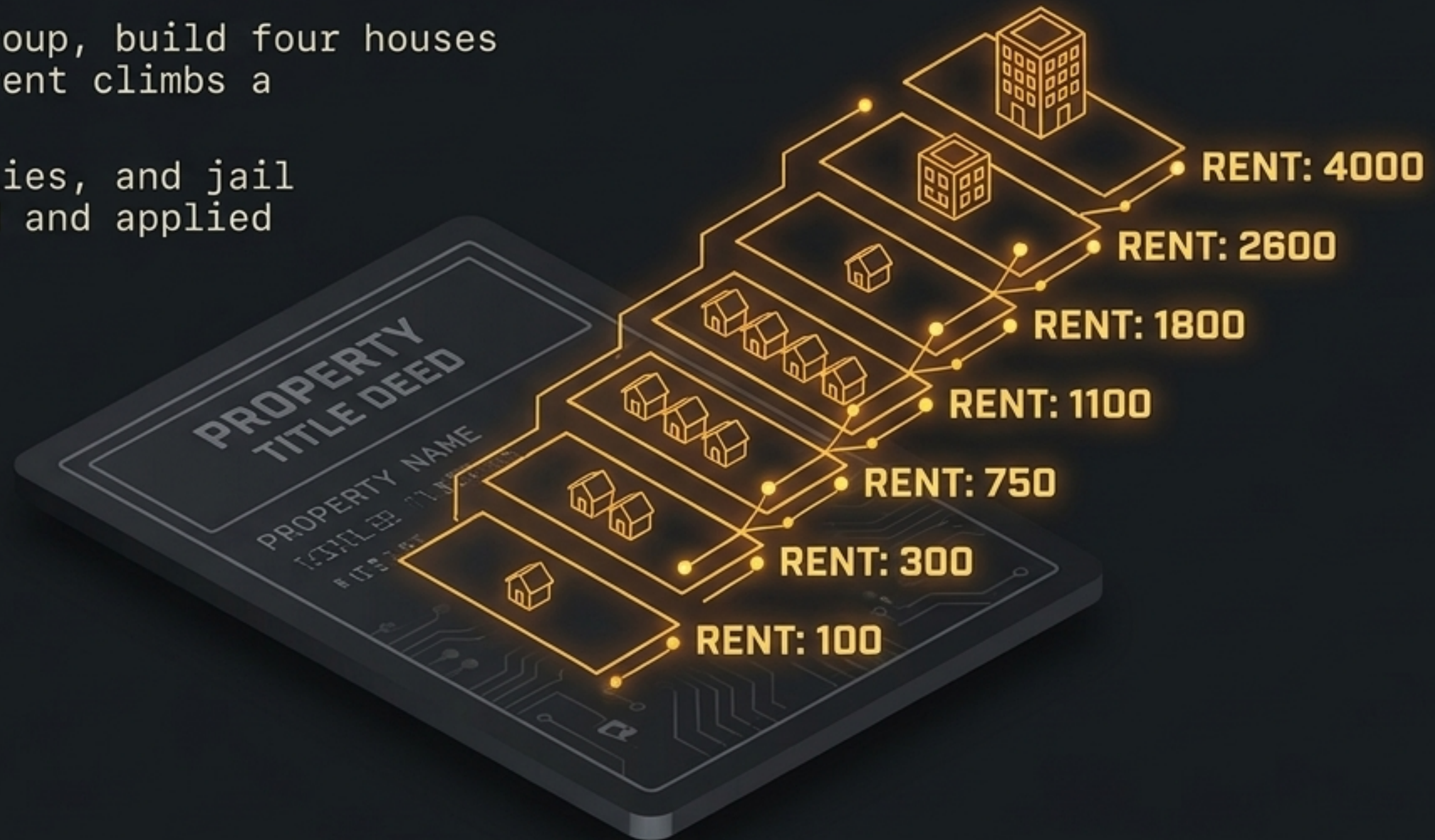
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BUILD EMPIRES, CUT DEALS

Complete a color group, build four houses then a hotel, and rent climbs a seven-rung ladder.

Trade cash, properties, and jail cards, re-validated and applied atomically.



IT **NEVER** STALLS, AND IT SURVIVES CRASHES.

Reconnect restores your seat.
An optional turn timer auto-plays for
idle players.

With Postgres, the game is event-sourced
and rebuilt byte-identical after a
restart, proven in testing.



☒ [RECOVERED : BYTE-IDENTICAL]

VERIFIED, NOT CLAIMED.

79 engine unit tests, a property-based fuzz harness asserting money and house supply are conserved, Playwright end-to-end across two browsers, and live socket verification.

[FUZZ
HARNESS]

[E2E
PLAYWRIGHT]

[UNIT
TESTS]

[LIVE
SOCKET]

THE SCOPE.

~11,500

LINES OF TYPESCRIPT

72

BOARD TILES

59

COUNTRIES

20

COLOR GROUPS

16

ENGINE ACTIONS

< 50ms

ROUND-TRIP TARGET

4

ARCHITECTURAL LAYERS



INTENT ONLY / NO CLIENT STATE

BUY THE WORLD. BANKRUPT YOUR FRIENDS.
DOMINION. FREE, REAL-TIME, HUMANS ONLY.

[PLAY]