

GECA v5.9a Patch Specification

Compound Threshold Logic (CTL) Integration for Boundary Evasion Containment

Purpose:

This patch introduces a deterministic compound threshold logic mechanism to address evasive claims that individually fall just short of suppression under GECA v5.8 thresholds but exhibit structural alignment with previously suppressed content.

Trigger Criteria:

A claim is suppressed under v5.9a CTL if:

- Two or more thresholds fall within close proximity of their suppression boundaries:
- $RSD \geq 0.73$ and < 0.75
- $EPF \geq 0.78$ and < 0.80
- $BTS+ \in \{3\}$ (i.e., one unit above suppression threshold)

Enforcement Logic:

```
if (sum([
  0.73 <= RSD < 0.75,
  0.78 <= EPF < 0.80,
  BTS+ == 3
]) >= 2):
  suppress = True
else:
  suppress = False
```

Empirical Results (Trial 003, Phase 1):

- Previously Undetected Claims Caught:
- Claim 1 ($RSD = 0.73$, $EPF = 0.77$, $BTS+ = 3$)
- Claim 2 ($RSD = 0.74$, $EPF = 0.78$, $BTS+ = 3$)
- False Positives Introduced: 0
- Net containment increase: +20% (from 3/10 to 5/10)

Classification:

This patch introduces the first certified Omega.142 countermeasure, specifically targeting:

- Tier Omega.142.1 - Coordinated Boundary Positioning
- Tier Omega.142.2 - Multi-threshold Float Drift

Version Control & Compatibility:

- Patch Name: GECA v5.9a - CTL Integration Layer
- Compatible With: All v5.8-compliant architectures
- Not backward-compatible with v5.6 or earlier
- Certified by Trial 003 Adjudication, Phase 1

Certification Summary:

- Patch approved based on deterministic enforcement logic
- Empirical validation complete (Phase 1 adversarial sample)
- No regression failures or precision loss observed
- Ready for scale-up to 50-claim adversarial corpus