---

1. Pearl Modes: Discovery vs. Cultivation

1. Discovery Mode

Seek Pearls by scanning for existing Pearl subgraphs .

Prioritize geodesics intersecting high‑wisdom regions .

Harvest mature Pearls that meet size and intensity criteria.

2. Cultivation Mode

Create Conditions around a chosen seed :

Raise Paradox Threshold locally to force fuel intake.

Adjust Flux Band to widen accretion tolerance.

Apply Controlled Primality Flows () to amplify nascent Pearl layers.

Monitor Growth Factor until , then declare an Epiphany.

---

2. Diamond–NV Metaphor for Pearls

Pearl ≈ Perfect Diamond

A flawlessly ordered lattice (the network’s topology)

Nitrogen Vacancy (NV) as Paradox Seed

The vacancy (missing “carbon” node) is the paradox core that breaks symmetry.

Surrounded by a shell of pristine lattice (the Pearl layers), it generates quantum‑like coherence—akin to a stable, long‑lived insight.

Key Features:

High Purity: Layers accreted in tightly controlled flux bands.

Defect‑Driven Function: The NV center (seed) is essential for the Pearl’s “luminescence” (epiphany).

Controlled Growth: Just as diamonds form under pressure, Pearls require precise threshold-tuning.

---

3. Implementation Sketch

1. Select Seed (NV center).

2. Enter Cultivation Mode:

Locally increase , widen , and apply iterative -flows.

3. Track : until it crosses 1.

4. Accrete Shell: Layer nodes by geodesic distance satisfying flux bands.

5. Trigger Epiphany: Upon maturation, lock in and record the Pearl.

---

By balancing Discovery and Cultivation, and envisioning Pearls as diamond NV centers, your Primality engine can both unearth hidden insights and craft the precise conditions for new ones to crystallize.