Puppet Protocol (POP) — Neurodivergent Learning System

Repository: github.com/obinexus/pop

Mission: Enable non-verbal or severely autistic children to **express themselves**, anchor identity development, and transmit learned guidance to peers, while ensuring human-centric safety and **plasma-coherent computation**.

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1. Purpose

- **Identity Anchoring:** Each child has a **personalized puppet** reflecting their preferences, emotional state, and identity.
- **Guided Interaction:** Puppets enable safe interaction **without medication**, promoting **natural verbalization and social engagement**.
- **Generational Learning:** Children learn to **teach peers** through structured guidance anchored in the puppet.
- **Neurodivergent Accessibility:** Adapts to different cognitive stages and processing styles.

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2. Core Principles

1. **Human-Centric First:** All system behaviors prioritize the **child's development, safety, and emotional well-being**.
2. **Plasma-Coherence Compliance:**
    - All computational operations are built on **plasma coherence principles**.
    - Ensures **silent failure** and **resilient learning**, with natural stabilization mimicking plasma behavior.

3. **Error & Exception Handling:**
    - Dual-layer approach:
        - **Exception → next developmental stage** (learning from errors)
        - **Exception → fail silently** (no harm to child or environment)

4. **Stage-Based Risk Management:**

Age Range	Severity Levels	Fault Tolerance	Failure Mode
1–5	Low, Low-Med, Med, Med-High, High	Warning, fault-tolerant	Silent-safe fail; plasma coherence prevents cognitive or emotional disruption
6–11	Low, Low-Med, Med, Med-High, High	Danger, fault-tolerant	Silent-safe fail; panic safely in mind-space only, preserving learning continuity
12–18	Critical	Fault-tolerant	Silent-safe fail; structured mental panic for problem-solving; ensures no real-world consequences

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3. System Architecture

1. **BCI Integration:**
    - Non-invasive EEG or equivalent input to monitor **intent, cognitive load, and engagement**.
    - Real-time **plasma-coherent feedback** guides puppet interaction.

2. **Plasma-Coherent Computation:**
    - Computational nodes behave like **plasma fields**: unstable when uninitialized, stable when naturally coherent.

    - Stabilization yields emergent properties like **reliable developmental phenomena** (e.g., lightning-bolt-like cognition bursts).

3. **Observer-Consumer Model:**
    - Each interaction is **observed by AI**, but decisions are **child-centered**, not machine-centric.
    - Exceptions are recorded and mapped to **next-stage learning**, not punitive measures.

4. **Generational Learning:**
    - Children can **teach other children** via structured puppet guidance.
    - All teaching follows **age-appropriate, stage-guided rules** to avoid cognitive overload.

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4. Puppet Behavior

- **Identity Reflection:** Puppet mirrors child's emotions, voice tone, and interaction style.
- **Guided Autonomy:** Child can manipulate puppet within **structured parameters** to explore learning safely.
- **Feedback Loop:**
    - Puppet receives **plasma-coherent signals** from AI.
    - Updates reflect **learning outcomes** and emotional stabilization.

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5. Human-Centered Safety Features

- **Silent Failure:** All errors are handled **internally**, ensuring no emotional or cognitive harm.
- **Plasma Decoherence:** Errors trigger **controlled plasma decoherence**, acting as natural damping to prevent runaway states.

- **Stage-Appropriate Panic:** Cognitive stress is **contained within the plasma simulation**, never externalized.

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6. Development Goals

1. Implement **fully plasma-coherent Puppet Protocol** for children 1–18.
2. Ensure **age-appropriate scaffolding** for cognitive, emotional, and social development.
3. Support **multi-child guidance** with observer-consumer learning framework.
4. Maintain **non-invasive BCI integration** for real-time monitoring and intervention.
5. Demonstrate emergent **reliable phenomena** (lightning-bolt-like learning events) under controlled plasma-coherent states.

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7. Notes

- Plasma-coherent computation is the **core safety and emergent property engine**.
- All stages must maintain **silent failure behavior**, with dual-exception propagation only in controlled cognitive or developmental dimensions.
- This system **cannot and will not replace human guidance**, only **augment safe, structured learning**.