PSL-C v2.0 — Extended RFC / Technical Deep-Dive

This document provides the complete engineering-level technical specification for PSL-C v2.0, including full semantic ordering rationale, transformer alignment, object-binding logic, token behavior, multi-shot sequencing, and system integration notes.

1. Architectural Overview

PSL-C v2.0 is a hierarchical, deterministic prompting system aligned with cinematic scene grammar and neural transformer inference behavior. It reduces ambiguity by enforcing strict semantic order.

2. Semantic Cascade Model (SCM)

The SCM describes how information flows top-down: visual style → environment → action → objects → camera → lighting → audio → physics → environment → language. This ordering mirrors attention maps.

3. Category Separation Logic

PSL-C prevents semantic contamination by isolating categories: STYLE cannot override CAMERA, MOTION cannot override LIGHTING, TIMING cannot rewrite WEATHER. Isolation stabilizes inference.

4. Detailed Category Ordering

The exact ordering is: STYLE, COLOR, LOCATION, VIBE, MOTION, ANIMAL, ANIMAL BEHAVIOR, INTERACTION, CHARACTER BEHAVIOR, OBJECTS, CAMERA, LIGHTING, AUDIO, TIMING, WEATHER, PHYSICS, MATERIALS, ENVIRONMENT INTERACTION, LANGUAGE, DIALOGUE, CLIP LENGTH.

5. Object Category (OBJ) Justification

OBJ is positioned after CHARACTER BEHAVIOR to bind objects directly to characters before CAMERA logic. This ensures props, devices, tools, and scene items are interpreted with correct interactive weight.

6. Tokenization Behavior

PSL-C compresses 1000–2000 token natural language prompts into 40–70 token compact structures. This reduces inference complexity, energy consumption, and GPU time.

7. Multi-Shot Sequencing

PSL-C supports sequential shot blocks, enabling film-like production pipelines. Each block inherits global categories but redefines motion/camera specifics.

8. Continuity Systems

Character tags, lighting consistency, weather persistence, and spatial anchors can be retained across multiple PSL-C scenes for long-form video and full film generation.

9. Transformer Integration

PSL-C categories are ordered to match transformer attention priority: global cues first, interactive actions second, capture logic third, environment fourth, dialogue last.

10. Latent-Space Stability

Strict hierarchical ordering reduces drift and stabilizes latent embeddings. Compact categories behave as stable symbolic anchors rather than natural-language clusters.

11. Implementation Guidelines

PSL-C can be parsed into JSON, YAML, XML, or protobuf for pipeline integration. Each category is treated as a discrete field to be interpreted deterministically.

12. Error Handling

Optional categories simply drop from the hierarchy without penalty. Missing fields must not be hallucinated; null semantics should be maintained.

13. Temporal Logic

TIMING precedes WEATHER and PHYSICS to avoid conflict between time-based events and physical/environmental simulation layers.

14. Compact Encoding

Compact encoding uses STY/COL/LOC/etc. with slash-separated value stacks. Example: CAM handheld/OTS/hunt.

15. Interoperability

PSL-C integrates with prompt-builders, UI editors, LLM preprocessors, and video generation pipelines.

16. Licensing Notes

17. Version History

v1.x laid the foundational DSL. v2.0 introduces the OBJ category, stabilizes ordering, formalizes compact encoding.

18. Conclusion

PSL-C v2.0 provides a rigorous, transformer-aligned framework for cinematic AI prompting, enabling repeatability, efficiency, and production-level control.