Core Emotion Framework (CEF): TS 21 Appendix C — Update Validation Rules

Canonical Rules for Maintaining Integrity During CEF-KG Updates
Version 1.0 — Phase 4

Author: Jamel Bulgaria
ORCID: 0009-0007-5269-5739
Affiliation: OptimizeYourCapabilities.com
Contact: admin@optimizeyourcapabilities.com

Status: Canonical Appendix (TS-21)

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0. Purpose and Canonical Position

Appendix C defines the **validation rules for updates** applied to the CEF Knowledge Graph (CEF-KG) after initial population.

It ensures that:

- updates preserve identity
- updates preserve canonical structure
- updates do not introduce contamination
- updates remain aligned with TS-1 → TS-21
- updates do not violate reasoning or ontology constraints

This appendix introduces **no new emotional constructs**.
It defines the **rules that govern how the CEF-KG may evolve safely over time**.

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1. Update Categories

All updates fall into exactly **three canonical categories**:

1. **Parameter Updates**

2. **Inference Updates**
3. **Metadata Updates**

No other update categories are permitted.

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2. Parameter Updates (Allowed)

Parameter updates modify **numeric or symbolic values** associated with:

- activation parameters
- stability parameters
- predictive parameters
- plasticity parameters
- governance parameters

Rule P-1: Identity Preservation

Parameter updates must not alter:

- operator identity
- facet identity
- center identity

Rule P-2: Structural Preservation

Parameter updates must not:

- create new transitions
- create new modulation pathways
- alter facet ordering
- alter center membership

Rule P-3: Canonical Bounds

Updated values must remain within canonical ranges defined in:

- TS-12 (stability)
- TS-13 (prediction)
- TS-16 (plasticity)
- TS-17 (governance)

Rule P-4: No Cross-Parameter Contamination

Updating one parameter must not implicitly modify another.

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3. Inference Updates (Conditionally Allowed)

Inference updates occur when the TS-19 Reasoning Engine produces new:

- transitions
- modulation cascades
- stability assessments
- predictive indicators
- plasticity projections
- governance actions

Rule I-1: Inference Validity

All inference updates must follow TS-19 Appendix A.

Rule I-2: No Inference Drift

Inferences must not introduce:

- new operators
- new facets
- new centers
- new emotional constructs

Rule I-3: No Structural Overrides

Inferences may **add** lawful edges but may not:

- remove canonical edges
- override TS-1 transitions
- override TS-3 modulation rules

Rule I-4: Constraint Re-Validation

Every inference update must pass:

- identity constraints
- directionality constraints

- modulation constraints
- predictive constraints
- plasticity constraints
- governance constraints

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4. Metadata Updates (Allowed)

Metadata updates may modify:

- version numbers
- timestamps
- provenance
- validation status
- reasoning logs

Rule M-1: Metadata Isolation

Metadata updates must not affect:

- nodes
- edges
- parameters
- inferences

Rule M-2: Provenance Integrity

All updates must record:

- source
- timestamp
- update type
- validation outcome

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5. Forbidden Updates

The following updates are **strictly prohibited**:

5.1 Structural Changes

- adding new operators
- adding new facets
- adding new centers
- adding new transitions
- adding new modulation pathways
- removing canonical transitions
- removing canonical modulation pathways

5.2 Identity Violations

- facet migration
- operator merging
- center blending

5.3 Ontology Violations

- adding new classes
- adding new properties
- altering TS-18 ontology structure

5.4 Reasoning Violations

- manually adding inferred edges
- overriding TS-19 inference logic

5.5 Semantic-Web Violations

- allowing external ontologies to override CEF definitions

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6. Update Validation Pipeline

```
function validateUpdate(graph, update):
  if update.type == "parameter":
    validateParameterUpdate(update)

  if update.type == "inference":
    validateInferenceUpdate(update)
```

```
    if update.type == "metadata":
        validateMetadataUpdate(update)

    enforceGlobalConstraints(graph)
    return VALID
```

If any rule fails:

return INVALID with errorCode

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7. Global Constraint Enforcement

All updates must pass the global constraints defined in TS-20 Appendix C:

- identity constraints
- structural constraints
- dynamic constraints
- predictive constraints
- plasticity constraints
- governance constraints
- contamination prevention
- coherence preservation

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8. Canonical Status

Appendix C is the authoritative update validation specification for TS-21.
It defines how the CEF-KG may evolve safely while preserving canonical integrity.

It is subordinate only to:

- Core Essence Document
- TS-1 → TS-21
