Core Emotion Framework (CEF): TS 18 Appendix A — JSON LD Schema Specification

Canonical Machine-Readable Schema for the CEF Computational Ontology
Version 1.0 — Phase 4

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

Status: Canonical Appendix (TS-18)

---

0. Purpose and Canonical Position

Appendix A defines the **JSON-LD schema** for the CEF Computational Ontology (TS-18).
It provides the machine-readable structure for:

- operators
- facets
- centers
- transitions
- modulation pathways
- capacity & threshold parameters
- dysregulation patterns
- predictive indicators
- plasticity parameters
- governance signals

This appendix is a **shared technical artifact** used by:

- TS-18 (ontology)
- TS-19+ (future computational specifications)
- EL-Series
- Knowledge Graph
- INTIMA (TS-9)
- mapping engines (TS-6)
- validation logic (TS-2)

It does **not** introduce new emotional constructs.
It encodes existing constructs in a canonical JSON-LD format.

---

1. JSON-LD Context Definition

```
{
  "@context": {
    "cef": "https://cef.schema.org/",
    "id": "@id",
    "type": "@type",

    "Operator": "cef:Operator",
    "Facet": "cef:Facet",
    "Center": "cef:Center",
    "Transition": "cef:Transition",
    "Modulation": "cef:Modulation",
    "Capacity": "cef:Capacity",
    "Threshold": "cef:Threshold",
    "DysregulationPattern": "cef:DysregulationPattern",
    "PredictiveIndicator": "cef:PredictiveIndicator",
    "PlasticityParameter": "cef:PlasticityParameter",
    "GovernanceSignal": "cef:GovernanceSignal",
```

"operatorId": "cef:operatorId",

"facetId": "cef:facetId",

"centerId": "cef:centerId",

"belongsToCenter": { "@id": "cef:belongsToCenter", "@type": "@id" },

"hasFacet": { "@id": "cef:hasFacet", "@type": "@id" },

"canonicalSuccessor": { "@id": "cef:canonicalSuccessor", "@type": "@id" },

"modulates": { "@id": "cef:modulates", "@type": "@id" },

"activationLevel": "cef:activationLevel",

"activationThreshold": "cef:activationThreshold",

"activationRange": "cef:activationRange",

"modulationStrength": "cef:modulationStrength",

"modulationElasticity": "cef:modulationElasticity",

"modulationLatency": "cef:modulationLatency",

"capacityLimit": "cef:capacityLimit",

"thresholdSensitivity": "cef:thresholdSensitivity",

"thresholdSpacing": "cef:thresholdSpacing",

"transitionSmoothness": "cef:transitionSmoothness",

"transitionLag": "cef:transitionLag",

"transitionResistance": "cef:transitionResistance",

"driftVelocity": "cef:driftVelocity",

"loadAccumulationRate": "cef:loadAccumulationRate",

```
    "modulationDecayRate": "cef:modulationDecayRate",

    "microAdjustmentStep": "cef:microAdjustmentStep",
    "facetReorderingDelta": "cef:facetReorderingDelta",
    "centerMicroShift": "cef:centerMicroShift",

    "selfCorrectionGain": "cef:selfCorrectionGain",
    "coherenceProtectionFactor": "cef:coherenceProtectionFactor"
  }
}
```

---

2. Operator Schema

```
{
  "@type": "Operator",
  "operatorId": "Sensing",
  "belongsToCenter": "Head",
  "hasFacet": [
    "Sensing_F1",
    "Sensing_F2",
    "Sensing_F3",
    "Sensing_F4",
    "Sensing_F5"
  ],
  "canonicalSuccessor": "Calculating",
  "modulates": ["Calculating"]
}
```

---

3. Facet Schema

```
{
  "@type": "Facet",
  "facetId": "Sensing_F1",
  "belongsToOperator": "Sensing",
  "canonicalOrder": 1,
  "functionalDefinition": "Environmental Registration"
}
```

---

4. Center Schema

```
{
  "@type": "Center",
  "centerId": "Head",
  "containsOperator": ["Sensing", "Calculating", "Deciding"],
  "weightingParameters": {
    "baselineWeight": 1.0
  }
}
```

---

5. Transition Schema

```
{
  "@type": "Transition",
  "fromOperator": "Sensing",
  "toOperator": "Calculating",
  "transitionSmoothness": 0.8,
  "transitionLag": 0.1,
  "transitionResistance": 0.05
}
```

---

6. Modulation Schema


```
{
  "@type": "Modulation",
  "fromOperator": "Expanding",
  "toOperator": "Constricting",
  "modulationStrength": 0.7,
  "modulationElasticity": 0.4,
  "modulationLatency": 0.2
}
```


---

7. Capacity & Threshold Schema


```
{
  "@type": "Capacity",
  "operatorId": "Boosting",
  "capacityLimit": 1.0
}
{
  "@type": "Threshold",
  "operatorId": "Boosting",
  "thresholdSensitivity": 0.6,
  "thresholdSpacing": 0.2
}
```


---

8. Dysregulation Pattern Schema


```
{
  "@type": "DysregulationPattern",
  "patternId": "ChronicFusion",
  "involvesOperators": ["Expanding", "Boosting"]
```

```
}
```

---

9. Predictive Indicator Schema

```
{
  "@type": "PredictiveIndicator",
  "indicatorId": "ModulationDecay",
  "predicts": "StabilityCollapse",
  "modulationDecayRate": 0.3
}
```

---

10. Plasticity Parameter Schema

```
{
  "@type": "PlasticityParameter",
  "operatorId": "Deciding",
  "microAdjustmentStep": 0.05,
  "facetReorderingDelta": 0.02
}
```

---

11. Governance Signal Schema

```
{
  "@type": "GovernanceSignal",
  "operatorId": "Achieving",
  "selfCorrectionGain": 0.4,
  "coherenceProtectionFactor": 0.7
}
```

---

12. Canonical Constraints

All JSON-LD instances must preserve:

- operator identity
- facet boundaries
- center architecture
- transition directionality
- modulation reciprocity
- capacity limits
- threshold predictability
- whole-system coherence

No JSON-LD representation may introduce:

- new operators
- new facets
- new centers
- illegal transitions
- illegal modulation pathways
- cross-center facet migration

---

13. Canonical Status

Appendix A is the authoritative JSON-LD schema for TS-18.
It is a shared Phase-4 technical artifact used across the entire computational ecosystem.
