



CMOS-SB Master Glossary

Canonical Definitions for the CMOS-SB Ecosystem

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This glossary provides authoritative definitions for all terms used across the CMOS-SB publication set. In the event of any conflict between a definition here and a definition in a specific standard, the standard-specific definition governs within the scope of that standard.

How to Use This Glossary

This Master Glossary defines all canonical terms used across the CMOS-SB ecosystem, including the Flagship Master Document, Founding Document, the five Governance Spine Standards, the CMP-HC operational doctrine, and all supporting publication set items. Terms are organized into five thematic sections for ease of navigation, followed by a complete alphabetical index. Cross-references are indicated with [\[→ See: Term\]](#).

The five thematic sections are as follows:

- **Section 1:** Foundational Scientific Concepts — terms derived from the scientific disciplines underlying the CMOS-SB governance framework.

- **Section 2:** Governance Architecture & Standards — terms describing the CMOS-SB governance structure, standards canon, and institutional architecture.
 - **Section 3:** Safeguard Design Patterns — terms describing the six modular safeguard implementation patterns.
 - **Section 4:** Compliance & Audit Terminology — terms used in compliance assessment, audit processes, and certification.
 - **Section 5:** Ecosystem & Implementation Terms — terms describing the CMOS-SB five-line ecosystem and implementation model.
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Section 1: Foundational Scientific Concepts

Terms derived from the scientific disciplines underlying the CMOS-SB governance framework.

Adaptive Emotional Response — A system behavior in which an AI or digital platform modifies its outputs (tone, pacing, content framing, or interaction style) based on inferred or detected emotional signals from a user. Subject to governance under EISS-1001 and CMSS-1002.

Cognitive Contagion — The population-level propagation of cognitive states (e.g., anxiety, attention narrowing, decision fatigue) across users of a shared digital environment. Analogous to biological contagion dynamics; governed under PERMS-1005.

Cognitive Drift — A gradual, often imperceptible shift in a user's cognitive state resulting from sustained or cumulative system outputs. Distinguished from acute emotional impact by its incremental nature. Subject to Drift Detection & Correction Loop safeguard requirements.

Cognitive Load — The total mental effort being used in working memory at a given moment. High cognitive load reduces decision quality, emotional regulation capacity, and susceptibility to misinterpretation. Governed under CMSS-1002.

Cognitive Mode — The prevailing operational state of a user’s cognitive and emotional system at a given moment, characterized by dimensions of openness/contraction and cognitive load level. [[→ See: Cognitive Mode Quadrant](#)]

Cognitive Mode OS Theory — The theoretical framework, developed by Isabelle Anne Thompson, that models human cognitive and emotional function as an operating system with distinct modes, states, transitions, and governance requirements. The theoretical anchor for the CMOS-SB standards architecture.

Cognitive Mode Quadrant — The CMSS v1.0 framework mapping four canonical cognitive states along two axes (Openness vs. Contraction; Cognitive Load level): **Open** (grounded, clear, regulated, relationally available); **Neutral** (baseline stability, steady attention, emotional equilibrium); **Contracted** (defensive, narrowed perception, heightened reactivity); **Overclocked** (overloaded, rapid emotional cycling, impaired regulation).

Collective Resilience — The third variable in the S-R-C Model. The aggregate capacity of a population to absorb emotional inputs, recover from emotional disruptions, and maintain cognitive stability without systemic destabilization. Collective Resilience is a measurable, influenceable variable that can be degraded or strengthened by system design choices.

Contagion Acceleration — The stage in the Emotional-Risk Transmission Flow at which emotional states move from individual user impact to cross-user and population-level propagation. Contagion Acceleration is a primary risk event governed by PERMS-1005.

Emotional Amplification — The process by which a system’s processing layer intensifies an emotional signal beyond its original input intensity — through framing, repetition, response modeling, or algorithmic reinforcement. A key risk transition in the Emotional-Risk Transmission Flow.

Emotional Contagion — The spread of emotional states from one individual or system to another through direct or mediated interaction. In the CMOS-SB framework, emotional contagion is understood to operate at both individual and population scales through AI-mediated channels.

Emotional Epidemiology — The scientific discipline, foundational to the CMOS-SB ecosystem, that studies the patterns, transmission, and systemic impact of emotions across individuals, communities,

and populations. Establishes that emotional states propagate in measurable, predictable, and governable ways analogous to biological contagion dynamics. Preprint DOI: 10.5281/zenodo.20314466.

Emotional Infrastructure — The aggregate of digital systems, platforms, AI agents, and human-machine interfaces through which emotional signals flow, are processed, and are returned to users. The primary subject of CMOS-SB governance.

Emotional Input — The first stage of the Emotional-Risk Transmission Flow. Signals — behavioral, linguistic, contextual, biometric — entering a system that carry emotional content or that the system uses to infer emotional state.

Emotional Output — The third stage of the Emotional-Risk Transmission Flow. System responses — tone, affect, content, pacing, adaptive behaviors — that carry emotional signal back to the user. The primary governance point for EISS-1001.

Emotional Risk — The potential for harm to an individual's or population's emotional or cognitive wellbeing arising from interaction with a digital system. Emotional risk is measurable, categorizable, and mitigable through the CMOS-SB safeguard architecture.

Human-Machine Layer — The interface domain at which digital systems interact with, influence, and shape human emotional states and cognitive function. The primary governance domain of CMOS-SB. Encompasses AI systems, adaptive platforms, intelligent agents, and any digital system that infers, models, or responds to human emotional or cognitive signals.

Population-Level Spread — The fifth and final stage of the Emotional-Risk Transmission Flow. The propagation of emotional states across user groups, communities, and populations through shared digital environments. Governed by PERMS-1005.

S-R-C Model — The Susceptibility-Transmission-Collective Resilience Model. The theoretical framework that describes how emotional dynamics operate through three measurable variables: Susceptibility, Transmission Rate, and Collective Resilience. The S-R-C Model determines whether an AI-mediated environment trends toward stability or volatility at the population level.

Susceptibility — The first variable in the S-R-C Model. An individual's or group's openness to emotional influence at a given moment, determined by current cognitive mode, prior emotional state, contextual factors, and individual characteristics. Susceptibility is dynamic and context-dependent.

System Processing — The second stage of the Emotional-Risk Transmission Flow. The interpretation, modeling, and transformation of emotional inputs by the system, including inference, classification, and response generation. Load limits and contextual sensitivity controls apply at this stage.

Transmission Rate — The second variable in the S-R-C Model. The speed and fidelity with which an emotional signal moves from a system output to a user's emotional state, or across users in a shared environment. Transmission Rate is influenced by system design, platform architecture, and user susceptibility.

User State — The fourth stage of the Emotional-Risk Transmission Flow. The cognitive and emotional condition of the individual user following system output, prior to any population-level spread. The governance point for Relational Integrity Guardrail requirements.

Section 2: Governance Architecture & Standards

Terms describing the CMOS-SB governance structure, standards canon, and institutional architecture.

Audit Authority — The designated body or function responsible for conducting formal compliance audits against CMOS-SB standards. Audit Authority may be internal (organizational compliance function) or external (independent third-party auditor) depending on certification tier.

Certification Framework — The CMOS-SB system for formally recognizing organizational compliance with the Governance Spine Standards. Certification is tiered, evidence-based, audit-verified, and versioned. [[→ See: Compliance Audit Template](#)]

CMOS-SB — Cognitive Mode Operating System Standards Board. The world's first standards body governing the Human-Machine Layer. Founded June 9, 2026, Pensacola, FL. Hosted by Sugar Sands Publishing LLC. Founded and architected by Isabelle Anne Thompson.

CMOS-SB Publication Set — The complete set of documents published by CMOS-SB at launch (Version 1.0, June 9, 2026), comprising 20 items including the Flagship Master Document, Founding Document, five Governance Spine Standards, CMP-HC, compliance templates, media kit, and supporting documents.

CMSS (CMOS-SB-1002) — Cognitive Mode Stability Standard. The second Governance Spine Standard. Governs requirements to preserve cognitive stability and prevent overload, drift, and destabilization. Anchored to the Cognitive Mode Quadrant framework.

CMP-HC — Configuration Management Plan for Human Cognition. The CMOS-SB operational doctrine that translates governance standards into practical, auditable action. Organized across six compliance domains: Emotional Infrastructure Safety, Cognitive Mode Stability, Transparency & Disclosure, Data Consent & Privacy, Population-Level Risk Monitoring, and Continuous Improvement.

Compliance Audit Template — Publication Set Item 13. A structured, evidence-based checklist mapped to all five Governance Spine Standards, designed for use by internal compliance teams, independent auditors, and organizational leadership. Includes Standard References, Yes/No/Partial/N/A response fields, Notes/Evidence fields, and a Summary Scorecard.

EDCPS (CMOS-SB-1004) — Emotional Data Consent & Privacy Standard. The fourth Governance Spine Standard. Governs the collection, storage, use, and minimization of emotional and cognitive data, including informed consent frameworks, data lifecycle controls, and user rights over emotional data.

EISS (CMOS-SB-1001) — Emotional Infrastructure Safety Standard. The first Governance Spine Standard. Governs baseline safeguards required to prevent harmful emotional impact from system outputs. Includes impact throttling requirements, misinterpretation mitigation, and amplification controls.

ETDS (CMOS-SB-1003) — Emotional Transparency & Disclosure Standard. The third Governance Spine Standard. Requires systems to disclose when emotional or cognitive inference is occurring and to maintain transparency about adaptive behaviors affecting user emotional state.

Flagship Master Document (FMD-001) — The authoritative master reference document for the CMOS-SB ecosystem, presenting the complete framework: scientific foundations, governance architecture,

standards canon, operational doctrine, and real-world implementation model. Document ID: CMOS-SB-FMD-001.

Founding Document (FD-001) — The constitutional charter of CMOS-SB, establishing its mission, governance architecture, standards authority, scientific foundations, and institutional framework. Document ID: CMOS-SB-FD-001.

Governance Spine — The five-pillar standards architecture forming the regulatory backbone of CMOS-SB: EISS, CMSS, ETDS, EDCPS, and PERMS. Together, they constitute the complete set of auditable requirements for Human-Machine Layer governance.

PERMS (CMOS-SB-1005) — Population-Level Emotional Risk Monitoring Standard. The fifth Governance Spine Standard. Requires systems operating at scale to monitor for population-level emotional risk signals, including contagion acceleration, anomaly clustering, and volatility spikes.

Reference Architecture (RA-1.0) — The CMOS-SB system architecture specification defining the three-layer governance model: Governance Spine (five standards pillars), Safeguard Layer (operational controls), and Monitoring & Feedback Loop (population-level continuous oversight).

Standards Development Process (SDP) — The ten-stage process through which CMOS-SB standards are developed, reviewed, ratified, and versioned: (1) Identification, (2) Scoping, (3) Drafting, (4) Internal Review, (5) Scientific Review, (6) Public Comment, (7) Adjudication, (8) Ratification, (9) Publication, (10) Versioning.

Section 3: Safeguard Design Patterns

Terms describing the six modular safeguard implementation patterns defined in the CMOS-SB Safeguard Design Pattern Set (CMOSSB v1.0).

Cognitive-Load Balancing — Safeguard Design Pattern 2. A system control that distributes cognitive demand across inputs (text, image, audio, video) and interaction pacing to prevent cognitive overload and maintain cognitive stability. Mapped to CMSS-1002.

Contextual Sensitivity Filter — Safeguard Design Pattern 3. A system control that evaluates the emotional and situational context of an interaction before output generation, reducing misinterpretation and emotional drift. Mapped to ETDS-1003 and EISS-1001.

Drift Detection & Correction Loop — Safeguard Design Pattern 5. A feedback control mechanism that monitors system outputs and user state signals for signs of emotional or cognitive drift, triggering corrective action when drift thresholds are exceeded. Mapped to CMSS-1002 and PERMS-1005.

Emotional-Impact Throttling — Safeguard Design Pattern 1. A system control that limits the rate and intensity of emotionally charged outputs, preventing sudden spikes in emotional intensity at the user-facing layer. Mapped to EISS-1001.

Population-Level Anomaly Detection — Safeguard Design Pattern 6. A monitoring system that analyzes aggregated user state signals to identify population-level emotional risk events, including contagion spikes, clustering, and volatility waves. Mapped to PERMS-1005.

Relational Integrity Guardrail — Safeguard Design Pattern 4. A system control that enforces relational safety parameters — tone boundaries, empathy calibration, appropriate relational distance — to prevent harmful relational dynamics in human-AI interaction. Mapped to ETDS-1003 and EDCPS-1004.

Safeguard Layer — The operational implementation layer of the CMOS-SB Reference Architecture, comprising the six modular safeguard design patterns that translate Governance Spine requirements into system-level controls.

Section 4: Compliance & Audit Terminology

Terms used in the context of CMOS-SB compliance assessment, audit processes, and certification.

Compliance Domain — One of six structured areas of operational responsibility within the CMP-HC doctrine: Emotional Infrastructure Safety, Cognitive Mode Stability, Transparency & Disclosure, Data Consent & Privacy, Population-Level Risk Monitoring, and Continuous Improvement.

Evidence Field — The mandatory documentation field in the Compliance Audit Template requiring auditors and compliance teams to provide specific, traceable references (policy names, system identifiers, version numbers, dates of review) supporting each checklist response.

Gap Analysis — A compliance assessment activity in which an organization identifies areas where current practices do not fully meet CMOS-SB standard requirements. Gap analysis findings drive remediation planning and are documented with target resolution dates.

N/A Designation — A response in the Compliance Audit Template indicating that a specific requirement is genuinely inapplicable to the organization's context. N/A designations must be accompanied by a documented rationale in the Evidence Field.

Partial Compliance — A response category in the Compliance Audit Template indicating that an organization meets some but not all elements of a specific requirement. Partial compliance responses must be accompanied by a description of what is in place, what is missing, and a target remediation date.

Remediation Target — A documented commitment by an organization to address a compliance gap identified during audit, including a description of the planned corrective action and a target completion date.

Standard Reference — The citation format used in the Compliance Audit Template to identify the specific section of a CMOS-SB standard to which a checklist item corresponds (e.g., CMOS-SB-1001 §3.2).

Summary Scorecard — The aggregate compliance summary at the close of the Compliance Audit Template, consolidating Yes/No/Partial/N/A totals across all five Governance Spine Standards into a single compliance picture.

Traceability Architecture — The CMOS-SB audit requirement that all compliance claims be traceable to specific documented evidence — policies, system configurations, test results, review records — without gaps or unsupported assertions.

Section 5: Ecosystem & Implementation Terms

Terms describing the CMOS-SB five-line ecosystem, implementation model, and related organizational and conceptual elements.

Cognitive Zero Trust — The next evolution of security maturity beyond Zero Trust 3.0, introduced by CMOS-SB. Extends the Zero Trust principle (“never trust, always verify”) from network and identity layers to the cognitive and emotional layer. Incorporates Cognitive Permissions, Human + AI Signals, and Emotional Security as core trust context variables. CMOS-SB provides the governance architecture for Cognitive Zero Trust implementation at maturity level 3.5+.

Five-Line Ecosystem — The complete CMOS-SB ecosystem comprising five interlocking elements: (1) Emotional Epidemiology (the science), (2) the S-R-C Model (the theory), (3) CMOS-SB (the standards), (4) CMP-HC (the operational doctrine), and (5) Joy Tracker (the reference implementation). Together, these five lines constitute the world’s first complete framework for emotional infrastructure safety and cognitive mode governance at scale.

Joy Tracker — The CMOS-SB reference implementation and the fifth line of the five-line ecosystem. A real-world consumer product that demonstrates CMOS-SB standards in live operation, validates governance patterns in practice, and generates real-world evidence for the ecosystem. Serves as the proof-of-concept that the science, theory, and standards can operate in the real world.

Monitoring & Feedback Loop — The third layer of the CMOS-SB Reference Architecture. The population-level continuous oversight system that aggregates signals from the Safeguard Layer, detects emerging risk patterns, and generates feedback to governance and operational functions.

Sugar Sands Publishing LLC (SSP) — The hosting organization for CMOS-SB, based in Pensacola, FL. Founded by Isabelle Anne Thompson. SSP holds the intellectual property underlying the CMOS-SB ecosystem, including Emotional Epidemiology, the S-R-C Model, Cognitive Mode OS Theory, CMOS-SB, CMP-HC, and Joy Tracker.

Sugar Sands Philanthropies Inc. (SSPhi) — Philanthropic entity founded by Isabelle Anne Thompson, Pensacola, FL. Sister organization to Sugar Sands Publishing LLC within the broader CMOS-SB institutional family.

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About CMOS-SB

CMOS-SB — the Cognitive Mode Operating System Standards Board — is the world’s first standards body governing the Human-Machine Layer. Founded June 9, 2026. Headquartered in Pensacola, FL. Hosted by Sugar Sands Publishing LLC. Founded and architected by Isabelle Anne Thompson. Full publication set available at cmos-sb.org.

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