

License

© 2025 Joseph A. Sprute, ERES Institute for New Age Cybernetics.

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0).

1. Conceptual Foundations

1.1. Bifurcation & Trifurcation in NAC

Building upon the 2×3 template’s “WALL” concept—where each **Material**, **Use**, and **Dimensions** axis defines a legal border—this framework introduces dual-branch and triple-branch splits to enable dynamic governance scenarios over deep time ERES BORDERS_ Analysis.

- **Bifurcation:** Splitting a primary border into two alternative regulatory channels when conditions diverge (e.g., marriage → divorce vs. annulment).
- **Trifurcation:** Splitting into three concurrent streams (e.g., preventive, reactive, restorative) for complex domains like security.

1.2. ERES Memory Integration

This edition assimilates thread-wide NAC insights to enhance adaptive governance:

- **EarnedPath Loops:** Real-time feedback at every fork ensures pathways evolve with outcomes.
- **PlayNAC Simulations:** Game-theoretic weighting of branch outcomes using GCF and Vacationomics metrics.
- **BERC Layers:** Bio-ecologic ratings embedded within each wall to quantify environmental and social health.

2. Legal Border Definitions

Each of the following borders is defined via the 2×3 “WALL” schema (Material / Use / Dimensions).

2.1. NAC (New Age Cybernetics) Border

- **Material:** NAC charters, EarnedPath specs, PlayNAC RFCs, implementing regulations.
- **Permitted Use:** Deploy metadata overlays, enforce NAC compliance, restrict legacy decision processes.
- **Dimensions:**
 - *Height:* From NAC adoption to scheduled revision/sunset.
 - *Thickness:* One layer per NAC sub-module (SOMT, EP, GERP).
 - *Length:* Across all ratifying institutions and domains.

2.2. SOMT (Sociocratic Overlay Metadata Tapestries) Border

- **Material:** Published SOMT schemas, CC BY-SA metadata licensing, enabling bylaws.
- **Permitted Use:** Apply overlays for consensus tracking, bar conflicting metadata schemes.
- **Dimensions:**
 - *Height:* From charter incorporation to decommission/update.
 - *Thickness:* One layer per metadata category (consent, objection, iteration).
 - *Length:* Across all participating governance bodies.

2.3. EP (EarnedPath) Border

- **Material:** EP documentation, smart-contract repos, accreditation policies.

- **Permitted Use:** Validate merit credits, trigger learning-loop alerts, restrict non-EP credentials.
- **Dimensions:**
 - *Height:* From program entry to credit award/revocation.
 - *Thickness:* One layer per credit type (skills, peer reviews, milestones).
 - *Length:* Across all adopting educational and professional institutions.

2.4. GERP (Global Earth Resource Planning) Border

- **Material:** GERP charter, international treaties, sustainability regulations.
- **Permitted Use:** Allocate quotas, enforce covenants, bar non-compliant extraction.
- **Dimensions:**
 - *Height:* From GERP entry-into-force to re-evaluation cycle.
 - *Thickness:* One layer per resource class (water, minerals, carbon).
 - *Length:* Across all signatory territories and corporate actors.

2.5. Global HR (Global Human Rights) Border

- **Material:** UDHR, ICCPR, regional conventions, implementing legislation.
- **Permitted Use:** Protect inalienable rights, enable oversight, preclude conflicting local laws.
- **Dimensions:**
 - *Height:* From treaty ratification to amendment/withdrawal.
 - *Thickness:* One layer per rights category (civil, socio-economic, group).
 - *Length:* Universally across all recognizing jurisdictions.

2.6. EDF (Earth Defense Federation) Border

- **Material:** EDF charter, member-state protocols, UN/security resolutions.
- **Permitted Use:** Authorize planetary threat mitigation, supersede conflicting military directives.
- **Dimensions:**
 - *Height:* From EDF formation to mandate renewal.
 - *Thickness:* One layer per threat domain (cosmic, geophysical, anthropogenic).
 - *Length:* Across all member territories and agencies.

2.7. GSSG (Green Solar-Sand Glass) Border

- **Material:** GSSG patents, technical standards, environmental impact assessments.
- **Permitted Use:** Authorize manufacture, enforce sustainable sourcing, restrict non-certified glass.
- **Dimensions:**
 - *Height:* From certification to patent expiration or review.
 - *Thickness:* One layer per compliance domain (sourcing, performance, recycling).
 - *Length:* Across all jurisdictions recognizing GSSG standards.

2.8. HPE (Human Performance Enhancement) Border

- **Material:** Regulatory approvals (FDA/EMA), clinical-trial protocols, privacy statutes.
- **Permitted Use:** Sanction approved interventions, enforce consent and surveillance, ban unapproved methods.
- **Dimensions:**
 - *Height:* From clearance to post-market monitoring end.
 - *Thickness:* One layer per enhancement type (endurance, cognition, sensory, neuro-feedback).

- *Length:* Across all covered medical, research, and occupational settings.

2.9. GAIA (Global Actuary Investor Authority) Border

- **Material:** GAIA charter, treaties granting oversight, standardized smart contracts for securities.
 - **Permitted Use:** Allocate resource-backed securities, enforce reporting, preclude bypass instruments.
 - **Dimensions:**
 - *Height:* From ratification or launch to actuarial reassessment cycles.
 - *Thickness:* One layer per asset class (energy credits, biodiversity offsets, social bonds).
 - *Length:* Across all signatories and registered market participants.
-

3. Bifurcating Trifurcation Each Border

3.1. Marriage–Divorce (±Annulment)

- **Primary WALL:** Main marriage–divorce axis.
- **Bifurcation:**
 1. Divorce (irretrievable breakdown)
 2. Annulment (fraud/incapacity)
- **Trifurcation:**
 1. Modification Track (support & custody)
 2. Appeals Channel
 3. Reintegration Module (restorative mediation) ERES BORDERS_ Analysis

3.2. Security–Terrorism (Preventive, Reactive, Restorative)

- **Primary WALL:** National security vs. terrorism.
- **Bifurcation:** Domestic vs. International security branches.
- **Trifurcation:**
 1. Preventive (early warning, Fourier-Schumann, BEST biometrics)
 2. Reactive (tactical response, non-punitive remediation)
 3. Restorative (de-radicalization, SOMT mediation) ERES BORDERS_ Analysis

3.3. Sovereignty–Dependency (Core, Delegated, Renegotiation)

- **Primary WALL:** Sovereign authority vs. dependency.
 - **Bifurcation:** Administrative delegation vs. protectorate/treaty path.
 - **Trifurcation:**
 1. Core Sovereignty (defense, currency, foreign affairs)
 2. Delegated Competence (education, environment, economy)
 3. Renegotiation Pipeline (GAIA-powered amendment loops) ERES BORDERS_ Analysis
-

4. Scaling & Adaptation Across the Future Map

1. **Modular Boundary Definitions**

Reusable 2x3 WALL templates support new domains without bespoke coding.
2. **Temporal & Layered Scalability**

Height = time span; Thickness = regulation layers; dynamically toggle on the 1000-Year Map.
3. **Fractal Governance & Dependency Networks**

Nested sub-borders and Merkle-hash nodes ensure auditability and automated network

reconfiguration. ERES BORDERS_Analysis

5. Next Steps & Implementation

1. **Prototype Kernel:** Develop PlayNAC code modules on GitHub to instantiate bifurcation/trifurcation nodes.
 2. **Data Integration:** Connect real-time environmental and civic data feeds to BERC layers.
 3. **User Interface:** Build a React canvas (shadcn/ui + recharts) for interactive branch visualization.
 4. **Policy Pilots:** Partner with municipalities on modular border deployments (e.g., digital marriage contracts).
-

Open Source Creative Commons: 6/2025