OR2026 Repository Showdown Track Submission

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Fully Online

Title of Proposal

ERES Institute GitHub Repository: New Age Cybernetic Frameworks for Civilizational Transformation

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Abstract

The ERES Institute GitHub repository houses comprehensive frameworks for 'New Age Cybernetics'—systematic approaches to civilizational transformation at millennial timescales. Established in 2012, this 13+ year initiative provides technical documentation, working code, and theoretical papers for PlayNAC (VERTECA User-GROUP Energy Resolution Simulator), a governance system for climate-resilient smart cities. The repository integrates cybernetic governance (C=R×P/M formula), alternative economics (Meritcoin/Gracechain), environmental metrics (PBJ Tri-Codex, NBERS), and bio-energetic measurement (BERA with ARI/ERI). By referencing the repository with well-formed questions, user-groups extract intelligence for graceful evolution. Production-ready implementations include collision avoidance algorithms for multi-stakeholder coordination, Service Level Agreement actuation-enforcement, and Spatial Harmonization Reference Services (SHRS). The repository demonstrates how open-source frameworks can address institutional failure by making human flourishing and planetary sustainability actual optimization targets.

Keywords

Cybernetic governance, climate-resilient smart cities, alternative economics, bio-energetic measurement

Time Zone

Central Time (US)

Proposal

Overview & Demonstration Focus

This 8-minute presentation will demonstrate the ERES GitHub repository as a living knowledge base for programmatic development of civilizational-scale solutions. We will showcase:

• The VERTECA PlayNAC Simulator architecture—showing collision avoidance algorithms resolving competing resource requirements among user-groups

• Interactive query methodology—demonstrating how well-formed questions extract actionable intelligence from repository documentation

• Integration patterns—C=R×P/M cybernetic formula connecting governance, economics, and environmental measurement

Recent Developments & Roadmap

Recently implemented: Production-ready BERA-PY library for bio-energetic measurement; comprehensive PlayNAC technical specifications; NBERS (National Bio-Ecologic Resource Score) methodology improving GDP metrics.

2026 Roadmap: Academic partnerships with urban planning and consciousness studies programs; pilot deployment frameworks for island nations and special economic zones; AI-assisted repository navigation enabling natural language queries for extracting implementation guidance.

Key Information for Repository Users

The repository serves multiple user communities: Developers implementing smart city infrastructure can extract SLA actuation patterns and conflict resolution algorithms. Policy makers find game-theoretic governance models replacing adversarial politics. Researchers access formal models validating alternative economic systems (Meritcoin/Gracechain). Community organizers discover spatial harmonization protocols enabling hundreds of groups to coordinate shared resources without centralized control.

Unlike traditional repositories, ERES documentation is structured for intelligence extraction—users pose questions and navigate interconnected frameworks to synthesize solutions addressing their specific contexts. This presentation will demonstrate live query-response patterns showing how repository architecture enables this unique interaction model.

Unique Viewpoint

ERES represents a paradigm shift in repository purpose: from passive documentation storage to active intelligence extraction for evolutionary change. By structuring frameworks around cybernetic principles (C=R×P/M) rather than disciplinary silos, the repository becomes a catalyst for systems thinking—users naturally discover connections between governance, economics, environment, and human consciousness that remain hidden in conventional organizational schemas. This presentation challenges assumptions about what open repositories can achieve when designed for millennial-scale transformation rather than quarterly publications.