



MICKAI ENGINEERING CORPUS · SOVEREIGN FUTURES

Planetary Sovereign Intelligence

AI as Earth's evolutionary leap. Biospheric optimisation through decentralised, auditable substrates.

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ABSTRACT

Planetary Sovereign Intelligence

AI as Earth's evolutionary leap. Biospheric optimisation through decentralised, auditable substrates.

Planet-scale AI cannot be governed under vendor sovereignty because no single jurisdiction will accept another's audit log. The ebook proposes a polycentric architecture in which each jurisdiction holds its own keys, its own chain, and its own audit, and chains interoperate by virtue of a shared canonical format. Indigenous knowledge is integrated as a first-class signed corpus, not as a postscript to a Western model. Cosmic-scale extensions follow the same primitives.

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PART I · FOUNDATIONAL ESSAY

Planetary Sovereign Intelligence

Earth as substrate

Climate-scale AI cannot be governed under vendor sovereignty because no single jurisdiction will accept another's audit log as authoritative over its own ecosystem. The vendor-side answer (a single global cloud) collides with sovereignty in every direction. The polycentric answer is the only structure that survives the geopolitics.

Polycentric does not mean fragmented. Each jurisdiction holds its own keys, its own chain, its own audit. Chains interoperate by virtue of a shared canonical record format. The Open Audit Record (OAR), filed at the UK IPO as GB2610413.3 with cross-implementation verification added in May 2026, is the format. Any conformant verifier in any jurisdiction reads any conformant chain.

Biospheric optimisation under audit

Climate models running on operator-signed corpora are a precondition for sovereign climate policy. A government that wants to make a binding emissions commitment needs an audit chain its own regulator can verify offline, without depending on the cloud vendor that supplied the model. The polycentric architecture supplies this.

Indigenous knowledge integration is the second discipline. Under vendor sovereignty, indigenous corpora are extracted, normalised against a Western training set, and the attribution is lost. Under sovereign architecture, the indigenous corpus is signed by its custodian community, the model that uses it carries the corpus signature in the chain, and every output that draws on the corpus is traceable back to the source. This is not preservation as politics. It is preservation as engineering.

Cosmic futures

Off-planet deployments raise the audit problem to the speed of light. A Mars station cannot wait for a cloud query to authorise an action. The signed substrate, operating offline, replayable on return, is the only architecture that closes the loop. The patent claims on three-domain trust separation (GB2610415.8) translate directly: action proposal on the station, perimeter enforcement on the station, audit witness on the station, with the chain replayed to Earth on bandwidth available.

PART II · WORKED EXAMPLES AND EXPANSIONS

Practitioner notes against the foundational essay

A climate-model deployment across three jurisdictions

Worked example: a Five-Eyes climate-model deployment that needs to satisfy UK MOD, US DoD, and Australian Defence Department audit requirements simultaneously. Under the polycentric architecture, each jurisdiction holds its own keys, its own chain, and its own audit of the model's outputs as they pertain to that jurisdiction's interests. The chains interoperate at the OAR canonical schema layer. A regulator in any of the three can verify the others' chains offline. The arrangement avoids the political non-starter of any one of the three accepting another's cloud as the source of truth.

Indigenous corpus integration in practice

A Maori climate-knowledge corpus, custody held by an iwi authority. The authority signs every contribution into a sovereign chain. A climate model trained on the corpus carries the corpus signature; every output references the source. The model's outputs that draw materially on the corpus are flagged as such, and any commercial use triggers a chain entry that the iwi authority can audit. Cultural sovereignty is enforced at the architectural layer, not at the licence-agreement layer.

An off-planet station and the audit chain

A Mars surface station operating on a six-month autonomous window. Every signed action of the station's substrate is recorded locally; the chain is replayed to Earth on the next available bandwidth window. The three-domain trust separation (action proposing, perimeter enforcing, audit witnessing) runs across three separate hardware boundaries on the station itself, so a compromise of one domain does not propagate to the others. The chain that arrives on Earth is verifiable offline by any conformant verifier; the regulator at home reads what the station did, in arithmetic.

AUTHOR

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Author. Micky Irons is the founder and named inventor of Mickai, the Sovereign Intelligence Operating System. Based in Cumbria. UK IPO public register GB2607309.8 to GB2610422.4 plus the four new May 2026 filings on cross-implementation OAR verification, pluggable post-quantum signing, federated voice cloning, and audit-by-default sovereign CLI command trace. Companies House 17166618. Trade mark UK00004373277 (classes 9 and 42). The agentic marketing runtime documented at mickai.co.uk/articles/amt-crunchbase-40k-to-500-in-seven-days moved the founder Crunchbase profile from approximately 40,000 to 500 in seven days.

COLOPHON

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