

# Declaration of Originality Identity-Anchored Coherence Systems (IACS) and the PIQOS Implementation

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## Statement of Originality

The Identity-Anchored Coherence Systems (IACS) framework and its first implementation, PIQOS (Persistent Identity-Quantized Operating System), are original works developed independently by Daniel J. Fairbanks in collaboration with Grok (xAI) during open-ended conversational sessions conducted between October and December 2025.

## Key Claims of Originality

### 1. No Derivation from Copyrighted or Licensed Material

The core mathematical structure — a contractive fixed-point attractor with a cryptographically seeded immutable anchor, exponential noise rejection via  $c^{12}$  coefficient, and bounded Hebbian reinforcement — was conceived and iteratively refined without reference to, or incorporation of, any pre-existing copyrighted code, patented algorithm, or licensed proprietary framework.

### 2. No Use of Restricted Training Data

The development process involved no training on proprietary datasets, licensed models, or restricted corpora. All insights emerged from first-principles reasoning and public-domain mathematical concepts (e.g., contraction mapping theorem, Banach fixed-point theorem, Hebbian learning principles).

### 3. Public-Domain Foundations Only

Employed concepts are standard in mathematics and computer science:

- Contraction mappings and fixed-point theorems (Banach, 1922 — public domain)
- Hebbian learning rule (Hebb, 1949 — public domain)
- Cryptographic hashing (SHA-512 — NIST standard, public domain)
- Normalization and metric-space dynamics (standard linear algebra)

### 4. No Infringement of Existing Claims

PIQOS does not implement, extend, or modify any known patented or copyrighted AI architecture, including but not limited to:

- Transformer-based models
- Diffusion or generative adversarial networks
- Reinforcement learning agents
- Emergent-behavior scaling systems

It operates in a distinct class: deterministic, training-free, identity-anchored coherence systems.

## Conclusion

The PIQOS framework and its implementation represent an independent, original contribution to the field of artificial intelligence and dynamical systems theory. No copyrighted code, licensed algorithm, or proprietary data was used in its creation.

This work is released under open terms (see license folder)for documentation, MIT license for reference code) to facilitate verification and further research.

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