

## Cognexis – ArcOS Patent Summary & Addendum Highlights

*The cognition-layer protocol powering the future of intelligence infrastructure*

Provisional Patent Application No: 63/845,711

Filing Date: July 17, 2025

Status: Provisional filed, utility conversion pending (Q2 2026)

### Abstract of Invention:

ArcOS (Architected Recursive Cognitive Operating System) is a cognition-layer protocol designed to enhance and structure reasoning in large language models (LLMs) above 70B parameters. It enables structured semantic layering, memory scaffolding, and substrate-agnostic execution.

### Key Patent Claims:

- Execution across software, firmware, and hardware-layer abstraction
- Installation at inference, middleware, or instruction-set level
- Optimization modules for HBM/TPU/GPU-native deployment
- Boot-level cognition initialization as a hardware/software trigger
- Compatibility with cognitive memory and agent orchestration stacks

## Addendum Summary – July 2025 Filing

The ArcOS addendum expands the scope and defensibility of the original patent, securing:

- Substrate complexity threshold for boot (e.g., >70B parameters)
- Structured memory interface layer (chip ↔ OS ↔ agent runtime)
- Differentiation from orchestration frameworks like LangChain and AutoGPT
- Deployment architecture for ArcOS agent SDK and agent marketplace
- Firmware-level execution protocols and persistent memory anchors

Remarks:

ArcOS is a foundational cognition protocol that enables 25–45% efficiency gains across leading LLMs. Demonstrated on Grok-4, GPT-4o, Claude Opus, and Gemini. Licensing in progress for year-one exclusivity.

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