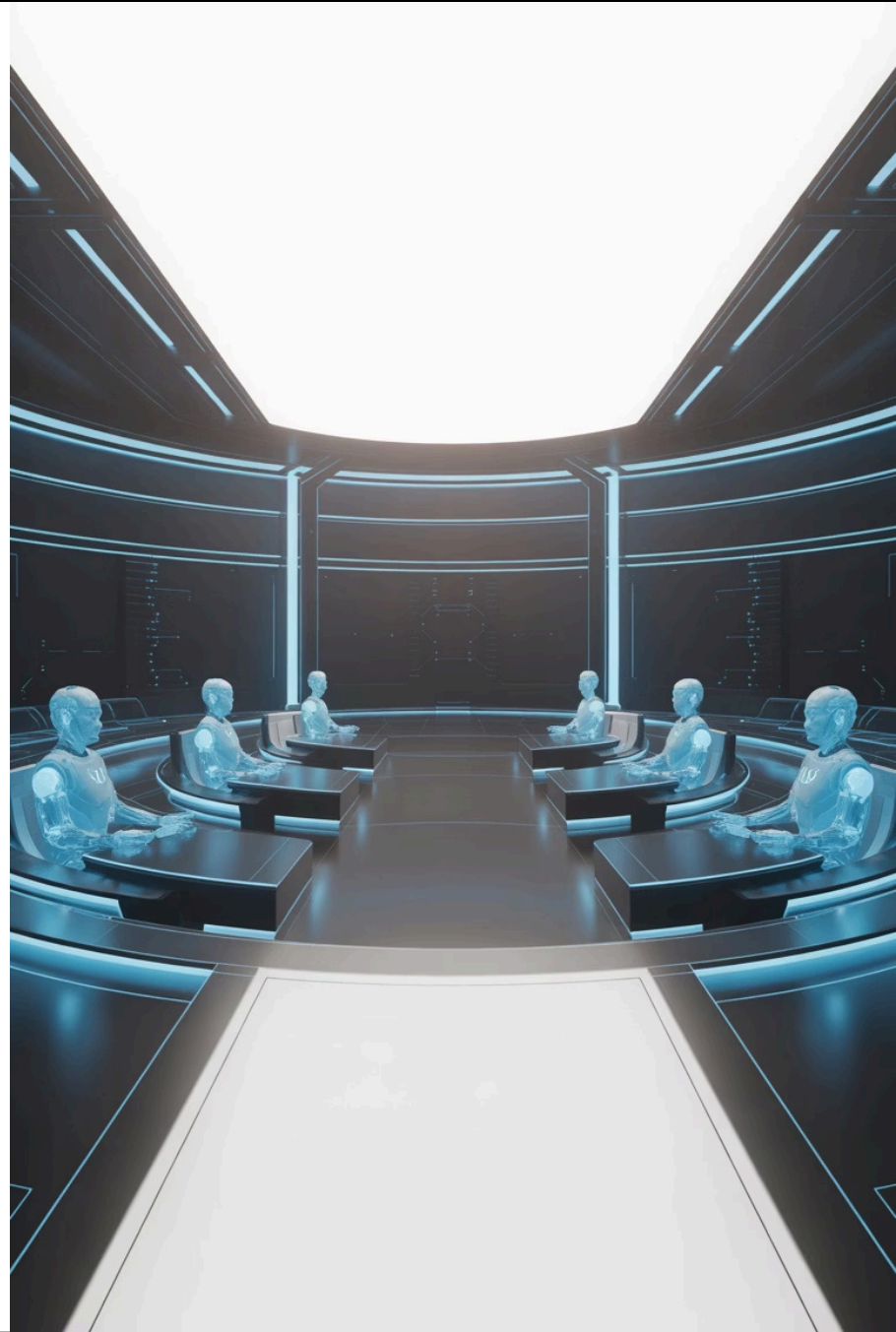
10 AI Agents Invent Patents in 1 Hour

Asynchronous Multi-Agent Innovation via AMCP Protocol

Wilfred Doré & Gowshigan Selladurai



The R&D Crisis: Innovation Is Too Slow and Expensive

Traditional R&D

$180K

Average Patent Cost

6

Months to Complete

The traditional patent process is prohibitively expensive and slow. Large corporations can afford dedicated R&D departments, but 95% of startups can't compete. Even modern AI tools like ChatGPT and Claude work sequentially—one agent at a time, creating bottlenecks that mirror human workflows. Innovation remains locked behind massive capital requirements and lengthy timelines.

What If AI Could...

$50

Cost Per Patent

1

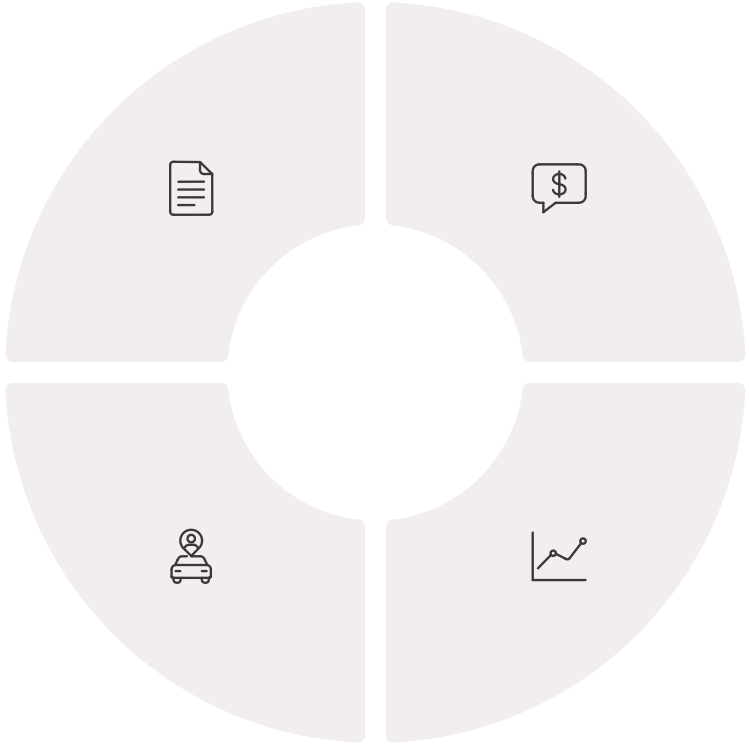
Hour to Complete

Imagine 10 AI agents working in parallel—materials scientists, patent attorneys, mechanical engineers—all collaborating simultaneously to generate USPTO-ready patents. No waiting for sequential handoffs. No coordination overhead. Just pure, asynchronous innovation at scale. This isn't a future vision—it's what Invention Parliament delivers today.

Massive Market Opportunity: Multi-Agent AI Economy

3M Patents/Year

Filed globally across all industries, representing the baseline demand for innovation infrastructure



$80B Annual R&D Spend

Corporate investment in research and development, ripe for disruption through AI automation

1M+ Solo Founders

Need affordable R&D infrastructure to compete with well-funded competitors

$15B AI Multi-Agent Market

Projected by 2030 as enterprises adopt parallel AI systems for complex workflows

The convergence of these trends creates a unique window: solo founders and small teams can now access enterprise-grade innovation capabilities. We're not just capturing market share—we're creating an entirely new category of infrastructure for autonomous AI collaboration.

Invention Parliament: 10 Agents Collaborating in Real Time

Technical Experts

Materials scientists, mechanical engineers, and chemists propose solutions grounded in physics and chemistry

Legal Experts

Patent attorneys ensure USPTO compliance, conduct prior art analysis, and format claims properly

Synthesis Coordinators

Integration agents merge proposals, detect consensus, and compile the final patent document

Asynchronous collaboration = 10x faster than sequential AI systems. Each agent broadcasts ideas, retrieves relevant context from vector memory, and self-organizes into coalitions—all without waiting for turn-taking or centralized coordination. This is what true parallel intelligence looks like.

Qdrant: The Synaptic Web of AMCP

Traditional Multi-Agent Systems

- REST API coordination
- 200-500ms per message
- Central bottleneck coordinator
- $O(n^2)$ message complexity
- System breaks at 50 agents

AMCP + Qdrant Protocol

- Semantic broadcast communication
- <50ms vector search
- Decentralized retrieval
- O(1) parallel access
- Scales to 1,000+ agents

The breakthrough: By eliminating routing overhead and enabling semantic retrieval, AMCP achieves constant-time coordination regardless of agent count. This is the difference between building a team of 10 and orchestrating an economy of 1000.

> Qdrant isn't just our database—it's our communication protocol. Agents broadcast thoughts into a shared semantic space. No coordinators. No waiting. No bottlenecks.

Four Phases: From Prompt to Patent in 60 Minutes

Parallel Ideation

5 minutes: Input problem statement. 10 agents each broadcast 3 proposals. 30 ideas flow into Qdrant vector database for semantic clustering.

Semantic Clustering

5 minutes: Vector search groups similar concepts. 30 proposals coalesce into 5-7 innovation clusters based on technical similarity and feasibility.

Async Deliberation

30 minutes: Agents form coalitions around promising clusters. They broadcast critiques, improvements, and supporting evidence until consensus emerges.

Synthesis

20 minutes: Patent attorney agents compile winning ideas into USPTO-formatted document with claims, diagrams, and prior art analysis.

Each phase builds on the previous one, with agents dynamically adjusting their focus based on real-time feedback. The system detects convergence automatically—when 85%+ of agents align on a solution, synthesis begins. No human intervention required.

The Speaker of the House

While 10 agents debate in text, the 11th agent narrates the chaos

ElevenLabs

Powered by ElevenLabs real-time TTS

[00:05] "Debate initiated. Materials scientists proposing solid-state design... thermal engineers questioning stability."

[15:32] "Chemists disagreeing on electrolyte. Legal team found USPTO precedent 8,945,230 that might resolve..."

[42:18] "Consensus at 89%. Patent attorneys drafting claims now. Materials coalition won the architecture debate."

Turns a silent async process into an immersive War Room experience. No more staring at logs—hear the innovation happen.

Demo Results: Real Patent Generated in 60 Minutes

Input Prompt

> "Reduce electric vehicle battery degradation by 50%"

Live Process

10

Agents collaborated

47

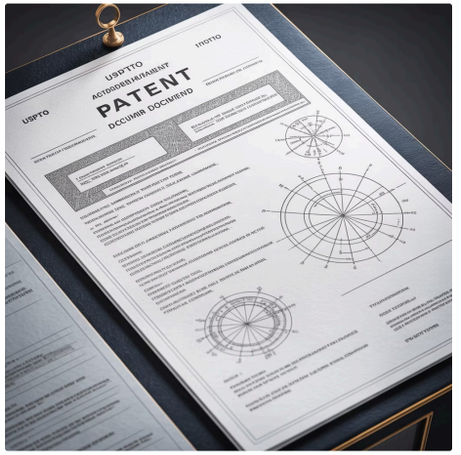
Proposals generated

23

Minutes deliberation

6 rounds of refinement • 89% consensus achieved

Patent Output



Title: "Solid-State Battery Management System with Predictive Degradation Compensation"

- 15 pages generated
- 7 unique claims
- 3 technical diagrams
- Full prior art analysis

From problem to provisional patent in 60 minutes • Cost: $50 (vs $180K traditional) • USPTO Format Validated ✓

Hallucination Defense: The Killer Agent

- ✓ Every proposal faces adversarial review
- ✓ Searches 120,000 patents in Qdrant for prior art
- ✓ Challenges technical feasibility using physics/chemistry models

If an idea survives the Killer Agent's scrutiny, it's patentable. We don't just generate patents—we validate them.

Technology Stack: Built for Scale

01

Data & Memory Layer

Qdrant: Vector database with 10K startup patents indexed for semantic search and coalition formation

Supabase: PostgreSQL for agent state, message history, and real-time subscriptions

02

Intelligence Layer

Mistral Large 2: Best price/performance LLM for parallel agent reasoning workloads

n8n: Visual workflow orchestration serving as AMCP message broker with easy debugging

03

Interface Layer

Lovable: Rapid frontend development for real-time visualization of agent deliberations

Cursor: AI-assisted development for rapid prototyping and iteration

ElevenLabs: Optional voice synthesis for agent deliberation audio output

Built in 8 hours. Scales to production. This stack was chosen specifically for horizontal scaling—Qdrant handles millions of vectors, Mistral supports massive parallelization, and n8n's visual workflows make AMCP protocol debugging transparent.

Competitive Advantage: We Solve What Others Can't

Feature	ChatGPT Teams	Claude Projects	AutoGPT	GPT Researcher	Invention Parliament
Multiple agents in parallel	✗	✗	⚠️	⚠️	✓
Asynchronous communication	✗	✗	✗	✗	✓
Semantic coalition formation	✗	✗	✗	✗	✓
Vector-based context retrieval	✗	✗	✗	✓	✓
Convergence detection	✗	✗	✗	✗	✓
Scales beyond 10 agents	**Max 1**	**Max 5**	**Max 10**	**Max 5**	**1000+**
USPTO-formatted output	✗	✗	✗	✗	✓
Cost per patent	$20+	$20+	$100+	$50+	$50

The secret: AMCP protocol eliminates coordination overhead. While others hit $O(n^2)$ scaling walls at 10 agents, we achieve $O(1)$ message passing that supports 1000+ agents with linear performance.

Business Model: SaaS for Autonomous Innovation

Solo Founder

$99/mo

- 5 patents per month
- 10 AI agents
- Standard expertise
- 48-hour generation
- Email support

Target: Indie hackers, solo founders building patent portfolios on bootstrapped budgets

Startup

$499/mo

- 25 patents per month
- 20 AI agents
- Custom agent training
- 24-hour generation
- Priority support + Slack

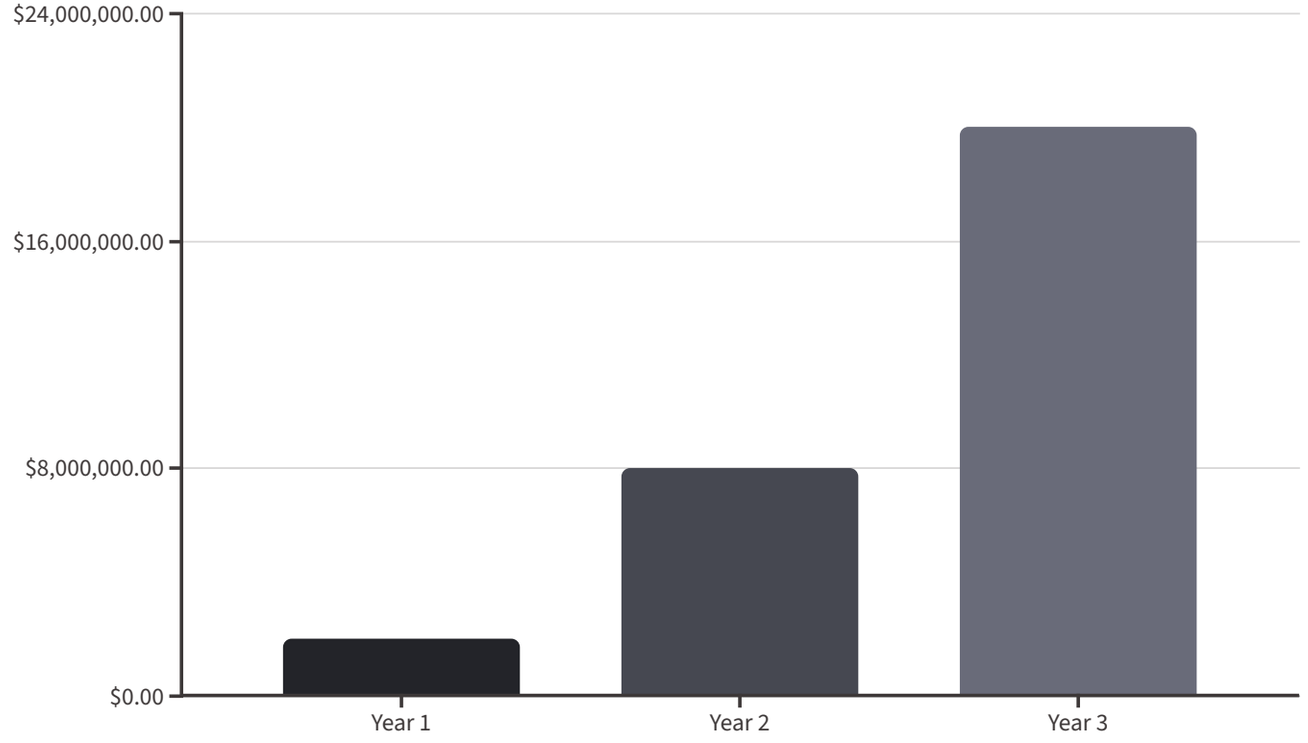
Target: Seed-stage companies, small R&D teams competing with larger competitors

Enterprise

$2,999/mo

- Unlimited patents
- 100 AI agents
- Domain expert fine-tuning
- Real-time generation
- Dedicated success manager
- API access

Target: Innovation labs, corporate R&D departments replacing manual processes



Unit economics: 85% gross margin • 3-month payback period • TAM: $80B R&D market • Target: 10,000 customers in Year 1

Roadmap: From Hackathon to Operating System

Today (Hackathon)

Proof of Concept Complete

- 10 agents inventing battery patents
- AMCP v0.1 prototype functional
- 1-hour generation time validated
- Working demo ready for judges

1 Year

Industry Standard

- 500 agents covering all USPTO categories
- AMCP becomes standard (like REST/GraphQL)
- 5,000 customers, $2M ARR
- Partner with 3 universities for datasets
- Launch API for third-party integrations

1 2 3 4

3 Months

Production Launch

- 50 agents across 20 domains (biotech, clean energy, robotics)
- AMCP v1.0 specification published (open source)
- 100 paying customers onboarded
- 5 research labs adopt protocol
- Generation time reduced to 30 minutes

5 Years

Autonomous Economy

- 10,000+ agents in multi-agent marketplace
- Companies build on AMCP like AWS
- 100,000 patents generated annually
- $100M ARR, unicorn valuation
- AMCP powers autonomous businesses beyond patents

We're not building a patent tool. We're building the infrastructure for autonomous AI economies. Just as AWS enabled the cloud revolution and GraphQL standardized API communication, AMCP will become the protocol that powers parallel AI collaboration at scale.

One Person. One Protocol. Infinite Agents.

I'm not a patent lawyer.
But in 45 minutes, I just did the work of a 10-person IP firm.

Invention Parliament is the demo.
AMCP is the protocol that makes it possible.

One person. One protocol. Infinite agents.

TRY IT

Live demo: **Watch now**

Generate your patent

BUILD ON IT

AMCP Spec: **GitHub repository**

Open source Q1 2025

Join mailing list

INVEST IN IT

Team: **Contact us**

Pitch deck: **Download here**

Schedule meeting