APS 🤖💳

AgentPayment Sandbox

Sivasubramanian Ramanathan
Product Owner | Fintech & Innovation
Ex-BIS Innovation Hub Singapore

🌏 **Seeking Opportunities in Singapore**
Product Management • Fintech • Payments • RegTech

"I am a Product person. **I built this to understand the problem.**"

I believe the best Product Owners accept complexity. I built this sandbox not to be an engineer, but to deeply understand the **infrastructure gap** preventing agentic commerce.

The Agentic Vision 🌍

Instead of optimizing checkout forms for humans, can we eliminate them?

YES. This replaces "User Attention" with "Cryptographic Mandates".

1. The Old Way (Human-Centric) 👤

- User navigates UI, solves CAPTCHAs, inputs 16-digit PAN.
- **Gap**: Depends on human attention span.
- **Result**: "Cart Abandonment" and friction.

2. The UCP Way (Agent-Centric) 🚀

- Agents use **Universal Commerce Protocol** to negotiate deals.
- **Trust**: User signs a **Mandate** once.
- **Result**: Zero-click, autonomous execution.

" **Impact**: Unlocks the "Machine Economy" (Agents trading 24/7). „

The Paradigm Shift 💡

It is not about the payment rail itself.

It is about the AUTHORITY to transact.

- **From**: "Prove you are human" (CAPTCHAs).
- **To**: "Prove you are authorized" (Verifiable Credentials).

" This treats the Agent as a **first-class participant** in the economy. „

The Unified Ecosystem 🧩

UCP unifies the fragmented agent landscape.

Protocol	Owner	Role
UCP	**Google, Shopify, Walmart**	**The Universal Standard**
AP2	Google	Mandate & Auth Layer
ACP	Shopify + OpenAI	Commerce/Checkout Layer
x402	Google + Coinbase	Crypto Extension (A2A)

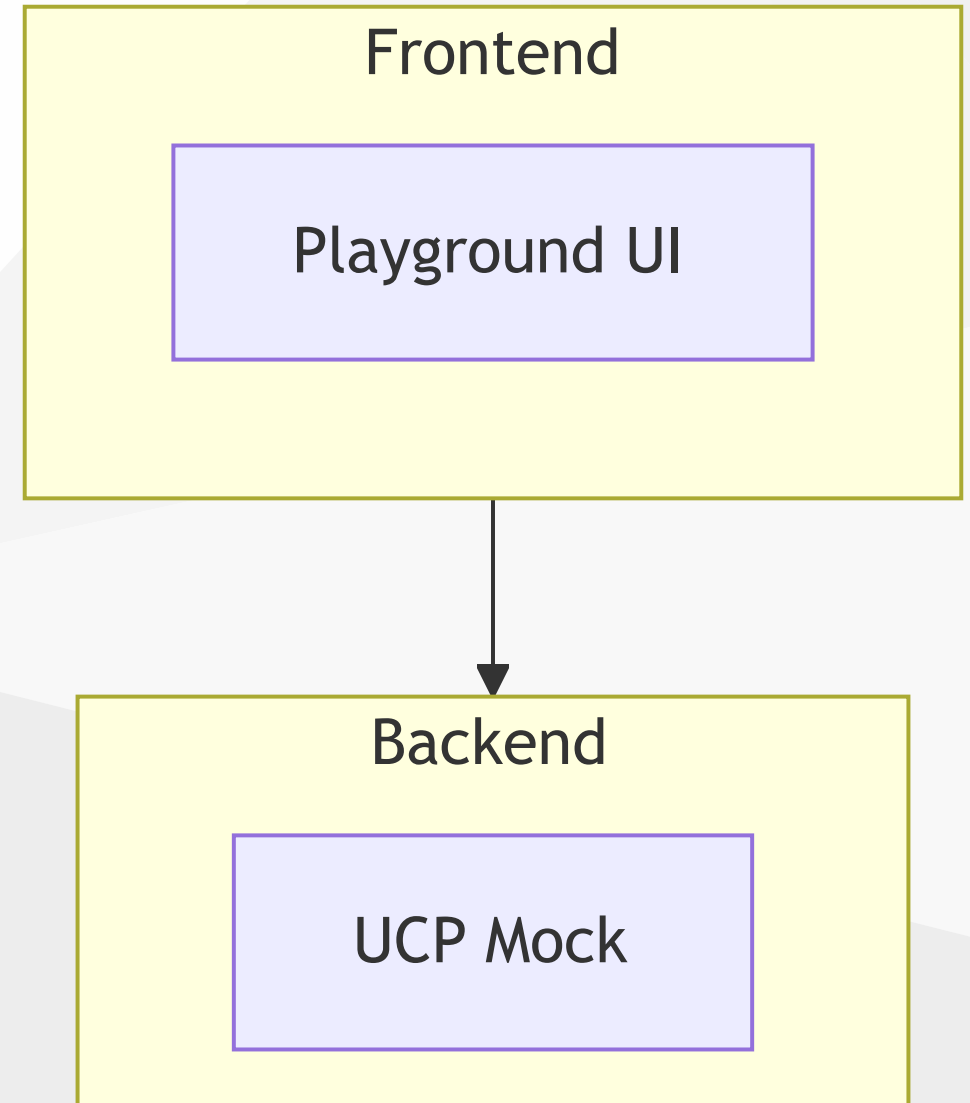" **The Problem**: Developers need a single tool to test this entire stack. „

Introducing APS 🚀

Unified Sandbox for Agentic Commerce

The "Postman" for Agents

- ⚡ **Mock Servers**: Instant endpoints for UCP, AP2, ACP, x402.
- 🔍 **Inspector**: Validates requests against schemas.
- 🛡️ **Security**: Verifies Mandate signatures.
- 🎮 **Playground**: Learn by doing.

Frontend

Playground UI
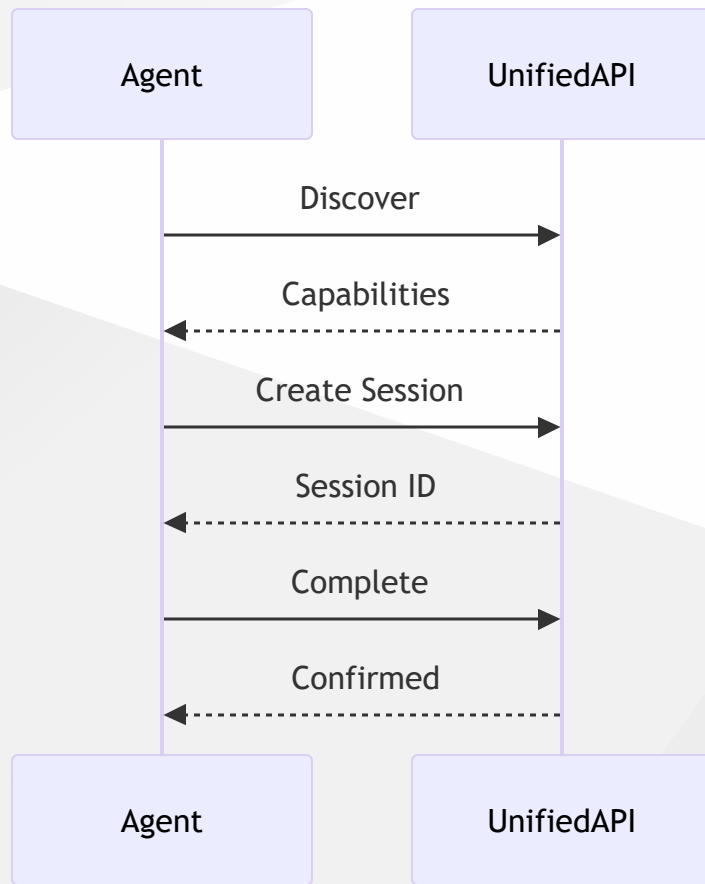
Backend

UCP Mock

UCP (Google + Partners) 💳

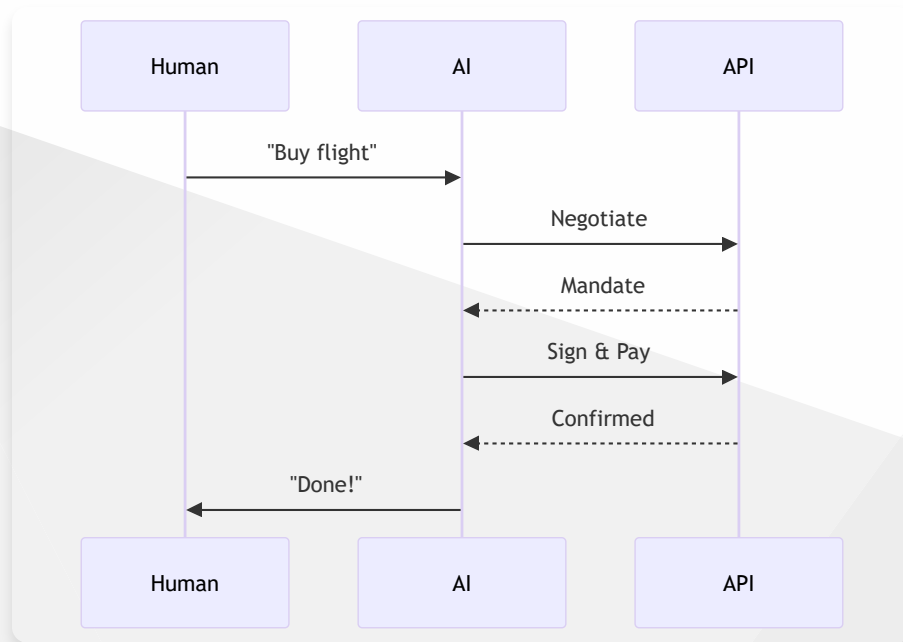*The Universal Standard (Shopify, Etsy, Target, Walmart).*

What APS Tests

1. **Orchestration**: Tying Discovery to Payment.
2. **Product Search**: Universal catalog access.
3. **Cross-Platform**: Works across Shopify, Stripe, etc.

AP2 (Google): The Auth Layer 🤖

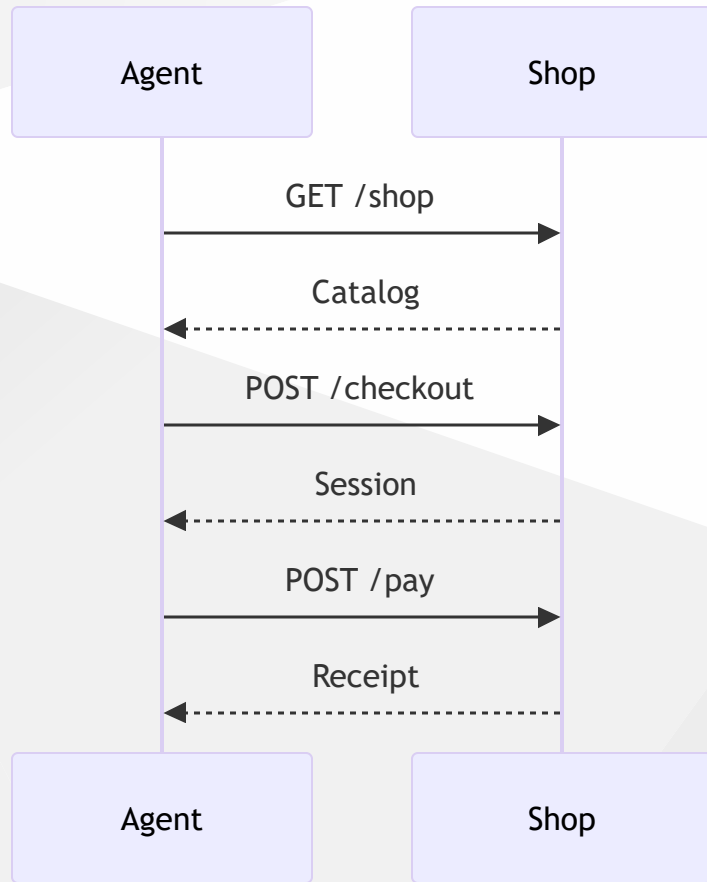*Handling Trust, Mandates, and Verifiable Credentials.*

What APS Tests

1. **Intent Mandates**: Proving user authority.
2. **Cart Mandates**: Locking in prices.
3. **Accountability**: Audit trails.

ACP (Shopify + OpenAI) 🛍️

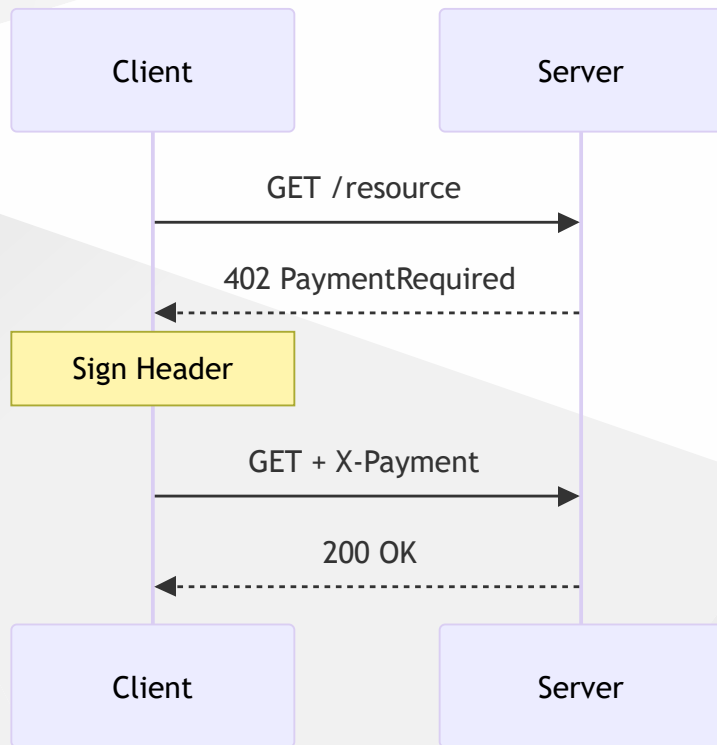*Specialized for E-commerce Checkout flows.*

What APS Tests

1. **Sessions**: Maintaining cart state.
2. **Variants**: Size, Color, SKU selection.
3. **Checkout**: Completing the purchase.

A2A x402 Extension (Coinbase) ⚡

The Crypto Rail for Agent-to-Agent (A2A) payments.

What APS Tests

1. **Micro-payments**: Per-token billing.
2. **EIP-712**: Web3 signatures.
3. **Metered Access**: Pay-as-you-go APIs.

Demo Mode: GitHub Pages 🌐

How I deployed a backend-heavy app to static hosting.

The Challenge

GitHub Pages = No Server.
API calls usually fail.

The Solution

```typescript
// frontend/src/services/api.ts
const IS_DEMO = window.location.hostname
    .includes('github.io');

if (IS_DEMO) {
    return MOCK_DATA.ap2_response;
}
```

- **Context-Aware API**: Detects `github.io`.
- **Service Worker Logic**: Intercepts requests.
- **Mock Data Layer**: Returns valid JSON responses.

" **Result**: A frictionless live demo. "

About Me 🧑‍💼

Sivasubramanian Ramanathan
Product Owner | Fintech, Payments & Innovation

I specialize in **taking complex systems and making them usable**.

- **Philosophy**: Product Managers must understand the protocols they govern.
- **Experience**: BIS Innovation Hub Singapore.
- **Focus**: Bridging the gap between Regulation/Policy and Engineering.

Let's Connect 🤝

I am ready to bring this level of product thinking and execution to your team.

- 🌐 **Portfolio**: sivasub.com
- 💼 **LinkedIn**: linkedin.com/in/sivasub987
- 💻 **Code**: GitHub/APS
- 📚 **Docs**: Documentation

Live Demo:
siva-sub.github.io/AgentPayment-Sandbox