Alan Weiner

Senior iOS Architect | SDK & Platform Builder | Spatial UX Advocate

📍 Based in PA – Open to hybrid/remote roles
📧 aweiner@simecorp.com | 📞 717-329-1491
🔗 https://www.simecorp.net | 📱 myPromenade App: https://apple.co/475iZ2I
👤 LinkedIn: https://www.linkedin.com/in/alan-weiner-72bb80/

Professional Summary

Senior iOS Architect and Principal Engineer with 10+ years delivering large-scale consumer iOS applications used by millions, and 40+ years of software and systems innovation overall. Proven record owning architecture, performance, reliability, and evolution of complex mobile platforms — from healthcare (PHI-secure systems at CVS Health) to consumer apps built with Swift, SwiftUI, and Objective-C.

As a fractional architect, I help teams move beyond "just an app," designing durable Apple-ecosystem platforms rather than single-device solutions. My work drives SwiftUI adoption, modular package architectures, CI/CD, and platform patterns that endure across iPhone, iPad, Mac, Apple Watch, and Vision Pro. I'm known for inventing interfaces people didn't know they needed (spatial browsing, ambient SharePlay experiences), holding multiple patents, and consistently transforming industries by blending technical rigor with human-centered design.

Skills

Languages: Swift, SwiftUI, Objective-C, C++, JavaScript, TypeScript, SQL, RESTful APIs

Frameworks & Technologies: iOS SDK, UIKit, ARKit, SceneKit, CoreData, Swift Concurrency (async/await, Combine), Keychain, HomeKit, BLE Integration, OAuth2

Tools: Xcode, Swift Package Manager (SPM), Git, Jenkins, Jira, Bitbucket, Confluence, Visual Paradigm, Charles Proxy, Splunk, Crashlytics, Testing & CI: XCTest, XCUITest, pragmatic TDD, CI/CD with GitHub Actions, CircleCI, TestFlight multi-track releases

Published Swift Package: FlywheelControl – reusable control for zoom/scroll gestures, integrated with SwiftUI/SceneKit.

Methodologies: Agile/Scrum (practical expertise since its inception), CI/CD, Test-Driven Development (XCTest), App Store Delivery, SDK/Framework Development , CASE methodologies (UML, data/process modeling)

Computer Science Foundations: data structures, algorithms, concurrency models, memory management, distributed systems fundamentals

Additional Experience: Angular 9, Blockchain, FreeRTOS, Firebase, OpenAI API, GPT-4

Experience Highlights

Founder & Principal Engineer

Sumner Internet Marketing Environments, Corp - SIME Corp (1995 – Present)

Lead iOS Engineer — myPromenade / Record Player Platforms — *2023–Present*

- Architected and shipped **myPromenade**, a spatial-browsing app in **SwiftUI** with **SharePlay**, modular **SPM** frameworks, and AI-driven/cloud content pipelines; **App Store release** maintained with live analytics and roadmap.
- Designed next-generation **3D / media-rich interfaces** across iPhone, iPad, macOS, and **visionOS**.
- Integrated **Amazon/eBay** APIs with real-time image optimization for high-volume browsing and fast UX.
- Drove end-to-end product delivery: security, performance, CI/CD, and App Store operations.
- Shipped and operate production iOS apps on the App Store, owning release management, crash monitoring, performance tuning, and post-release iteration.

Earlier highlights at SIME Corp

- **Image Content Management System (ICMS)**: Built one of the earliest online systems for commercial artists (digital portfolios, early e-commerce, distribution).
- Prototyped interactive systems across **embedded hardware**, robotics, and audiovisual installations (early ambient computing).
- Created experimental platforms including **ColorfulThunder** (atomic-clock-synced AR visuals) and **The Record Player** (Objective-C **ARKit** app wrapped in SwiftUI).
- Built full-stack affiliate commerce engines using **GPT-4**, **Firebase Functions**, and dynamic content pipelines.
- Delivered user-loving, platform-level interfaces (spatial browsing, ambient interactions) blending **architecture** with **human-centered design**.

Principal Embedded Engineer

New Potato Technologies (2007 – 2010, 2023 contract)

- One of fewer than five U.S. companies licensed by Apple to design dock-connector hardware for iPods/iPhones.
- Designed ultra-low-power embedded hardware capable of running 3+ years on a single battery, enabling the company's first generation of Apple-connected accessories.
- Architected and built the electronics for the **DLO iBoom**, a CES 2008 award-winning iPod speaker system with an RF remote that displayed album artwork — the first of its kind.
- Co-created **myMPG** (2010), among the first iOS apps to use the accelerometer for eco-driving feedback.
- Built the first universal remote app for iPhone by embedding a SQL database of codes and pairing it with a custom infrared accessory.

Contract Engineer (2023)

- Developed **embedded control systems for real-time thermometers** using **FreeRTOS on TI chips**.
- Implemented **low-level system controls** and device interfaces, including Bluetooth connectivity to external devices.

Senior Advisor, Mobile Architecture

CVS Health (2014 – 2023)

- **Architected and developed the first native CVS Pharmacy iOS app**, transforming it from a website clone into a true mobile-first experience that scaled to **1M+ daily launches** across multiple business domains.
- Built internal mobile SDKs and enablement frameworks used across multiple CVS teams, accelerating feature delivery while enforcing security, performance, and governance standards.
- Built and operated state-heavy, latency-sensitive iOS experiences backed by distributed services, handling millions of daily sessions with strict reliability, performance, and security requirements.
- **Designed a modular Objective-C pod-based architecture**, creating reusable SDKs with analytics baked in. This enabled dozens of internal teams to plug into a shared platform while ensuring PHI/PCI compliance and performance at scale.
- Invented and implemented **Business Control Content (BCC)** — a governance system allowing multiple organizations to deliver dynamic, real-time content without overloading backend servers, even at peak traffic.
- Led the creation of **CVS Pay**, a PHI/PCI-compliant mobile payment solution processing **6,000+ secure transactions/hour**.
- Awarded **US Patent US11862306B1** for a blockchain-based PHI communication system enabling secure data routing, even offline.
- Evangelized mobile as a life-critical healthcare tool, embedding analytics and security into every layer of the app's architecture. Mentored engineers, drove code/design reviews, and helped shift CVS from waterfall toward Agile practices.

Principal iOS Developer

Control4 (2010 – 2014)

Built and maintained a universal iOS solution spanning both iPhone and iPad for whole-home control, ensuring every subsystem - media, climate, security, lighting - worked seamlessly across form factors.

- **Architected and implemented Control4's multi-camera security-video viewer**, aggregating heterogeneous IP-camera feeds (multiple manufacturers, formats, resolutions) into a **single unified, low-latency Apple-native pipeline**.
- **Designed buffering, concurrency, and degraded-network strategies** to keep real-time video stable over the inconsistent Wi-Fi networks common in homes - **experience directly applicable to modern real-time video architectures**.
- Built UI components for **music/video collections, lighting, security, and whole-house control**, emphasizing reliability in real homes with variable networks.
- **Invented the first rotary-style thermostat interface on mobile** - a design now widely adopted across the smart-home industry.

Principal Engineer – Digital Ultrasound Innovation

Krautkramer Branson (1985 – 1995)

- **Co-inventor of the Quiet Bus architecture (US Patent 5287291)** — a digital pattern for ultrasonic flaw detection that reduced system noise while preserving ultra-high resolution signal integrity. This design became the **industry standard** in aerospace non-destructive testing.
- **Inventor of electronic DGS (Distance-Gain-Size) compensation (US Patent 5511425 A)** — introduced real-time waveform visualization and digitized flaw sizing, enabling inspectors to work faster and with greater accuracy.
- Championed the industry's first transition from analog to **digital ultrasonic imaging**, presenting at international conferences (1985–1995) that **computers would be able to image and apply AI analysis to flaws** — a radical concept at the time that has since become the norm.
- Designed and shipped the **USIP-20 system**, a flagship ultrasonic test instrument that embodied these innovations and set a new benchmark in non-destructive evaluation (NDE).
- Established a **repeatable pattern: using digital technology to transform entire industries**, a throughline continued later in healthcare (PHI communications patent) and now in spatial/ambient Apple platform experiences.

Principal Developer – Digital Game Innovation

CBS Electronics (1983 – 1985)

- Helped pioneer modern gameplay mechanics, transforming the Atari 2600 PONG cartridge game into a real-time flight simulator with pitch, roll, and terrain logic.

Projects & Innovations

- **myPromenade** – Spatial browsing app built in SwiftUI with SharePlay and AI-driven content pipelines. 🔗 https://apple.co/475iZ2I
- **FlywheelControl** – Open-source Swift Package providing haptic zoom/scroll control, used in spatial browsing and visionOS prototypes. 🔗 https://github.com/aweiner42/FlywheelControl
- **CVS Pharmacy iOS App** – Architected the first native iOS app for CVS Health, supporting 1M+ daily users across multiple domains.
- **CVS Pay** – PHI/PCI-compliant mobile payment solution integrated with the CVS app.
- **The Record Player** – AR music playback with anchored vinyl simulation. 🔗 https://www.simecorp.net/theRecordPlayer.html
- **ColorfulThunder** – Visual music app translating notes into crowd-synced colors. 🔗 https://www.simecorp.net/ColorfulThunder.html
- **Control4 iOS App** – Contributed to universal home automation controller, including music, video, lighting, and house controls.
- **myMPG (New Potato)** – Early iOS accelerometer app for eco-driving feedback.

Patents

- **US Patent US11862306B1** – Blockchain-based system for secure PHI communication and presentation of health information. Issued Jan 2 2024.
- **US Patent US5287291** – Quiet Bus for busing analog and digital data. Issued Feb 15 1994.
- **US Patent US5511425A** – Flaw detector incorporating DGS. Issued Apr 30 1996.

Education

Bachelor of Science in Applied Physics – Worcester Polytechnic Institute (CS-equivalent curriculum: algorithms, systems, numerical methods)

Professional Skills

- **Mobile Evangelist** – Apple ecosystem advocate, pushing modular SwiftUI and visionOS frameworks.
- **Mentor & Team Leader** – Leads code/design reviews and team development for large-scale iOS platforms.
- **Agile Practitioner** – Extensive practical experience with Agile/Scrum methodologies and CI/CD.
- **Privacy & Security Expert** – Blockchain patent holder for secure PHI data systems.