Howard Stearns

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EXPERIENCE

Senior Developer	*Linden Lab (Second Life), San Francisco, CA*	*2021-present*
Lead Developer	*High Fidelity, San Francisco, CA*	*2015-2021*

Second Life is the original metaverse, created by Philip Rosedale, and High Fidelity was his separate VR re-conception. I led the senior development team for the blockchain economy, high-concurrency servers, personal safety, social services and business services, before following him back to Second Life.

Senior Developer / Lead	*Shocase, San Francisco, CA*	*2014-2015*

This social network for marketing professionals automatically suggested individual pre-loaded portfolios for new members. I led development of the system with 100k portfolio projects identified and processed from the Internet.

Senior Developer / Lead	*TuneUp Media, San Francisco, CA*	*2011-2014*

Working closely with product management, I architected a system that automatically corrects metadata in the music collections of 9 million users.

Senior Application Lead	*HP WebOS (Palm), Sunnyvale, CA*	*2011*

I delivered a new tablet app using Palm's first test-driven development process, and led the team for the release of Palm's most complex and visible mobile app: email.

Member of the Technical Staff	*Teleplace (Qwaq), Redwood City, CA*	*2007-2011*
Lead Developer	*University of Wisconsin, Madison, WI*	*2004-2007*

The Croquet Project was convened by computing pioneers Alan Kay and David Reed to advance 3D virtual worlds for real-time, persistent collaboration. I led the development team at UW before joining the enterprise commercialization, Teleplace. My direct accomplishments include the first end-user installations, an interactive authoring language for non-programmers, avatar animation on business-class computers, and (iOS, Blackberry, Android) apps that allowed mobile users to participate in collaborative meetings with shared multi-media.

Technology Strategist	*Curl, Cambridge, MA*	*1999-2002*

Curl was an MIT startup created by Tim Berners-Lee that created the rich internet architecture model of Web apps. I identified and articulated technical and competitive strengths, defining product positioning, products, and demos. I wrote the formal language specification and the systems to produce it.

Technology Director	*Elwood, Oak Creek, WI*	*1992-1999*

Elwood is a small industrial firm with products in electronics, hydraulics, and robotics that transformed the artificial diamond market. My group created micro-controller firmware, factory automation, realtime controls, programmable logic controllers, and Web catalogs. I also created the Eclipse ANSI Common Lisp system, including compiler, object system, complete portable standards-conforming system library, test suite, and documentation.

Applications Consultant	*Engineering Intent, Waltham, MA*	*2003-2004*
Manager Of Applications	*ICAD, Cambridge, MA*	*1987-1992*

ICAD was an expert system startup for 3D mechanical engineering that spawned an IPO, three spin-offs and sale to Oracle. Engineering Intent was a spinoff that was purchased by Autodesk. I created the application group that produced 13 products that integrated the system with seven different CAD systems.

EDUCATION

Massachusetts Institute of Technology	*Cambridge, MA*

B.Sc. Ocean Engineering	1986
B.Sc. Electrical Engineering	1987
Humanities Concentration: Economics	

SKILLS

Major works in Javascript, C, C++, Smalltalk, Lisp, Node.js and native plugins, Unity, iOS, QML, specifications, documentation, unit testing. Minor works in CSS, Cg shaders, Python, Java, Objective-C. Industry experience in consumer products, enterprise, mobile, 3d systems, virtual worlds, metaverse, social networks, blockchain, large-scale data, realtime distributed systems, full-stack, industrial systems, embedded systems, expert systems, SQL and no-SQL databases, and startups.

PUBLICATIONS

High Fidelity company blog three part series on social metaverse content, or on safety, live-streaming, or avatar body-tracking-IK.

Croquet Blog wetmachine: Inventing the Future, including: "Mostly Reliable Performance of Software Processes by Dynamic Control of Quality Parameters", 2011, and "Controlling Time", 2011, a seven part survey of the overall accomplishments of the Croquet Project and the key insights that made it possible.

Howard Stearns, Joshua Gargus, Martin Schuetze, and Julian Lombardi. "Simplified Distributed Authoring Via Component-based Object Construction and Deconstruction in Collaborative Croquet Spaces," and "A Language Supporting Direct Manipulation of Component-based Object Construction and Deconstruction in Collaborative Croquet Spaces," in Proc., Fourth Conference on Creating, Connecting, and Collaborating through Computing (C5 '06), IEEE Computer Society Press, 2006.

Rieko Kadobayashi, Julian Lombardi, Mark McCahill, Howard Stearns, Katsumi Tanaka, and Alan Kay. "Annotation Authoring in Collaborative 3D Virtual Environments," and "3D Model Annotation from Multiple Viewpoints for Croquet," in above and in Proc., 15th International Conference on Artificial Reality and Telexistence (ICAT '05). The Virtual Reality Society of Japan, 2005.

Croquet@UW Newsletter. Volume 1. 2006-2007.

"Curl Language Specification." Curl Corp. internal memo, 2001. 664 pages, including rationale, language comparisons with Java, C++ and others, and extensive cross-index.

"A Whirlwind Tour of Curl Technology for the Web," in Lightweight Languages Workshop CD-ROM. Dr. Dobb's Journal workshop CD, 2002.

"Lisp/C Integration in Eclipse," in Proc., 40th Anniversary of Lisp Conference, Berkeley, CA, 1998. "Eclipse Product Documentation", Elwood Corporation, 1997.

"Designing a Knowledge Based Ship Design System," in Proc. 4th International Marine Systems Conference, Kobe, Japan, 1991.

OPEN SOURCE

Second Life: https://bitbucket.org/lindenlab/

High Fidelity: https://ryanschultz.com/category/high-fidelity-highlights/

GitHub: https://github.com/howard-stearns

Qwaq/Croquet: https://github.com/itsmeront/openqwaq

Eclipse Common Lisp: https://github.com/blakemcbride/eclipse-lisp

BOARD MEMBERSHIPS

Pre-school: Little City Kids, Franksville, WI and San Mateo, CA	1998-2015
Non-Profit: Collaborative For Croquet, Waunakee, WI	2006-2007
Public Policy: Citizens for Responsible Energy, Waunakee, WI	2006-2007
International professional organization: Association of Lisp Users	1997-2002
Commercial real-estate: Third Little Pig, Franksville, WI	1998-2000
Bookpublishers' production services: City Desktop Productions, Franksville, WI	1990-2000