

# Resumé: Stephen Travis Pope

## Contact

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## Objective

Seeking a position as system architect, chief scientist, director of research, CTO, project lead, technical consultant, or “design conscience” on a team of professionals delivering innovative multimedia, numerical or scientific software-related products.

## Summary

Stephen Pope is an experienced software/hardware engineer, technology visionary, strategic manager and intellectual property expert. He has an extensive track-record developing large systems in C, C++, Java, and Smalltalk for applications such as multimedia data processing and delivery, reliable distributed web services, computer graphics, database systems, virtual environments, numerics/statistics, and artificial intelligence.

His skills cover project/product requirements specification, planning and development management, software architecture and design, marketing and communications, and executive planning and administration. Stephen has worked in environments ranging from small start-ups to large industrial and defense organizations in a variety of countries; he is willing to travel or relocate (for the right position) and speaks several languages well.

## Background

Over his 25-year career, Stephen Pope has held lead technical and managerial positions at PCS/Cadmus Computers in Munich, Xerox PARC, ParcPlace Systems (now Cincom), Predixis (now Music-IP) and Expertcity.com (now Citrix-Online) in California, and in numerous analysis/design and team mentoring roles in US-based, European and Asian industry and defense organizations. He has managed academic R&D teams at the Vienna Music Academy, the Mozarteum, Stanford University, U. C. Berkeley, the Swedish Institute of Computer Science, the Technical University of Berlin, the STEIM Institute in Amsterdam, and U. C. Santa Barbara.

Stephen is currently active as a software consultant/contractor specializing in object-oriented software and development process management, and as a lab manager and graduate lecturer at the University of California, Santa Barbara’s Graduate Program in Media Arts and Technology (UCSB MAT).

His 100 publications range in topic from artificial intelligence, computer graphics and user interfaces to programming environments, object-oriented technologies, audio signal processing, and music theory and composition. From 1988-97 he served as editor of *Computer Music Journal* (MIT Press).

Stephen studied at Cornell University (1974-77), the Vienna Music Academy (1977-80), and the Mozarteum Academy in Salzburg (1980-86), receiving degrees and certificates in electrical engineering, recording engineering, music theory and composition. He lived in Europe (Austria, France and Germany) from 1977-86, and spent several years there since then (in Holland, Germany and Sweden).

## Software Products

Stephen's individual and team development projects have included:

- Integrated E-commerce and Object/Relational database web services (Java, C++);
- Flexible front-ends to "legacy" corporate database systems (C++, Smalltalk, Java);
- Software for ATM network element/connection management (C++, Smalltalk);
- Data-mining, database clustering for content-based search engines (C++, Smalltalk, R);
- Expert systems for content post-production and mastering (C++, LISP);
- Virtual-reality-based user interfaces and applications (C, C++, Smalltalk);
- Zero-down-time distributed databases (C++, Smalltalk);
- Frameworks for reliable distributed application monitoring (C++, Smalltalk);
- Media-data signal processing and numerical tools (C, C++, Smalltalk, MATLAB, R);
- Compilers for experimental telecommunications protocols (C++, Smalltalk);
- Cross-platform tools for parallel assembler programming (C, ObjectiveC);
- Multimedia database analysis/query feature extraction systems (C++, MATLAB);
- Dynamic audio-driven OpenGL animation programs (C++, OpenGL);
- Distributed database for requirements analysis and project tracking (C++, Java);
- Smalltalk, CommonLISP, C++, and SuperCollider software development tools; and
- UNIX windowing systems, user interfaces and graphics libraries (C, C++, OpenGL).

Details of these projects can be found in [http://HeavenEverywhere.com/STPope\\_Docs.zip](http://HeavenEverywhere.com/STPope_Docs.zip).

## Technology Expertise

- Languages (expert-level): C, C++, Smalltalk, Java, shell, SuperCollider, SQL
- Languages (some experience): Python, lua, ruby, MATLAB, ObjectiveC, LISP
- Databases: Oracle, MySQL, PostgreSQL, Gemstone, MinneStore, SQL, JDBC, C APIs to SQL
- Distributed systems: CORBA, DST, MPI, UDP/TCP/IP, load-balancing, fault-tolerant systems
- Delivery technologies: GUIs, servlets, DHTML, JSP, app. servers, client/server
- A/D Methods: O-O A/D, UML, spiral, XP/agile methods, scrum, ISO 9000, CMMI, PSP
- Other: Real-time scheduling, scientific/financial numerics, data-mining, OS kernel programming, artificial intelligence methods, IO and file systems, network protocols, computer graphics, technical writing and communications

## Professional Experience

1996-present: Center for Research in Electronic Art Technology (CREATE), University of California, Santa Barbara ([www.create.ucsb.edu](http://www.create.ucsb.edu))—Research Director/Senior Researcher. Teaching in the Graduate Program in Media Arts and Technology ([www.mat.ucsb.edu](http://www.mat.ucsb.edu)), project management, principal investigator, strategic planning, fund-raising and lab/department-level administrative activities.

1992-present: FASTLab, Inc., Santa Barbara, California ([FASTLabInc.com](http://FASTLabInc.com))—Development and management consultant/contractor for teams building multimedia and numerical signal processing and data networking software. Clients have included Sprint (Lead), Parasoft (Lead), Ameritech (Lead), American Express (Lead), Catalyst Mobile (Lead), Citrix Online (Lead), Yamaha, Apple, Teknowledge, John Deere, US Air Force, US Navy, and a variety of intellectual property law firms.

1993-1996: Center for New Music and Audio Technologies (CNMAT), University of California, Berkeley ([www.cnmat.berkeley.edu](http://www.cnmat.berkeley.edu))—Research associate at a computer music research, education, and production center. Project management in new language development.

1989-93: Center for Computer Research in Music and Acoustics (CCRMA), Stanford University ([www.ccrma.stanford.edu](http://www.ccrma.stanford.edu))—Visiting scholar/composer at a computer music research, education, and production center. Project work and management in composition and music software development.

1988-1997: *Computer Music Journal*, MIT Press, Cambridge, Massachusetts—Editor-in-chief of an award-winning quarterly technical/ artistic journal. Management of manuscript processing, organization of special issues, writing and editing of articles, budget planning, and public relations.

1986-1994: Xerox Palo Alto Research Center (PARC, [www.parc.com](http://www.parc.com)), ParcPlace Systems, Inc., Palo Alto, California (now [www.cincomsmalltalk.com](http://www.cincomsmalltalk.com))—Software developer and team manager for the Smalltalk-80 language and system. Responsible for kernel code, user interface frameworks and developer's tools. Implementation of distributed processing environments (CORBA), strategic planning, documentation, PR, support, publications, and training development/delivery.

1983-1986: PCS/Cadmus: Periphere Computer Systeme GmbH, Munich, Germany—Manager and lead programmer, artificial intelligence (AI) and graphics software groups. Design and development of C, LISP and Smalltalk-80 software for graphics and window systems, and AI tools and applications. Participation (as a group manager and planner) in European-funded R&D projects for graphics and AI.

1980-1986: CMRS (Computermusik Rechenzentrum Salzburg) and Mozarteum Academy, Salzburg, Austria—Systems administrator of a center for computer music and software development, UNIX operating system programming and application development for AI applications, graphical user interfaces, and teaching activities. Several commissions for music compositions.

1978-1980 (several visits totaling 15 months): IRCAM (Institute de Recherche et Coordination, Acoustique/Musique) Paris ([www.ircam.fr](http://www.ircam.fr))—Music software developer, recording studio management, performances with the Ensemble Intercontemporain, composition.

1972-1975, 1990-93 (Part-/full-time): Eventide Clockworks, New Jersey ([www.eventide.com](http://www.eventide.com))—Design, construction, prototyping and custom digital signal processing devices for audio applications; development of graphical programming tools for assembly-language signal processing.

## Education

1974-1977: Cornell University, Ithaca, New York—Bachelor's of Science in Electrical Engineering (completed in three years). Concentration in computer architecture and design (senior project in real-time audio signal processing for sound spatialization), courses in computer science, analog circuit design, digital signal processing, and a minor in music.

1977-1980: Vienna Music Academy/Vienna International Music Center, Vienna, Austria—Honors certificate (*Zeugniss mit sehr gutem Erfolg*) in Tontechnik (recording engineering). Other courses in composition, conducting, and electroacoustics.

1980-1986: Academy of Music and the Performing Arts “Mozarteum,” Salzburg, Austria—Honors certificates (*Zeugnisse mit sehr gutem Erfolg*), in music theory and composition, form and analysis and orchestration. Served on the faculty 1981-86 as a lecturer in composition.

## Professional Organizations

- Member of advisory committee of the Institute of Electrical and Electronics Engineers (IEEE), the Audio Engineering Society (AES), the *Journal of the AES*
- Former officer: International Computer Music Association, elected a lifetime member in 1990.
- Frequent reviewer for any number of technical conferences

## Personal Data

Born 1955 in Ridgewood, New Jersey, USA; citizen of the USA.

Previous working permits in Austria, France, Germany, The Netherlands, and Sweden.

Languages: fluent English & German; good French & Swedish; rusty Mandarin & Italian.

Based in Santa Barbara, California; willing to relocate for the right position.

See also the web sites <http://HeavenEverywhere.com/stp> and <http://FASTLabInc.com> and download Stephen's documentation portfolio from [http://HeavenEverywhere.com/STPope\\_Docs.zip](http://HeavenEverywhere.com/STPope_Docs.zip)