

## Timothy Moore

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- Objective** To do outstanding work as a principal engineer or project leader.
- Skills**
- General Programming:* C, C++, Common Lisp, Java, Perl, objected oriented design, Unix and Linux, embedded systems, J2ME
  - Computer Graphics:* real time 3D graphics, OpenGL, OpenSceneGraph, CLIM, JSR-184, X Windows, presentation based interfaces
  - Language Implementation:* internals of GCC (GNU C compiler), GDB (GNU symbolic debugger), CMU Common Lisp
  - Databases:* Oracle SQL, Berlekey DB
  - Simulation:* DIS, ModSAF
  - Operating System Internals:* Linux kernel and modules
  - Typesetting and Illustration:* T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X, PDF, Adobe Illustrator, Photoshop, Blender, Wings3d
  - Web:* HTML, Apache (mod\_perl), XML, XML-RPC
  - Languages:* Fluent in French
- Experience**
- Red Hat France SARL Puteaux, France  
June, 2006 – April, 2010  
Senior software engineer, Developer Tools Group. Member of the team working on the Frysk next-generation debugger. Implemented x86-64 support, support for debugging 32 bit processes on 64 bit platforms, and breakpoints. Grapher for events and backtraces for Systemtap tracing project. Worked remotely as part of an international team.
- In-Fusio Bordeaux, France  
September, 2005 – December, 2005  
Advanced technology developer. Researched and wrote prototypes for emerging technology in mobile phones such as streaming video and messaging via the SIP protocol. Wrote benchmarks and utilities for EGE 3D, In-Fusio's 3D library for mobile platforms.
- LaBRI – Université Bordeaux I Bordeaux, France  
September, 2003 – August, 2005  
*Professeur associé* and doctoral student. Prepared lectures and supervised student exercises and projects in programming and software engineering. Classes were conducted in French. Research in the engineering of human interfaces. Dissertation title: "User Interfaces Based On Presentations and Presentation Types".
- Amazon.com Seattle, WA  
August, 1999 – August, 2001, September, 2002 – August, 2003  
Software design engineer, Media Technologies Group. Major contributor to "Amazon Free Music Downloads", an mp3 upload / download project which involved new development across many areas of Amazon's website software. Prototyped, designed and specified resources for Amazon's "Look Inside the Book" project. Implemented critical parts of the back end processing for the

“Search Inside the Book” feature. Wrote Perl scripts that made cached snapshots of backend Oracle databases. Created a system for developers to prototype localized changes to website content. Served as group resource for knowledge of C++, Perl, SQL, and object-oriented programming.

Dotcast Inc. Kent, WA  
August, 2001 – August, 2002

Senior software engineer. Major contributor to datacasting network scheduling and management software, controlled via a web front end, written in Common Lisp. Wrote a library for converting program objects into XML messages and back for communication between software components. Wrote code to create a web page “navbar” automatically from a tree of objects. Wrote the prototype of the program’s object persistence system that using Common Lisp’s Meta Object Protocol.

Crave Entertainment Inc. Seattle, WA  
February, 1998 – May, 1999

Software engineer. Technical lead on a Sony PlayStation title. Designed and implemented a complete tools path from Maya modeling package to Sony’s HMD format including easy preview on the PlayStation. Wrote programs to fix errors in output of Animetix 3D Studio Max plugin. Implemented full motion video system for PSX game Shadow Madness.

Zombie LLC Seattle, WA  
February, 1997 – July, 1997, December 1997

Independent consultant, DisneyQuest Coaster. Wrote a loader that imports scenes created in Alias PowerAnimator into Iris Performer via the RTG format. Designed a very fast, pagable graphics database format for a location-based entertainment application implemented in Performer.

Lockheed Martin ADS (formerly Loral ADS) Bellevue, WA  
August, 1995 – January, 1998

Senior software engineer. Principal engineer on OpenScene, a visual simulation system built on Iris Performer. Wrote a Performer loader and terrain database pager for a legacy run-time visual database format. Designed and supervised implementation of projective texture lighting effects in OpenGL in bid for UK CATT tank simulator program. Helped architect, and implemented, network protocols for dynamic terrain in distributed DIS simulations.

Northwest Digital Systems Seattle, WA  
February, 1995 – August, 1995

Software engineer. Ported VxWorks and X11 server to a new Mips R3300 based X terminal design. Wrote setup menu code for this terminal. Configured and provided support for gcc and other GNU tools in this environment.

Sarcos Research Corp. Salt Lake City, UT  
April, 1994 – March, 1995

Software engineer. Wrote real-time graphics software for ISMS virtual reality project using SGI Performer. Implemented a visualization program for the real-time programming of robotic entertainment figures (Universal Studios’ Jurassic Park). Wrote high-speed data collection software for a VME system running VxWorks. Participated in the design of Sarcos’ digital controller architecture.

Sarcos Research Corp. Salt Lake City, UT  
January, 1994 – March, 1994

Programmer, ISMS project. Wrote communications and real-time control software for virtual reality training device. Interfaced VME system running VxWorks with SGI Unix hosts. Wrote

interface library to Polhemus 3D tracker. Demonstrated the device before the U.S. Army Chief of Staff.

University of Utah Department of Computer Science Salt Lake City, UT  
January, 1991 – December, 1993

Staff programmer, Center for Software Science. Ported Utah Common Lisp (UCL) to the 80386 architecture. Ported GCC 2.0 to Hewlett-Packard's PA-RISC architecture. Wrote a PA-RISC backend for CMU Common Lisp. Modified UCL compiler to generate code for a persistent object store. Represented University on X3J13, ANSI Committee for the Standardization of Common Lisp.

University of Utah Department of Computer Science Salt Lake City, UT  
January, 1989 – December, 1990

Research assistant, Portable A.I. Software Systems group and Center for Software Science. Ported GCC 1.37 and GDB to the PA-RISC architecture. Ported UCL to the MIPS architecture. Wrote a retargetable assembler backend for UCL's compiler. Developed and maintained Utah Common Lisp.

Ardent Computer Sunnyvale, CA  
July, 1988 – September, 1988

Did software quality assurance. Ported GNU Emacs to the Ardent Titan.

University of Utah Department of Computer Science Salt Lake City, UT  
October, 1987–May, 1988, October, 1988–December, 1988

Teaching assistant for Programming in FORTRAN, Introduction to Computer Science, Software Fundamentals, and Lisp and A.I. Programming.

### Independent Projects

Major contributor to the FlightGear flight simulator project, [www.flightgear.org](http://www.flightgear.org). Contributor to OpenSceneGraph high performance graphics toolkit, [www.openscenegraph.org](http://www.openscenegraph.org). Major contributor to McCLIM, a free implementation of the Common Lisp Interface Manager. Author of cparse, a Common Lisp package that parses C header files and produces Lisp Foreign Function Interface definitions (See <http://www.bricoworks.com/~moore/cparse/>). Designer and typesetter of the electronic edition of Neil Myers' *From a Zazen Journal*, using  $\text{\LaTeX}$  and Adobe PDF (<http://www.bricoworks.com/zazen/>).

### Publications

T. Moore. An Implementation of CLIM Presentation Types. In *Journal of Universal Computer Science* vol 14 no 20

R. Strandh, T. Moore and M. Villeneuve. Flexichain: An Editable Sequence and its Gap-buffer implementation. In *Proceedings of the first European Workshop on Lisp and Scheme*, Oslo, Norway, June, 2004

R. Strandh and T. Moore. A Free Implementation of CLIM. In *Proceedings of the 2002 International Lisp Conference*, October, 2002

D. Pratt, P. Barham, J. Locke, M. Zyda, B. Eastham, T. Moore, K. Biggers, R. Douglass, S. Jacobsen, M. Hollick, J. Granieri, H. Ko, and N. I. Badler. Insertion of an Articulated Human into a Networked Virtual Environment. In *Proceedings of the 1994 A.I., Simulation and Planning in High Autonomy Systems Conference*, December, 1994.

### Other Writings

Slot Accessor Names Matter <http://www.lisp-p.org/i000/80-closminded/>, the first article in a series on object oriented programming in Common Lisp.

**Education** University of Utah Salt Lake City, UT  
PhD. program, Computer Science, October, 1987 – December, 1990, January, 1992 – May, 1993  
Passed Comprehensive (Qualifying) Exams, May, 1989.

Massachusetts Institute of Technology Cambridge, MA  
S.B. Ocean Engineering, September, 1984 – June, 1987

**Background** Born and raised in New York City. Attended Trinity School; was graduated cum laude, receiving school prizes in physics and drama. National Merit Scholar. Attended Thacher Summer Science Program. Hobbies include photography, cycling, and hiking.