

Trent Larson

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EXPERIENCE

Owner, Buehner Marble & Granite, Salt Lake City, UT – 2009-Present

Took a struggling slab granite business and have made it profitable with the addition of a modular approach to installation. We did \$1.5M in sales the first year, \$1.2M of which was in the last 6 months. We support a dozen employees and another half-dozen installers. I consult on management and IT.

VP of Software Development, Max International, Salt Lake City, UT – 2008-Present

Started as a consultant and built the site that manages associate sign-ups and reports, then joined permanently to take responsibility for the data services for the whole corporation. Now we have almost doubled in size, are working 3 more countries (in addition to US and CA), and have goals to become a Fortune 500 company.

Director of IT, Icentris, Inc., Salt Lake City, UT – 2000-2010

Directed the implementation of the flagship product; the company is now the industry leader in the direct-sales market. Oversaw expansion of the technical team from a single group of 10 to three functional units of 30 people.

- Led teams on deployments of existing and new products, balancing customer expectations and development milestones. Managed project plans when necessary.
- Managed the systems group and improved our haphazard network with no monitoring to a redundant system with backups and automated monitors and alerts.
- Developed the source-code and deployment processes, allowing concurrent customized work for a dozen clients with different release schedules on the same codebase.
- Deployed the resource management system and adapted it to our needs, allowing weekly work projections backed by shared measurements.
- Adapted the application architecture to allow a smoother migration to a more modern system in months rather than years.
- Supervised the design and development of customer-relationship product. The internet-based application contains contact management, dynamic email and messaging, calendaring and goals, reporting, and administration features such as content management. The reporting data is customized for each company, where data is pulled into the system on a daily basis; other interfaces include real-time order submission and contact imports via web services.
- Managed India office of outsourced developers.
- Implemented the order-entry system for a \$300M corporation which runs their business for all markets world-wide.

EXPERIENCE cont'd

Research Assistant, Laboratory for Applied Logic, Provo, UT – 1995-2001

Worked in formal methods projects, with an emphasis on theorem-proving for hardware specifications and verifications.

- Hosted a local conference for the international research community.
- Travelled internationally to present work.
- Taught and assisted with courses on programming language fundamentals and enterprise internet development.
- Wrote two volumes of thesis documents and defended work with professors.
- Developed application that was selected as the internet presence for another organization.
- Received stipend award to do research.
- Other projects include: formal methods for frameworks and patterns; hardware verification at various levels of abstraction; and advanced type theory to help with verification projects.

Independent Consultant, Salt Lake City, UT – 1996-2002

Created a sheet-music rendering, writing, and playback program, along with a site for sharing music; also developed business plans and solicited funding.

Created a natural-language querying agent and marketed concept to book publishers and AI researchers.

Instructor, Certified Careers Institute, Salt Lake City, UT – 1994-1995

Developed curriculum and trained programmers in self-paced computer degree programs.

Programmer, IBM Networking Systems, Research Triangle Park, NC – 1993

Helped upgrade network control software for frame relay capability.

System Administrator, ZCMI Headquarters, Salt Lake City, UT – 1992-1993

Ran statement reconciliation, accounting, and other large computing jobs on IBM mainframe.

Programmer, IBM Federal Systems Corporation, Manassas, VA – 1992

Developed an upgrade for Navy submarine acoustic system. This involved understanding the existing program, helping define the desired addition, and implementing one part of the upgrade.

Instructor, Missionary Training Center, Salt Lake City, UT – 1990-1991

Taught missionaries the Japanese language and trained them in principles of effective communication.

VOLUNTEER POSITIONS

Gesundheit! Volunteer On The Land, September 2007

Thomas Tolman Family Organization Executive Board, 2007-present

Church Volunteer

- **Teacher and Teaching Trainer, 1990-present**
- **Japanese Missionary, 1988-1990**

EDUCATION

PhD, Computer Science, Brigham Young University, 2002

My dissertation focuses on formal methods for software design, particularly for large framework systems. Other graduate projects include a static bounds checker for Java based on abstract interpretation, and a utility to translate threaded programs into distributed programs. Teaching experience includes the junior-level class on programming language fundamentals and assisting with the enterprise web system class. I was awarded a stipend to study and research at BYU.

MS, Computer Science, Brigham Young University, 1998

My thesis describes the use of register transfer languages to specify of microprocessors at varying levels of abstraction. Another ongoing project introduced a theorem-proving system to help verify hierarchical hardware designs. Course work includes hardware verification and formal methods; complexity and computability theory; and advanced architecture, software engineering, and compilers.

BS, Computer Science, University of Utah, 1995

Elective course-work included programming semantics and AI methods. Projects include a distributed protocol for internet queries, verification of that protocol, and text categorization for natural languages.

PUBLICATIONS

"A Formal Method to Analyze Framework-Based Software Systems"

Trent Larson, Doctoral dissertation, 2002

"Alexandria: A Tool for Hierarchical Verification"

Annette Bunker, Trent N. Larson, Michael D. Jones, Phillip J. Windley

Proceedings of 2nd International Conference on Formal Methods in Computer-Aided Design (FMCAD'98), November 1998.

"Register Transfer Languages for Hardware Abstractions"

Trent Larson, Master's thesis, 1997

"A Package to Digitally Sign and Authenticate Theorems in HOL"

Trent N. Larson and Phillip J. Windley

Supplementary Proceedings of the 10th International Conference on Theorem Proving in Higher Order Logics: TPHOLs'97, August 1997

"Alexandria: Libraries of Abstract, Verified Hardware Modules",

Annette Bunker, Michael Jones, Trent Larson, Philip Windley

2nd Workshop on Libraries, Component Modeling, and Quality Assurance, April 1997

"Toward GHDL-EVAL: A Framework for Deeply Embedding Simple HDLs in HOL"

M. D. Jones, T. N. Larson, P. J. Windley

Supplementary Proceedings of the 9th International Conference on Theorem Proving in HOL, August 1996

"A Brief Introduction to Formal Methods"

Paul E. Black, Kelly M. Hall, Michael D. Jones, Trent N. Larson and Phillip J. Windley

Proceedings of the IEEE 1996 Custom Integrated Circuits, May 1996