Matthew Genovese

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Strengths & Interests

Functional verification of microprocessors and SoC's · Test bench design · Directed and random testing methodology · Software development · Computer architecture · System-level design / ESL modeling · Assertion-based verification · Data visualization · Web design

Engineering Tools

Synopsys, Cadence, Mentor simulators	Hardware emulation	Virtual-CPU (VCPU)
Novas Debussy	Software debuggers	Linux administration

Languages & Skills

SystemC, Verilog, VHDL, Vera, SVA	Assembly (6800, 68K, PowerPC)	HTML, CSS, PHP, Drupal
C, C++, Java, Eclipse IDE	Perl, Shell Script	CVS, GIT, DesignSync, ClearCase

Professional Experience

2002 – 2009

VLSI Design Verification Engineer · PowerPC Design Center, Freescale Semiconductor, Austin, Texas.

- Developed all memory BIST verification software tools for directed and random testing; authored and executed verification plan on PowerQUICC-3 SoC's in simulation and hardware emulation.
- Integrated PowerPC core and SoC test benches for directed-random system testing of a new SoC design. Traveled to India to deploy test bench and teach local verification engineers.
- Created a directed-random tests environment to verify coherency of a PowerPC core L1 cache in an SoC using random instruction set generation tool as stimulus.
- Pioneered use of SystemVerilog Assertions (SVA) in PowerPC core verification IP.
- Executed block-level and system-level verification of complex arbiters for the system bus and PCI bus, testing specifically for system-wide deadlock scenarios.
- Developed multiple types of verification IP, including protocol monitors, response checkers, drivers, and coverage checkers using Verilog, C++, Vera, and SVA.
- Upon own initiative, created a bus arbitration modeling simulator in C++ to evaluate performance of various arbitration algorithms.
- Authored customer programming application notes, and presented technical talks in academic settings.

1998 – 2002

Product & Test Engineer · Motorola, Austin, Texas.

- Designed and executed experiments, and authored reports on the MPC860 SoC to increase fabrication and final test yield, outgoing quality, and reliability of the device in the field.
- Device characterization experiments on multiple projects often resulted in increased sales for higher performance chips.
- Debugged bring-up, production, and customer issues on testers, both in wafer probe and final test.
- Responsible for new hardware evaluation, test program debug, and all aspects of device qualification and reliability testing.
- Mentored and trained all junior engineers after rising to level of senior engineer, and routinely called upon for expert advice for fabrication, assembly, and final test issues.
- Authored formal reports and data sheets, as well as tutorials for internal evaluation of engineering experiments.
- Traveled to Malaysia and China to debug production problems or to bring up new devices.
- Self-enrolled in night class to become more knowledgeable in modern wafer fabrication processes, directly impacting debug of fabrication-related problems.

Additional Tenures

2007 – 2012

Founder and CEO · Door64, Austin, Texas.

- Founded Door64 to serve the Austin-area technology professionals through a community website and high-value in-person events. Attracted clients like Samsung, eBay, Oracle, PayPal, AT&T, Freescale, Rackspace, Texas Instruments, and many more.
- Amplified clients' recruiting efforts by engaging Austin technology professionals face-to-face. Increased their recruiting efficiency and efficacy, and helped employers find critical hard-to-reach tech talent.
- Over five years, successfully marketed and grew the Door64 membership to 30,000 local technology professionals, and was recognized as the largest Business and Networking organization by the *Austin Business Journal* for two consecutive years (2011-2012).
- Growing to a paid staff of four, Door64 hosted over 100 events including focused job fairs, networking happy hours, SXSW™ Interactive events, technical conferences, and tech-focused meet-ups.
- Routinely recognized and interviewed by print newspaper articles and online blogs, and regularly asked to give talks and participate in panels concerning topics like career issues faced by technology professionals, and how to start and grow online communities.
- Self-taught expert in Drupal Content Management System administration, HTML, CSS, and PHP module development for Drupal. Managed an outsourced Russian team for additional code development.

2009 – 2011

CEO · JobCannon, Austin, Texas.

- Joined JobCannon team to help design and refine a software tool to help job seekers manage their job search process and progress.
- Gathered user requirements, translated into features and written specification, and managed the software development team's efforts. Application written in *Grails* (Java-based framework).
- Managed marketing website, including design, wireframes, copy, graphic design, and implementation.
- Created training program and oversaw class for new JobCannon users to encourage adoption.

2006 – 2009

Software Architect and Developer Consultant · The Learning Labs, Inc., Austin, Texas.

- From concept to implementation, designed a stand-alone Java GUI application using Eclipse and SWT to create a rich-client platform application intended for students and professors in a university educational environment.
- The overall solution was a combination of hardware and software. Architected all software, from the user-interface down to the drivers that communicate with external hardware.
- Managed two off-shore development teams who implemented driver, firmware, licensing, and installation development.

Education

M.S. Electrical Engineering, December 2005 (GPA: 4.0 / 4.0)
The University of Texas at Austin, Austin, Texas
Project & Report: A Tool for Dynamic Data Capture and Visualization in Heterogeneous Simulation Environments

Object-Oriented Design & Programming in C++, 2002
Ten week immersive course, Glenn Downing, Professor, The University of Texas at Austin

B.S. Computer Engineering, November 1997
Rochester Institute of Technology, Rochester, New York
Senior Project: Real-time Autonomous Laser Tracking System (custom-made)

Professional Affiliations	Member, Institute for Electrical and Electronics Engineers (IEEE) Advisory board member, Rochester Institute of Technology (RIT) Department of Computer Engineering
Speaking	Speaker, “Building Community: Lessons from Door64”. Various engagements, Austin, Texas (2010-2011). Speaker, “Using Drupal for Community Websites”. PubCon South, Austin, Texas (2011). Panel moderator, “Community Management”. Interactive Austin 2009 Conference, Austin, Texas (2009). Panelist, “The Art of Networking”. Society for Women Engineers, Austin, Texas (2009). Panelist, “Consumer and Community Generated Content”. PubCon South Conference, Austin, Texas (2009). Guest speaker, “Networking – The Missing College Course”. Multiple universities (2009). Guest lecturer, “Driver Development”. Embedded System Design graduate course, The University of Texas at Austin, Austin, Texas (2008). Guest speaker, "Functional Verification Methodology at Freescale Semiconductor". IEEE Computer Society, Rochester, New York (2006).
Publications	M. McDermott, M. Ravel, M. Genovese, “A Design Engineering Education Platform for SYSTEMatic Learning” (poster). Presented at the IEEE International Conference on Microelectronic Systems Education, San Diego, CA (2007). M. Genovese, “A Tool for Dynamic Data Capture and Visualization in Heterogeneous Simulation Environments.” Report detailing tool created during Masters program at The University of Texas at Austin (2005). M. Genovese, “A Quick-Start Guide for Learning SystemC.” Tutorial presented at The University of Texas at Austin as culmination of an independent study (2004). M. Genovese, “A Modular Approach for Data Extraction Using Perl,” Teradyne Users Group Conference 2001, San Antonio, Texas (2001).