

Brent A. Musat

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Objective

Seeking a challenging and rewarding position that will fully utilize and advance my hardware and software knowledge.

Work Experience

Applied Materials (*contractor*) - Austin, Texas (Jun 2004-present) - FEP (Front End Products) Final Tester

- Responsible for testing semiconductor mainframes in a manufacturing environment prior to customer shipment.
- Worked with the customer during final system inspection to answer questions and demonstrate machine operation.
- Tested a variety of semiconductor equipment (Centura 200mm and 300mm platforms, Vantage 300mm) along with various chamber types specializing in thermal processes (RTP, Epi, LPCVD, DPN).
- Troubleshoot problem equipment, reported discrepancies, and fixed defective hardware during test cycle.
- Communicated improvements to engineering for more accurate and easier to use testing procedures.

Agere Systems (formerly Lucent Technologies) - Austin, TX (Nov 2000-Nov 2002) - Systems Application Engineer

- Worked in a team of Applications Engineers to support our leading edge network processors (PayloadPlus).
- Learned extensive networking knowledge including: protocols, technology, test equipment, and applications.
- Exchanged emails and conversed with customers on a daily basis to solve issues or problems in a timely manner.
- Responsible for tracking down hardware and software bugs in our chipset and API.
- Communicated directly with Hardware and Software Engineers to gain expert knowledge in specific areas, report problems and bugs, and solve customer issues.
- Programmed our chipset to perform varying degrees of Quality and Class of Service, ATM SAring, IP over ATM, or other customer specific line-rate applications that exhibit traffic management, shaping, and/or policing.
- Worked on our Integrated Development System (IDS) running Linux and VxWorks operating systems.
- Interfaced our chipset with other networking chips such as framers and switch fabrics.

Silicon Metrics Corporation - Austin, Texas (Mar 1999-Nov 2000) - Senior Software Engineer

- Developed and maintained our main product, CellRater, which was used to characterize standard cell libraries.
- Made changes to our Verilog and VHDL cell models and tested SDF compatibility with multiple simulators.
- Integrated Platform Computing's Load Sharing Facility (LSF) into CellRater to allow load-balancing over networks.
- Responsible for fixing and improving power characterization methodology using various SPICE engines to increase the accuracy of calculated cell power usage.
- Used numerous EDA tools including DesignCompiler, Primetime, Verilog-XL, VCS, ModelSim to verify correctness of CellRater's output model formats.

United Space Alliance (formerly Lockheed-Martin) - Houston, Texas (Jun 1996-Mar 1999) - PASS FCOS Developer (Primary Avionics Shuttle Software)

- Developed and maintained the Flight Computer Operating System (FCOS) that runs onboard the Space Shuttle's five AP-101S computers.
- Learned redundant and fault-tolerant computer methodologies needed for life-critical systems.
- Practiced rigid software engineering which achieved our SEI (Software Engineering Institute) Level 5 rating.
- Analyzed errors in the software, assessed risk, and formulated process improvements to prevent future problems.
- Performed extensive software testing on various simulators and on actual NASA hardware.
- Maintained and improved multiple documents.
- Involved in reengineering various Shuttle systems.
- Helped develop analysis tools using current object-oriented design principles.

Education

- Texas A&M University - B.S. in Computer Engineering received June 1996
Specialized Courses: VLSI Circuit Design, Advanced Computer Architecture
- University of Houston at Clear Lake (spring 1997)
Six credit hours of Graduate studies pursuing M.S. in Computer Engineering

Technical Experience

- Networking: TCP/IP, ATM, SONET, Ethernet, MPLS, PPP, etc.
- Languages: C/C++, Java, Python, PHP, MySQL, Verilog, VHDL, Pascal, Fortran, Lisp
- Assembly Languages: AP-101S, IBM 370, Motorola 68040, x86, Cray Y-MP
- Operating Systems: Unix (Solaris, Linux), VxWorks, Windows 95/98/NT/2000/XP & DOS, TSO
- Software/Packages: RCS, Clearcase, LSF, various EDA tools, Adobe Photoshop