Brian Rose

OVERVIEW

My name is Brian Rose and I am an engineer with a Bachelor of Science in electrical engineering and a diverse background in software, embedded systems, and test engineering. Much of my work has focused on embedded systems and automated test equipment (ATE), which utilizes both my software and hardware skills. I am familiar with a wide variety of software development environments and languages such as Labview, ANSI C/C++, Windriver's VxWorks, the Microsoft Foundation Class (MFC), Visual Basic, Java, HTML, and assembly language for a variety of processors. I am looking for an engineering position that will allow me to apply my existing skills and learn new ones.

WORK EXPERIENCE

Sparton Electronics
5612 Johnson Lake Road
DeLeon Springs, FL 32130 USA
Ph: 386-985-4631
Electrical Engineer : May 2005 - present

At Sparton Electronics, my job is to develop and document automated test equipment (ATE) for medical products that are approved by the US Food and Drug Administration (FDA). I also participate in design for manufacturing (DFM) roles by advising design engineers about test requirements and how to best approach problems related to manufacturing and test. I also develop diagnostic code for medical products with the goal of providing the required functionality to support manufacturing test. I also am responsible for performing failure analysis of product and prototype units as well as designing and implementing research and development studies.

1. Developed diagnostic applications for a medical product that ran on an ARM microprocessor and used the u-boot boot loader and the Linux operating system.
2. Developed a simulator for a medical product that provided signals to the product to allow for product development and validation.
3. Developed a generic test software application that allowed for the rapid creation of automated tests using Labview to interface to the UUT via off-the-shelf instruments.
4. Developed JTAG programming software for Atmel microcontrollers based on the AVARICE open source project.
5. Developed JTAG programming software by providing a simple front end for Abatron's BDI-2000 JTAG interface.
6. Developed automated test software in Labview for a 20-unit burn in test that would exercise the product while controlling an environment chamber.
7. Developed custom test circuits and printed circuit boards (PCBs) for interfacing test equipment to the devices being tested.
8. Developed studies that gathered information on product performance. These studies are then used to develop statistically sound testing parameters to capture the desired information.

CES Wireless Technologies
925-122 S. Semoran Blvd.
Winter Park, FL 32792 USA
Ph: 407 - 679 - 9440
Software Engineer : August 2004 - Jan 2005

At CES, My job was to develop firmware for embedded communications devices. These devices are used in the fleet managment role, providing business leaders with real time situational awareness of their mobile assets. My typical work involved qualifying new components and developing firmware to handle new components and their capabilities.

1. Developed routines to control graphic LCD screens.
2. Changed routines to handle new input-output mechanisms.
3. Developed a toolchain based on the Open Source GNU Compiler Collection (GCC).

Siemens ICN
400 Rinehart Rd. Lake Mary, FL
Phone : 407 - 942 - 6000
Software Engineer : April 2000 - December 2002

While at Siemens, my principal job was to develop and maintain software for telecommunications switching equipment using ANSI C/C++ and assembly for PowerPC 8xx processors. This included requirements analysis, design, coding, download to the target, and real-time debugging. Some of the applications in which I was the principal developer included the following.

1. Designed and implemented a thermal protection system that allowed the system to protect sensitive equipment in the event of extreme temperatures.
2. Designed and implemented a power management system that allowed the system to shut down non-critical circuits in order to maintain availability for critical operations.
3. Designed and implemented an inventory application to report information about the components in the system allowing service personnel to remotely identify equipment configurations.
4. Develop and maintain an error database for use by other engineers. This tool allowed engineers to manage errors and alarms reported by the system using a simple database form. The database would then be run through a software tool that I designed to produce output that was linked to the system code and various forms of online and offline documentation.
5. Reliability analysis of the system using custom software (Relex) and in-house Excel spreadsheets (Visual Basic for Applications). This software incorporated CAD data as well as parts reliability information that dramatically reduced the time needed to do a reliability analysis of an assembly. This tool was also incorporated into sales documents which allowed the sales staff to produce an accurate reliability calculation based on the customer's configuration of the equipment.
6. Developed a traffic model using Erlang-C and Erlang-B formulas that allowed the sales team to produce an accurate traffic model depending on the customer's configuration of the equipment.

Ener1 Inc. (formerly BOCA Research)
1377 Clint Moore Road
Boca Raton, FL 33487
Phone : 561 - 997 - 6227
Software Engineer : May 1997 - April 2000

While at Ener1, I was part of a small, nimble software development team. Being a small company, individuals typically had wide ranging responsibilities. My responsibilities while employed included the development of software for customers, software tools for hardware engineers, and most aspects of product testing during manufacture.

1. Investigate RTOS (real time operating system) possibilities for embedded video on demand applications.
2. Driver development for a Texas Instruments ADSL chip for Windows9x/NT and VxWorks that was used in a video on demand set top box.
3. Customization and testing of x86 (National Semiconductor Geode processor) BIOS builds for embedded systems, using Microsoft MASM for coding and then downloading to EEPROM for insertion and testing.
4. Development of custom software tools for the hardware engineers using Visual C++ 5/6, Watcom C/C++ v10 (DPMI), Gnu GCC 2.x.x. These tools tested and configured various components, programmed EEPROMs, and allowed for interactive hardware debugging.

5. Development of automated test platforms (hardware, software and procedures) to test modems, network adapters, and multimedia equipment using Visual C++ 5/6 and Watcom C/C++ v10 (DPMI).
6. Documentation of procedures and processes for ISO9000 compliance using Visio.
7. Failure analysis of field damaged units.
8. Analysis and approval for components from alternate vendors.

Proctor Engineering and Research Corporation
2106 NW 67th Place, Ste 5
Gainesville, FL 32653
Phone : 352-384-9970
Research Aide : Oct 1993 - April 1994

1. Performed literary searches to gather data for experiments and testimony.
2. Operated experiments to gain insight into systems failure

EDUCATION
Jan 1995 - Dec 1996
Florida International University - Miami, FL
Bachelor of Science - Electrical Engineering

1. Graduated with a 2.8/4.0 GPA with a specialization in digital signal processing (DSP) algorithms and hardware design. My senior project was a two channel audio spectrum shaper using the Texas Instruments TMSC320C3X 32-bit Digital Signal Processor. Software was developed in assembly and downloaded to the processor to handle the signal processing. A front-end Windows application, developed using Borland C++ and the Object Windows Library, controlled the parameters of the signal processing via a bi-directional parallel port.

Jan 1994 - Dec 1994
Santa Fe Community College - Gainesville, FL
Associate of Arts - Engineering Science

1. Graduated with a 2.9/4.0 GPA with a degree emphasizing the knowledge needed in the field of engineering.

TRAINING COMPLETED
Relex Software Corporation
Relex Reliability Software Training
Windriver Systems
VxWorks Device Driver Workshop
Annabooks
Windows CE Developers Workshops
Phoenix Technologies
BIOS Builder Workshop

PROGRAMMING LANGUAGES / DEVELOPMENT ENVIRONMENTS
1. Labview, LabWindows (v7-v8)
2. Tornado 1.01/2.0 (VxWorks)
3. Microsoft Foundation Class / Microsoft Visual C++ 6.0
4. Microsoft Visual Basic for Applications
5. Windows CE v2.11 / Platform Builder
6. Borland Object Windows Library / Borland C++ 4.0
7. DOS / Windows Programming Environments
8. Assembly Language (intel 80x86, Motorola MC68xxx, PowerPC 8xx, TI TMS320C3X)
9. ANSI C/C++

10. GNU Compiler Collection (GCC).
11. Unix shell programming.
12. HTML/CSS - Hypertext Markup Language / Cascading Style Sheets.

FAMILIAR OPERATING SYSTEMS

1. Microsoft Windows 3.x/95/98/NT/2000/XP
2. Microsoft DOS
3. Linux/NetBSD

OTHER SOFTWARE SKILLS

1. Microsoft Office
2. Microsoft Visual Studio - Programming Environment
3. Microsoft Visual Source Safe - Version Control Software
4. Visio Corporation's Visio - 2D Drawing Software
5. Mathworks Matlab - Mathematical Computation Software
6. Tecniques Avancees Codesoft - Label Layout Software
7. Rational Software Clearcase - Revision Control Software
8. Component Software RCS - Revision Control Software

Contact

brian@brianrose.net