

Peter Hunnisett

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BACKGROUND SUMMARY

Software designer with more than 10 years of experience writing a variety of mid and low level software for embedded and desktop environments. Extensive experience programming in C++, C, and assembler on real time critical, high availability, limited memory, and distributed systems.

Management experience includes leading teams, process assessment and enhancement, and project planning.

AREAS OF EXPERTISE

Programming Languages: C++, C, Java, several Assembler varieties, and scripting languages.

Desktop Operating Systems: Windows and *NIX.

Embedded Operating Systems: VxWorks, INTEGRITY, u-velOSity, and pSOS+.

Design Tools: SDL/SDT and UML.

Management: Project Planning, Process Improvement, and Team Building.

PROFESSIONAL EXPERIENCE

SOFTWARE BALM CONSULTING

Principal, Winnipeg and Victoria, Canada

May 2006-present

Principal consultant responsible for all aspects of a project from definition to delivery.

Select projects during this time include:

- Design and construction of a software based EEPROM upgrade utility to allow remote upgrades of FPGA firmware.
- Design and implementation of a temperature sensor library for a graphics card including continuous monitoring and over/under temperature emergency behaviour for a specific card.
- Implementation of a graphics card driver for a variant supporting a single head of output.
- Design and implementation of a secure chain of trust bootrom featuring firmware upgrade via USB for an ARM9E based secure system on a chip design.
- Design and implementation of an ISO 7816 device driver.

SBS TECHNOLOGIES (CANADA)**Senior Software Developer**, Waterloo, Canada

March 2005-May 2006

Software and architecture prime on multi-disciplinary team to develop custom and commercial off the shelf graphics hardware based around the ATI Mobility Radeon 9000 graphics chip. The major offering was the conduction cooled G2 Plus Graphics PMC Module designed for the military and aerospace markets to provide true dual head output and dual video capture in a wide variety of video and graphics formats.

- Designed and implemented software to control simultaneous dual head graphics output and dual graphics capture for a family of graphics cards.
- Implemented reusable libraries using C for several graphics chips. These libraries are now used in multiple products.
- Provided pre-sales support to help land \$10+ million in sales for new product.
- Developed sample applications using OpenGL to demonstrate the abilities of the graphics hardware.
- Technical contact for all 3rd party development and integration issues.

TRANSGAMING TECHNOLOGIES**Software Development Manager and Developer**, Ottawa and Toronto, Canada

2001-2005

Managed team responsible for all Linux products including subscription based products, OEM and published titles. The technology is an implementation of Win32 APIs, using POSIX and OpenGL, targeted at DirectX and multimedia based software applications.

- Designed and instituted light weight development processes resulting in a doubling of release frequency, a reduction in defects, and a 100% increase in revenue.
- Improved performance of inter-process communication primitives tenfold.
- Halved CPU usage of sound mixing by recoding hot spots using MMX instructions and identifying silent buffers.
- Lead developer for Kohan series of games ported from Windows to Linux. Performance enhancements made the Linux version faster than original native.
- TransGaming Technologies lead for multi company binary port of x86 game title to MIPS target.
- Lead porter of video gambling title from Windows to set-top box running Linux.

NORTEL NETWORKS

Team Leader and Developer, Harlow, England

2000-2001

Part of a team working on implementing features, and correcting defects, for an embedded, real time, carrier grade VoIP and VoATM gateway. Hardware was a combination Motorola pairing of PowerQUICC for provisioning and call control, and a DSP for I/O processing. Software was written in assembler, C, and C++ on top of VxWorks.

- Analyzed and implemented real time enhancements to processing rates which reduced call set-up time from >100ms to <10ms through actions including:
 - Modifying the build environment to simultaneously support multiple compiler vendors, and operating system versions while performing 2 compiler and 1 operating system upgrades.
 - Eliminating inter thread dependencies and modifying algorithms to be “lazy”.
- Adapted an automated code test framework and created an automated regression suite for low-level system software.
- As team leader oversaw a group of 6 full time employees, contractors, and students.

Software Designer and Platform Architect, Ottawa, Canada

1998-2000

Developer and Architect for software controlling maintenance and configuration for the switching fabric of a carrier grade 10Gb/s ATM backbone switch. Hardware was a set of custom ASICs controlled through software running on a Motorola QUICC. Software was written in assembler, C and C++ and ran on pSOS.

- Created a real time modifiable event reporting system, which greatly improved designer and field debugging ability.
- Proactively initiated several RAM and ROM utilization recovery features involving such changes as:
 - Implementing a software interrupt stack pointer to reduce individual task stack size requirements.
 - Doubling load compression ratio for ROM and eliminating RAM overhead for decompression.
 - Modifying the operating system to record improved memory statistics allowing heap usage tuning.
 - Upgrading the compiler to get smaller and faster code.
- Reduced load build time 6 fold resulting in greater designer productivity.
- Organized a series of presentations, and provided two presentations, as training for group members. The resulting documents formed the start of a designer documentation library.
- Greatly improved product reliability, as platform architect, by ensuring quality of all software design and submission.

Software Designer, Ottawa, Canada

1994-1995 and 1996-1998

Software designer for fault monitoring software watching over the data switching component of a distributed digital telephone switch. Hardware was Motorola based with custom ASICs. Software was written in a proprietary language for a proprietary operating system.

- Eliminated chronic message loss in large system configuration under full traffic (>255 SS7 links @ 0.8e).
- Implemented support for a hardware upgrade from copper to optical inter node links. The increased capacity resulted in the sale of at least 500 upgrades to customers.
- Modified fault recovery state machine resulting in improved recovery time and a business case for customers to purchase a hardware upgrade.
- Modified the multi-nodal software to run under an HP-UX simulator reducing demand on real hardware.

EDUCATION

Bachelor of Applied Science (B.A.Sc.)
Engineering Science - Computer Option
University of Toronto Toronto, Canada

1991-1994 and 1995-1996

COMPUTER INTERESTS

Past contributor to WINE, an open source implementation of MS Windows for UNIX, Phex, a Gnutella servent, and Mercurial Eclipse, an Eclipse plug-in for the Mercurial distributed version control system. These projects are open source, written in C or Java, and follow a distributed development model using mailing lists and Usenet.

Resume Date: 8th June 2009