Richard Dubrawski

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SUMMARY

Software Engineer with extensive experience in real time embedded systems, from developing board support packages and device drivers to integrating protocol stacks. Background in hardware design, and system level theory, and in-depth experience with the VxWorks RTOS and Tornado development environment. Demonstrated ability to take a high level design requirement and produce a working product.

- C
- Assembly (ARM)
- Visual Basic
- Clearcase
- Make
- Perl
- Solaris/Linux/QNX
- VxWorks/Tornado

PROFESSIONAL EXPERIENCE

HUGHES NETWORK SYSTEMS, San Diego, CA **2000 - Present**
Software Engineer, Senior Member of Technical Staff (2001 – Present)
Projects included:

Next generation mobile satellite data modem:
Served as platform software technical lead

- Directed effort of several engineers on platform software team in implementing core interface software.
- Developed a custom board support package (BSP) to support VxWorks operating system on custom platform based upon Intel PXA-255 processor, using the Vision ICE emulator and Logic Analyzers for test and debugging.
- Designed and developed an ISDN interface device driver to integrate with a third party ISDN protocol stack.

First generation mobile satellite data modem:
Bluetooth software technical expert.

- Developed a custom device driver mating a Bluetooth baseband device to a third party protocol stack. Later redesigned the device driver when a new Bluetooth module was chosen.
- Integrated a third party Bluetooth protocol stack onto a VxWorks OS with custom enhancements.
- Implemented and certified the Bluetooth LAN Access Profile.

Software Engineer, Member of Technical Staff (3) (2000 - 2001)

- Designed and implemented software to enhance the basic messaging capabilities of the operating system.
- Developed a unified system providing developers runtime control of event logging to capture extensive system information during field testing, with minimal impact on performance.

THOMSON MULTIMEDIA, Indianapolis, IN **1996 – 1998**
Hardware Engineer (1998)
Designed, simulated, implemented and verified a Forward Error Correcting CODEC for a wireless phone, using Matlab, C and VHDL.

Engineering Co-Op student (1996 – 1998)
Projects Included:

First generation HDTV receiver:
Directed efforts of a technicians testing and revising a second iteration of hardware.

- Resolved issues during DVT by writing custom software to conduct tests.
- Analyzed and corrected a memory corruption problem caused by incorrect hardware timings.

Various Assignments:
Designed and implemented various test devices using C and Visual Basic, along with some custom hardware.

U.S. NAVY, San Diego, CA **1986 – 1992**
Nuclear Reactor Operator and Engineering Watch Supervisor (E-6)
Supervised the operation of a nuclear reactor plant as the senior enlisted watch stander.

EDUCATION AND TRAINING

MSEE, University of Illinois at Urbana-Champaign, Champaign, IL
BSEE, The Pennsylvania State University, State College, PA
Wind River VxWorks and Tornado Certification

PUBLICATIONS

Myopic and far-sighted strategies for control of demand-driven networks (MSEE thesis)
Management of Demand-Driven Production Systems (Co-Author, submitted for publication to *IEEE Transactions on Automatic Control*)