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## Don DenTandt

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Accomplished real-time embedded software engineer seeks new opportunities to apply skills of analysis, task focus, and understanding the big picture, to solving problems in software design and development, or other practical applications, with technical leadership possibilities in the right company in the Albuquerque, New Mexico area.

### Summary of Qualifications

- Design, coding, maintenance of real-time embedded code in C/C++, Ada, assembly
- Configuration management champion
- Requirements and problem tracking
- Collaborative problem solver
- Root cause analysis and strategic planning experience
- International training experience
- Customer attentiveness
- Micro to mainframe plus SCADA experience

### Professional Experience

#### Albuquerque Bernalillo County Water Utility Authority

[www.abcwua.org](http://www.abcwua.org)

2015 - present

##### *SCADA Systems Specialist*

Took lead in renewing an effort to transfer all plant control functions from an old ABB OIS system to the new ABB Symphony-Plus. This involves making hundreds of screens of graphics representing systems, controls, and instrumentation needed to run the ABCWUA Southwest Water Reclamation Plant (SWRP). Provided SCADA support for a multidisciplinary team to bring a new Pre-Treatment Facility (PTF) online.

#### Rice Lake Weighing Systems

[www.RiceLake.com](http://www.RiceLake.com)

2002 - 2014

##### *Senior Software Engineer*

Technical lead for up to 4 engineers making product enhancements to 170K CSLOC industrial controller and weight indicator software, the 920i. Created two derivative controllers, 820i and 720i, as lower cost alternatives. Wrote bootloader and display controller software in C++ and C for Kinetis controllers. Currently redesigning 920i functionality in C++ for iMx6 platform running embedded Linux.

- Programmed new regulatory features, audit trail, and secure weigh-ticket retrieval options. Optimized scale and controller speed in preemptive priority-based RTOS.
- Created, ran, debugged special scripts and test routines to bring up new Coldfire boards, VNC2 custom board, and other new hardware. Identified and fixed hardware problems and design issues. Developed drivers for Coldfire core architectural features.
- Facilitated department level Engineering Software Team. Established embedded C coding standards, processes and policies as a part of the company's ISO 9001 certification.
- Added USB to 920i indicator using FTDI VNC2 controller. Debugged and identified problems in FTDI provided library code.
- Driver level code development for Coldfire memory, UART, VNC2, and custom hardware.
- Led 3-4 person teams on product development. Acted as mentor to other engineers. Implemented some Agile techniques that worked for our small teams.
- Wrote image conversion software to allow customer programs to display images and graphics on 920i indicator.
- Introduced and led incremental software development and rapid prototyping on new product designs.
- Led effort to modularize 920i code design and convert to C++ using standard templates.
- **Technology and tools:** C/C++, Coldfire, ARM, Kinetis, VNC2, Linux; Green Hills MULTI IDE, Keil / RTX, Code Warrior / MQX, Microsoft Office and Project, Visual Studio, and Visio, UML, embedded Linux, git.

## Wind River Systems, Inc

[www.WindRiver.com](http://www.WindRiver.com)

2001

### *Instructor*

- Developed and taught board support package (BSP) course material to other instructors and customers.
- Developed and presented courseware for Tornado/VxWorks operating system components, using Microsoft PowerPoint in a classroom setting.
- **Technology and tools:** Microsoft Office, PowerPoint, microprocessor evaluation boards.

## Motorola Computer Group

[www.Motorola.com](http://www.Motorola.com)

1995 - 2001

### *Senior Curriculum Manager / Instructional Team Leader / Course Developer / Technical Expert*

- Managed curriculum, developed and taught courses, labs and tutorials for VME board products.
- Chaired faculty team, championing use of Instructional System Design (ISD).
- Developed and implemented interdepartmental strategic planning initiative.
- Provided pre- and post-sales technical support through training of sales staff and customers.
- Subject matter expert on custom PowerPC chipset, supporting sales, FAEs, and customers.
- **Technology and tools:** Compact PCI, VMEBus, USB, Falcon and Raven chipsets, Ethernet, Windows, Embedded Linux, Adobe Framemaker, Microsoft Office.

## Motorola Government Group

[www.Motorola.com](http://www.Motorola.com)

1987-1995

### *Staff Software Engineer / Software Quality Assurance Engineer*

- Real-time embedded system analysis, design, and coding using Ada, C, and assembly targeting Motorola DSP, M68K, and TI processors and DSPs.
- Wrote, debugged and tested high speed GPS decryption using DSP in targeting application. Wrote cryptographic key handling software.
- Technical lead of 7-engineer team on \$3M software project of electronic rekeying of crypto equipment.
- In SQA, led teams to define processes for review and approval of software, performed process monitoring, chaired committees to update existing standards.
- Chaired the Software Configuration Management Working Group. Member Motorola Object Oriented Design team.
- **Technology and tools:** M68K, DSP, GPS, CMVC, Cadre Teamwork, Microsoft Office, WordPerfect, Ada development tools, Windows, DOS, PL/1, RPG, COBOL.

## Recent Entrepreneurial Ventures

### **Rainbow's End Resort, LLC**

[www.RainbowsEndResort.travel](http://www.RainbowsEndResort.travel)

2002 - present

#### *Owner / LLC member*

Design and maintenance of web presence, responsible for building and facilities maintenance, handled all aspects of accounting for eight unit fishing resort in Chetek, Wisconsin.

- Wrote and implemented policies and procedures for HR, customer service, and accounting.
- Hired and fired employees. Selected and hired contractors for maintenance and improvement projects.
- Formed LLC to protect trade name and establish resort as a true business.
- **Technology and Tools:** PHP, Perl, MySQL, Linux server, Mac OS server, Adobe Golive, Adobe Photoshop, Open Office, Gimp, MYOB, Timetrex.

### **Tecknowlignce Consulting**

[www.tecknowlignce.com](http://www.tecknowlignce.com)

2001-present

#### *Owner / Consulting Engineer*

Putting small businesses on the web. PHP programming, web design.

- Created and maintained web sites for Rainbow's End Resort, LLC, the Chetek Area Historical Society and others, both commercial and *pro bono*.
- Tutored business owners on web and technology topics.

- Took photos and gathered information for client web site development.
- **Technology and tools: PHP, Perl, MySQL, Linux server, Adobe GoLive, Adobe Photoshop, Open Office, Gimp, Pivot, Fuzzylime.**

## **Education**

**BSEE**, Brigham Young University, Provo, UT  
*2011 Embedded Systems Conference - Silicon Valley*, focus on embedded RTOS  
*Designing Embedded Systems that Do Not Damage Humans*  
*Device Drivers Without the Bit-Bashing*  
*Implementing Secure Remote Firmware Updates*  
*Getting Started with Microchip Tools*  
*Microchip USB from Scratch*  
*Microchip Web Status, Monitor and Control*  
*Microsoft Windows Embedded Virtual Launch Event 2007* and evaluation trial  
*ARM Microcomputer Seminar*  
*How to Plan, Develop, and Evaluate Training*, Clark Training and Consulting  
*Criterion-Referenced Instruction*, The Center for Effective Performance, Inc.  
*BSA Wood Badge Training*

## **Professional Interests and Activities**

IEEE Member  
Family History Consultant  
Boy Scout Leader  
BYU Management Society  
Eta Kappa Nu, member  
Registered Professional Engineer, Illinois (inactive)  
Amateur Radio Operator, General Class, W9NQS  
Hiking  
Photography