

Ross Wolin

Everett, WA

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Electrical Engineer specializing in embedded systems firmware, software and hardware design. BSEE from NY's Rensselaer Polytechnic Institute and tons of industry experience.

Provides fully equipped lab and office: offsite projects only.

Clients include: Accomplio, Adeneo Embedded, Allied Signal, Alpha Technologies, Apricorn, Beadedstream, BSquare, Burke, Centri Technology, Clausius Technologies, Cortland Line, DBC Avionics, DEC, Discovery Bay Games, Dun&Bradstreet, EG&G, Emulex, E*swing, EZLYNK, FiftyThree, Ford Motor Company, FreeFly Systems, Fugu Ltd, Galactic Industries, Gideon Health, IBM, MAPIR, Metron, Metronics Systems, Microdyne, MicroEncoder/Mitutoyo, Microsoft, Mobile Integration Workgroup, Myotronics, Nebula, Optical Technology Devices, Protean Payment, Purigen Biosystems, Radio Thermostat Company of America, Sarcos Robotics, SeaMED/Plexus, Silicon Mechanics, Starwave, Stratos, Sun Microsystems / Oracle, Sunfire, SunStar Timers, Toyota, Traveling Software/TSI, Ventec Life Systems, Wang Laboratories, WD Machines, XLI, and YTCA.

Firmware/Software skills

- Bare metal firmware design, (C/C++, assembler)
- RTOS/IoT firmware design, including embedded Linux/Android/Raspbian, Zephyr, FreeRTOS, QNX...
- Kernel/device driver/BSP development
- Custom Yocto generated embedded Linux distros/kernels/BSPs (including PetaLinux)
- Raspberry Pi, Arduino, ESP32 based rapid prototyping
- DSP (Digital Signal Processing)
- TCP/IP networking and custom protocol development
- Cross-platform app development (Qt, C/C++/C#, Python)
- Reverse engineering with IDA Pro, OllyDbg, and other hw+sw tools
- OpenGL and 3D graphics/games, game engines (3D physics, collision detection, etc)

Hardware skills

- Hardware bringup/debug using scope, logic analyzer, and in-circuit emulators
- Rework, including microscope work
- Hardware review/design
- FPGA/CPLD circuit design (VHDL)
- Schematic capture (OrCAD, KiCAD)
- PCB layout

Other areas of experience

- ARM7/9/11/Cortex-Mx/Cortex-Ax, MX51/31, i.MX RT1051, Nordic, OMAP, STM32, SAM3X8E, ColdFire, 68332, 80x86, PPC, DSP, AVR, PIC, 68HC11/12, 8051, Z80, EZUSB, TI254x
- USB, BLE, 1394/Firewire, RS232, SPI, SCI, I2C, A/D, LCD, TCP/IP, IrDA, CAN, ICE, ICD, BDM
- Git, Mercurial, SVN, Visual Source Safe, SLM, RCS/Picasso, Github, Bitbucket, SourceForge
- Python, Perl, Bash, Make, CMake and C Shell Scripting
- Object Oriented Design, STL
- Xilinx, Altera, VHDL

Interests: Avid BC/AT/XC/telemark skier, mtn biker, kayaker, bassist, snowboarder, tinkerer