

KEVIN D'AQUILA

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OBJECTIVE

Tackling challenging system design, optimizing efficiency, and engineering multifarious solutions in embedded systems.

SUMMARY OF QUALIFICATIONS

- Strong knowledge of C, with a focus on efficient use of limited resources in an embedded environment.
- Advanced high-level system design and analysis. Broad focus software engineering.
- Clear documentation and communication skills. Extensive experience creating functional design specifications.
- Scripting expert in Perl and shell. Automation, algorithm testing / analysis, and data conversion / visualization.

TECHNICAL EXPERTISE

System Architectures and Languages

- Intel 8051
- Intel x86
- Microchip PIC
- TI MSP-430
- C, C++
- Perl, Shell Scripting
- VHDL
- Assembly for each arch.

Working Environment and Code Tools

- Keil uVision / Quadravox IDEs
- Visual Studio .NET / Eclipse
- Subversion, Perforce, CVS
- Windows
- Linux
- Unix

PROFESSIONAL EXPERIENCE

[Radiospire Networks, Hudson, Ma]

October 2007 – June 2008

Embedded Systems Engineer

Firmware engineer for a high bandwidth wireless A/V product at fast-paced start-up. Led fresh design. Worked with FPGA / ASIC engineers to implement custom drivers, and offload hardware logic to firmware. Wrote drivers for off-shelf components using I2c, SPI, and GPIOs. Managed local and remote entities via wireless UART, with automated state machine framework.

Accomplishments include:

- New design added HDMI switch and analog A/V chips. Implemented driver functionality for these. Branched codebase, integrated changes into automated state machine framework. Also implemented I2c slave interface for board's 8051.
- Increased robustness of wireless UART. Designed and implemented frequency-hopping scheme to meet FCC regulations. Created a Perl web utility to test the algorithm and optimize parameters. Synchronized with team and documented design.

[NMS Communications, Framingham, Ma]

September 2004 - October 2007

Software Engineer II

Leading design engineer creating computer cluster management software for high-reliability telephony systems on Sun Solaris and Red Hat Linux. Managed and guided coworkers, led individual and team design work and implementation in Perl, Shell scripting, and C. Analyzed data flow, automated tasks, and worked across departments to solve customer and internal issues.

Accomplishments include:

- Design of a centralized XML configuration system serving as single-point system administration interface for end-users, as well as providing developer capabilities. Drove reproducible installation & configuration tasks across clustered computers.
- Backup program for clustered computers to one hard drive. Created and peer-reviewed design doc before implementation.

PERSONAL PROJECTS

DIY Audiophile Electronics: Component Selection, Sourcing, Soldering, Assembly, and Troubleshooting

Utilize schematics and PCB layouts from community projects to create DIY audio electronics: headphone amplifiers, DACs, and similar. Analyze datasheets, configure system, and choose components. Soldering and testing toward a completed system.

EDUCATION

[Worcester Polytechnic Institute, Worcester, Ma]

Master of Science in Computer Science

Graduated: February 2006

Bachelor of Science in Computer Science, Computer Engineering Minor

Graduated with Distinction: May 2004