David Cogley

Embedded Software Engineer

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SYNOPSIS

I am a highly experienced senior-level embedded software engineer with 30 years of architectural and development experience. My expertise includes proficiency in multiple imperative and declarative programming languages and application frameworks, with a primary focus on low-level hardware integration and bring-up. I have extensive experience working with conventional and embedded RTOS operating systems.

EXPERIENCE

Cogley Consulting Services, San Luis Obispo, CA

Embedded Engineer and Owner

2023 - Present

Freelance development work to bring up small evaluation boards for 'proof of concept' projects.

- Developing and implementing embedded system software for clients across various industries.
- Provided ongoing technical support and maintenance for software applications, ensuring optimal performance, functionality and user experience.

QSC, LLC., San Luis Obispo, CA

Staff Software Engineer

2016 - 2023

Embedded software development targeting QSC's product portfolio.

- Next generation speakers with emphasis on Bluetooth (BLE) and networking stacks.
- USB video bridging components utilizing GPU acceleration for Q-SYS ecosystem components.
- Core management, security and delivery systems for digital cinema integrated media blocks (IMBs).

SKILLS

Embedded Software
Real-Time Operating Systems
General Operating Systems
Bootloaders
Cybersecurity
Device Drivers
C, C++, Rust
Python, Java, JavaScript
SVN, Git
Buildroot, Yocto

AWARDS

20 Years of Service
QSC, LLC, 2022
Exemplary service award

15 Years of Service
QSC, LLC October
Exemplary service award

Outstanding Employee
USL, Inc. 2014
Bi-annual award for outstanding performance.

USL, Inc., San Luis Obispo, CA

Embedded Software Engineer

2002 - 2016

Software development for embedded devices and systems for the traditional and emerging digital cinema market.

- Core management, security and delivery systems for digital cinema integrated media blocks (IMBs).
- Windows control and setup software for cinema audio processors, crossovers and amplifiers.
- Color / Luminance measurement and calibration software for cinema projection systems.

Nextronix Corp., Boulder City, NV

Senior Software Engineer

2000 - 2001

Contract work developing distributed power grid management software targeting generator control hardware.

- Distributed software for monitoring and control of standby power generation systems.
- Relational databases for monitoring and auditing generator controllers.

Controltec, LLC., Fallbrook, CA

Lead Software Engineer

1997 - 2000

Development of numerous custom software solutions for Controltec's clients. Primary focus was in emerging web technologies targeting electronic commerce, asset tracking, digital imaging and diagnostic applications.

- Electronic commerce custom ordering systems and shopping carts using ASP.NET.
- Postal mail and package tracking systems.
- Device drivers underpinning desktop imaging framework for multi-function printers.
- Automobile diagnostic system developed for San Diego Midas and Pep-Boys.

IDT/Alston, San Diego, CA

Junior Software Engineer

1994 - 1997

Development of man-machine interfaces and hardware testing

applications for telecom data acquisition systems.

- Windows device drivers for communication with IDT's hardware systems.
- Hardware testing applications to pinpoint component failures displaying faults in an intuitive user interface.
- RFC compliant FTP server for collection of remote site billing information.

PATENTS

Secure system and method for audio processing

US 8,751,832 · Issued Sep 27, 2013

A method and system for playing movies with object-based sound complying with industry security standards using less processing power than the prior art, comprises an integrated media block in which, in non-real-time, encrypted audio files are decrypted. The object-based and channel-based audio data is then rendered to theater specific channels in non-real time. After the audio objects are rendered, the rendered audio is re-encrypted and stored for use at a later time. When the rendered movie is to be played in real time, the encrypted video and rendered encrypted audio files are streamed from the server, decrypted, forensically marked and played. Using the present invention, movies also can be downloaded and pre-processed while another movie is playing.

RECOMMENDATIONS

Dave is one of those rare software wizards. More than just being an expert at his craft (which he is) Dave deep dives into whatever application he's coding for and becomes an expert in that field! So when he codes for immersive audio or JPEG2000 decoding, or AES encryption/decryption, or streaming digital cinema, Dave is an expert and creates incredible embedded solutions that are rock solid. In my 30 years of experience, there are only a handful of people that I would work with anywhere, anyplace, anytime; Dave is one of those people. It is terrific to work with Dave on a daily basis. – **Larry McCrigler**

Hired, worked with, and helped manage Mr Cogley. (I made the hiring decision). Initially hired as a user interface developer. Was encouraged to, and progressed, through and beyond Operating System programming (custom kernel and modified modules) to board circuit level software. Chip level TCPIP/UDP, WiFi and Bluetooth communications software. Mainly, high speed and volume data with integrated real time high level security for 4k 3d digital cinema processing. Self starter. Independent thinker. Information magnet. Reliable. Pleasant. Dave consistently addressed extremely difficult problems with creative, unique, solutions and made it seem effortless. If I currently had a project and need, he would be at the top of my candidates list. – **Robert M. Eddy**