CURRICULUM VITAE

Andrew Robert Henson ("Andy")

Company: Zexia Access Ltd
5 Florence Park Road, Oxford OX4 3PL

British, Male, Born 3 July 1963, Age 45

PROGRAMMING SKILLS

LANGUAGES: C, C++, Assembler, VHDL
Linux, OOA/OOD, Testing, Porting, Realtime Embedded Systems.
Cross platform development and development across boundaries of software/hardware.

EDUCATION

Honours Degree: Computer Science 2(i) from Exeter University in 1986

WORK REVERSE CHRONOLOGY

April 2008-August 2008: I developed an H.264 (video compression) encoder in VHDL. This included coding test suites in C and modifications to the C reference software suite to test the modules (approximately 75% of time was developing test suites). I was the only developer on this project, which started from the international standard documentation (and associated reference software in C) and went through a brief feasibility study, specification, design, coding and unit test using a simulator (with unit output compared against the output of parts of the reference software) and finally integration test compressing real images, decoded by known software. The client pulled out, but as it was nearly complete, I finished it and released this under an open source licence on SourceForge.
LANGUAGES: C under Linux, VHDL

February-March 2008: Three mini-projects: (1) I added support for MxPEG video compression standard to the Wavestore DVR (digital video recorder), this involved parsing MxPEG stream, storing it in the Wavestore indexed format, and after retrieval feeding it into the MxPEG software codec from Mobotix, which I modified to output YUV instead of RGB since this is a requirement of the Wavestore internal interface. I worked with the developer responsible for the video display to integrate it. (2) I added support for H.264 video compression standard, parsing it and storing in Wavestore format, I also looked at the issues for decoding and worked with the developer responsible for the H.264 decode libraries and video display to integrate it. (3) I ported the DVR code from an old Linux variant to a newer one, resolving a number of issues where the specifications of the libraries had changed. (all for Wavelet Technology Ltd).
LANGUAGES: C++ under Linux / Windows.

August 2007-January 2008: Support for products of former Tao Group Ltd under new (short lived) company "Tao Support Ltd" (I was one of the original staff at Tao Group back in the 1990s). I had hoped and expected this would be a development role, but most clients just wanted to know which options to set to run a program. I coded a number of feasibility studies but no serious development.
LANGUAGES: Tao VP, C++, others

March 2005-August 2007: Development of Megapixel CCTV camera (for Forensic Vision Ltd). I was responsible for back-end processing on the IP camera (VHDL in FPGA and C++ and C on an embedded ARM board) and the separate networked digital video recorder unit.
LANGUAGES: C++ under Linux, C under Linux (drivers), VHDL

2004-2005: Development of media player software to for bus and trains (for Crystaleyes) Initial requirement was for Linux based system, it was developed using cross-platform tools and eventually the software replaced their old Windows based system.
LANGUAGES: C++ under Linux using SDL toolkit and ffmpeg codec suite.

2001-2004: Development of CCTV Digital Video Recorder (for Wavelet Technology Ltd). Using hardware with wavelet compression; running Linux.
LANGUAGES: C++ under Linux, C under Linux, shell script

2001: Development of CCTV Digital Video Recorder (for Smiths Aerospace, ultimate client of British Airways). Using OnTime RT Kernel, PC-104 hardware.
LANGUAGES: C++ under RT Kernel, ABEL

2000: Development of client-server software for graphical archiving.
LANGUAGES: C++ under Linux

2000: Developing embedded software for PIC processor (for TrafficMaster plc)
LANGUAGES: PIC, C

1999-2000: Work on PowerPC based realtime operating system for Formula 1 racing cars for Pi in Cambridge
LANGUAGES: C, C++

1999 Developing "DCADM" in C++, as part of a team of 6. Client MOD via prime contractor IBM.
LANGUAGE: C++ in Windows.

1998: Developed Windows-based Coin Operated Internet Terminals: interface front end (Windows, C/C++) and coin mechanism firmware (PIC).
LANGUAGES: C/C++ in Windows, PIC

1994-1997: Contract work and later Employed by Tao Systems Ltd as "Chief Software Architect" developing translators and other software and designing software architecture.
LANGUAGES: VP, C/C++, Java, various assembler

1993: Contract work for UK MOD and later NATO.
LANGUAGES: C++ in DOS, C++ in Windows

1990-1992: Developed a translator (Freelance for Tao Systems (UK) Ltd).
LANGUAGES: VP, various assembler, C

1987-1989: Network software for PC and other computers (for Nine Tiles Ltd).
LANGUAGES: x86, 68000, C

1985-1986 Developed Transputer development kit and translator (for Kuma Computers Ltd)
LANGUAGES: 68000, C, OCCAM

1980-1985: Games software and later a word processor and development utilities which were all marketed by Newbear Computing Store and later Kuma Computers Ltd. Developed offline editor unit (Z80 based) and 68000 development kits.
LANGUAGES: BASIC, 68000, Z80

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