CURRICULUM VITAE

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EXPERIENCE

Education

MSc with distinction in Engineering, Coventry University.

Summary

- Main experience has been in the Aerospace Industry.

- For the previous 10 years 50% of my time has been spent on a long term project developing systems for use in maritime reconnaissance aircraft. This involved DSP code, code for displays for analysis of data and tactical information, code for communication using TCP/IP, plus taking part in flight trials. Post flight reconstituting of data for different formats and data rates.

- Embedded systems firmware for sensors used in aviation and maritime applications using industrial SBC PC104 platforms and PIC microcontrolers.

- Design of test systems and wrote software for magnetometer sensor calibration and test.

Skills

- Programming using C++, C and Assembler. Knowledge of Python.

- Embedded applications using Linux, XPe, FreeDOS Operating Systems.

- Knowledge of Analogue and Digital electronics.

- Comms; Ethernet using TCP/IP and Serial using RS232 and RS485.

- DSP code.

- Hardware interfacing including 16, and 24 bit ADC's, including SPI and I2C buses.

- Embedded systems using industrial PC104, and PIC microcontrollers.

- Linux Kernel building and kernel objects.

- Windows programming using MFC and Win32.

- Visual C++, gcc and g++ compilers.

- Applications Mathcad and MatLab.

EMPLOYMENT

Feb 2008 to April 2019	Magnetics Division Merged with; Ultra Electronics Ltd PMES Towers Business Park Wheelhouse Rd Rugeley Staffordshire	Contract Ultra Electronics Magnetics Division merged with PMES at new location. Continuation of work described below plus; Designed Simulator system and wrote software for testing multi-sensor naval system. Software for functional testing of interface boards on Land Magnetic Ranging System.
August 1996 to Feb 2008	Ultra Electronics Ltd Magnetics Division Fallow Park Rugeley Rd Hednesford Cannock Staffordshire	Contract Project to develop systems for use on maritime reconnaissance aircraft. Wrote code for DSP, displays for data analysis and tactical information. Also took part in flight trials. Embedded software for magnetic and electric field sensors. Design of test systems and wrote software for calibration and testing of various magnetometer sensors, including those for Solar Orbiter. Test software for ranging system and sub-systems.
October 1995 to June 1996	Lucas Electronics College Road Perry Barr Birmingham	Contract Designed and wrote software for communications between production ATE system and Engine Management System using Volvo J1708 protocol. Designed and wrote high level routines for exercising tests within Engine Management System test software.
August 1992 to Sept 1995	Ultra Electronics Magnetics Division Fallow Park Rugeley Rd Hednesford Cannock Staffordshire (formally Dowty Magnetics)	System design for land based magnetic characterization range, used in characterization of mine countermeasure vessel remotely operated vehicles (ROV's). Design of computer sub-system for Magnetic characterization range above. Conducted off-site investigation into problems encountered with navigation aids used in sea-based magnetic characterization ranges. Design and coding of data acquisition and control software for magnetic characterization range. Software written in C++. Designed and coded MMI for magnetic characterization range above. Software written in C++. Wrote various software packages in support of system hardware development and manufacture for above range, including board testing and magnetic sensor calibration.

EMPLOYMENT CONTINUED

March 1992 to July 1992	MEL Production Design Ltd Coventry	Design and development of equipment and software for customer entry Data Logging System using 8-bit embedded microcontrollers.
June 1990 to January 1992	Dowty Magnetics Fallow Park Rugeley Rd Hednesford Cannock Staffordshire	Development of ATE system for production testing, calibration and alignment of Tri-axial Magnetometers. Designed test simulator system used in development and testing of sea based vessel characterization range. Test system comprised of interfaces to characterization range hardware, and software for generation of signal simulation and hardware control. Designed and coded user interface software for Vessel characterization Range. Software included assembler routines for fast manipulation of VGA graphics displays.
March 1990 to June 1990	Lucas Aerospace Power Systems Division Marylands Ave Hemel Hempstead Herts	Wrote Qualification test plans for environmental testing of aircraft generator control units for 747-400. Qualification tests written in accordance to requirements of FAR 25, DO-160B, and ED14.
Nov 1989 to March 1990	BAe Dynamics Services Test Equipment Hydraulic Test Facility Bristol	Wrote application software for testing Harrier GR5 hydraulic actuators. Developed test procedures for actuators. Software written in Hydraulic Test Language (HTL) based on ATLAS.
Aug 1988 to Nov 1989	Philips Radio Communication Systems St Andrews Road Cambridge	Wrote software used in ATE system for testing of boards for hand-portable radio systems. Set up and wrote software for production prom blowing system interfaced to central database via LAN.
1984 to Aug 1988	THORN-EMI Electronics Radar Division Dawley Road Hayes Middlesex	Employed by test gear design as a Development/Design engineer. Was involved in a number of projects encompassing analogue, digital and microprocessor, D/A and A/D conversion, ATE system development and programming, and some microwave work.

EDUCATION

Date	College	Course/Award
1967-1974	St Gregory's RC High School Donnington Rd Harrow	O'Levels Chemistry ,Physics Maths English, Geography, Metalwork. A'levels Chemistry, Physics, Maths.
1979-1981	Thames Valley University Slough, Berkshire	HNC Applied Physics.
1981-1982	Thames Valley University Slough Berkshire	HNC Endorsements:- 1) Electronic Systems. 2) Linear and Digital Electronics (distinction). 3) Physics of semiconductor devices.
1985-1987	University of Westminster Northwick Park Harrow Middlesex	Microprocessor & Programming Courses; (Part-time) 1) Microprocessor assembler programming. 2) Microprocessor hardware and interfacing.
1993-1996	School of Engineering Coventry University Priory Street Coventry CV1 5FB	MSc in Engineering (Part-time). Awarded MSc with distinction.

PROFESSIONAL

Member of the Institute of Electrical and Electronic Engineers - IEEE, from June 1997.