

DON GOODEVE

DPHIL, MENG, CENG(UK), MIET(UK)

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ROLE

My skills span the technical and organizational needs of developing complex systems; from embedded systems design and programming through to desktop and server-based solutions. Beyond strong technical abilities in hardware/firmware/software, my communications and group skills support teams in delivering exceptional results within their organizations.

TECHNICAL SKILLS

- Firmware/Software:
 - **C (20 years)**; Win32, UNIX, Cross-development for Embedded 8, 16, 32-bit and DSP.
 - **C++ and Object-oriented design (15 years)**; Win32, UNIX, VisualStudio, XCode, GNU. Systems modeling using UML.
 - **Assembler (20+ years)**; M563xx, SHARC, ARM7, 8051, 68K, AVR, PIC, 6502 etc...
 - Digital Signal Processing (DSP) systems design.
 - Familiar with; ARM7, AVR, MSP430, SHARC, DSP563xx, 8051.
 - Software Configuration Management; Subversion, CVS, Perforce, SourceSafe, SCCS.
 - Real-Time Operating Systems (10+ years); Nucleus, CMX, RTOS design/development. Run-time systems design/development.
 - Other language technologies; JavaScript, Python, Pascal, Modula-3, Perl.
 - Web development; HTML, CSS, .cgi, AJAX. Database systems and SQL; MySQL.
- Hardware:
 - Schematic design through to layout hand-off; Protel, PowerLogic.
 - **Digital (18 years)**; High-speed digital systems. DSP, Microcontrollers, communications fabrics. Programmable logic (CPLD, VHDL, FPGA).
 - **Analog (16 years)**; signal path, instrumentation, ADC, DAC, DC-DC conversion.
 - Direction of layout to meet EMC, ESD and performance requirements.
 - Design and hand-off for test and manufacture; including offshore.

TEAM AND ORGANIZATION SKILLS

- Excellent written and verbal communications skills.
- Team Player, Team Leader, Mentor.
- Project Management: Project estimation, scheduling and execution. Adaptable approach focused on delivering effective results within organizational model and constraints.
- Familiar with operating in and supporting ISO9000/9001 environment.

POSITIONS AND EXPERIENCE

DEVELOPMENT CONSULTANT

February 2008 – Present

Gateway Filesystems Inc., Victoria, BC, Canada.

- Directing and augmenting development team for complex Medical web application.
- Requirements capture, modeling, specification and design of new features.

- ENGINEERING CONSULTANT** July 2009 – September 2009
Carmanah Technologies, Victoria, BC, Canada
- Upgrading legacy product firmware (assembler, C) to meet new requirements.
 - Test and design review for new product development.
- CONSULTANT; FIRMWARE/HARDWARE/DSP** September 2007 – June 2009
Stanton Magnetics Inc, Hollywood, Florida, USA.
- Senior Engineer, new product development team.
 - Hardware design and manufacturing support, Audio/DSP and Network (IEEE1394).
 - FireWire (IEEE 1394) firmware/middleware development.
- CONSULTANT; DSP SYSTEMS DESIGN** June 2007 – October 2007
Electrix Inc. Laguna Hills, CA, USA
- Design and project lead, DSP specialist.
 - Specification, design and development of a family of novel PC/Mac audio processing applications.
 - Management of project subcontracting team.
- VICE-PRESIDENT OF ENGINEERING** July 2006 – May 2007
Sanewave Inc. Snohomish, WA, USA
- Leadership of distributed engineering group encompassing Hardware, Firmware, DSP, Software and Mechanical/Industrial Design capabilities (15+ Engineers).
 - Liaison with multiple clients in the Music and Professional Audio industries.
 - Overall project management and resource deployment. Mentoring of Engineering and Project Management capabilities.
 - Hardware Design and Review.
 - Development of systems firmware and DSP code for audio processing applications.
- DSP AND SYSTEMS DESIGN CONSULTANT** December 2005 – July 2006
Sanewave Inc. Snohomish, WA, USA
- Development of systems firmware and DSP code for audio processing applications.
- ENGINEERING CONSULTANT** August 2004 – May 2006
Carmanah Technologies, Victoria, BC, Canada
Self-contained Solar-powered LED lighting solutions.
- Project definition and initial leadership for first purpose-designed Runway Edge Light.
 - Detailed design and implementation of electronics package hardware and firmware.
 - Technical liaison with internal and external project roles.
 - Pioneered proof-of-concept and initial deployment of Maximum power-point tracking (MPPT) and flexible power source charging technology.

FIRMWARE/DSP CONSULTANT January 2005 – August 2005
'Electrix' – Huntington Beach, CA, USA
Re-development of 'Electrix Repeater' product firmware .

- Requirements analysis, capture, project definition, negotiation and management.
- Detailed re-development of firmware in C/ASM on DSP563xx platform to agreed requirements; controlled schedule, scope and cost to customer satisfaction.

SENIOR SYSTEMS DESIGN ENGINEER October 2003 – July 2004
Acuma Laboratories, Victoria, BC, Canada
Multi-processor real-time DSP Embedded systems for music industry applications.

- Design and development of backing storage subsystem for stand-alone DSP products.
- Network protocol development; firmware and software components.

ENGINEERING CONSULTANT September 2003 - October 2003
Carmanah Technologies, Victoria, BC, Canada
Self-contained Solar-powered LED lighting solutions.

- Specification and development process analysis for new Solar/LED lighting application.
- Liaison with regulatory authorities.
- Grant application to obtain support for development of new technology.

SENIOR SYSTEMS DESIGN ENGINEER March 1999 – August 2003
IVL Technologies, Victoria, BC, Canada
Developing real-time DSP Embedded systems for music industry and consumer markets. OEM and branded products. Full embedded systems product lifecycle from conception, hardware and software design through to delivery and in-field support.

KEY ROLES AND RESPONSIBILITIES:

- Software Team Lead (13 engineers) responsible for system firmware for consumer voice transformation technology.
- Technical Team Lead (3 software, 1 hardware engineer) responsible for architecture, design and development of the '*Electrix Repeater*' high performance loop recorder.
- Deployment of *Perforce* SCM system and development of in-house software configuration management and release procedures/tools.
- Mentoring junior engineers. Recruitment/supervision of student engineers.

CONSULTANT IN ECT SYSTEMS TECHNOLOGY November 1994 – December 2003
Process Tomography Limited, Wilmslow, UK
Embedded industrial development systems exploiting Electrical Capacitance Tomography (ECT) technique for chemical and flow process monitoring applications.

- High-speed Processing Network design and Programming; Transputer/Occam2.
- Sensor application development; novel multi-sensor cross-correlation flow-metering application design/development.
- Analog auto-correlation based capacitance measurement sensor control.

LECTURER

April 1997 – December 1998

Department of Computer Science, University of York, UK

Advanced Computer Architectures Group.

- Research focus; Abstractions for efficient, high-level parallel/distributed applications development, Protocol design and correctness proofs using process algebraic approaches and Asynchronous logic design.
- Course development and presentation; Microprocessor Systems design, Operating Systems and Distributed Systems.

RESEARCH FELLOW

June 1994 - March 1997

School of Computer Studies, Leeds University, UK

Post-doctoral Research into novel scalable programming techniques for massively parallel and distributed systems.

HIGHER EDUCATION**DPHIL¹**

September 1990 - July 1994

Department of Electronics, University of York, UK

Thesis: *Performance of Multiprocessor Communications Networks.*

*Systems architecture of high-performance parallel computers. Occam2/Transputer, C, UNIX, assembler. Real-time scheduling and control. **Designed, Constructed and used a tightly-coupled 64-processor multiprocessor system during thesis work.** High-speed digital systems design, layout and construction. Sponsored by Inmos Ltd. (now subsumed into SGS Thompson Microelectronics).*

MENG (I)

October 1986 - June 1990

Department of Electronics, University of York, UK

Reading *Electronic Systems Engineering*. Graduated 1st Class.

Analog and Digital electronic system design. UNIX, C, Pascal, assembler (M68K, 6502, Z80), Logic simulation. 3rd year project; 'a communications co-processor for the ARM' – published. 4th year project; Optimal GHz digital filtering for data transmission (sponsored by British Telecom Research).

REFERENCES AND PUBLICATIONS AVAILABLE ON REQUEST.

OUTSIDE INTERESTS

- Parenting two happy and creative children into the challenges of the 21st Century.
- Music; solo and small group performer (Guitar, Vocal).
- BioDiesel and Alternative Fuels; co-founder and Board member of the Island BioDiesel Co-op, Victoria, BC.
- Alternative Energy, Sustainability and Societal transition. Member of the BC Sustainable Energy Association.
- Private Pilot.

¹ Doctor of Philosophy. York and Oxford universities in the UK use the designation DPhil. Most other universities use the conventional abbreviation; PhD.