

# DAVID C. BLEAKLEY

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david@dcbleakley.com

MEng with Honours Electronics and Electrical Engineering First Class from the University of Edinburgh.  
Engineer, with 5 years of experience that includes VHDL, C, PCB and system design.  
Striving to further a technical career whilst refining management expertise.

## Key Skills

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- RTL coding in VHDL FPGA (Xilinx/Altera) targets
- Tools: ModelSim, Altera Quartus, Xilinx ISE, OrCAD Capture, PSpice, Visual Studio, MatLab, Access
- Software programming in C,C++, Java, Visual Basic
- Scripting using .bash, .bat, vbs, tcl
- Project, team and line management

## Relevant Employment

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### **Image Processing Techniques Ltd (OmniTek), Basingstoke**

OmniTek, with 15 employees, manufactures world leading broadcast video test and measurement products.

#### ***Design Engineer, Production Engineer & Production Manager***

***Oct 2007–Present***

- VHDL, PCB and system design
- Managed manufacturing and test functions
- Customer demonstrations

Key OTM1000-[www.omnitek.tv](http://www.omnitek.tv) designer from concept to production, accounting for 1/3 of product sales since release.

Designed the USB-audio and FPGA based button PCBs successfully integrated into the final product. Coded FPGA RTL including RS232, I2C and a proprietary KLV protocol. Determined XJTAG and other test procedures used in-house and by the PCB manufacturer; consequently PCB failures are rare.

Assumed responsibility for the mechanical design (metalwork, plastics, PCBs, cable looms and packaging) in order to ameliorate weaknesses in the original design. Responsible for the CE test and worked with other designers solving chipset flaws. To improve quality, became the primary contact to the assembly subcontractors.

Manager of production and testing, and responsible for company procurement, delivery and RMAs, using a Sage based accounts and MRP process.

Generated OOBE hard drive images with factory image recovery for the OmniTek product range, allowing easy customer re-installation and thereby reducing factory support requirements. Implemented a network PXE image deployment system, quadrupling production throughput. Developed VBScript SNMP test and calibration scripts.

Demonstrated products at BVE and IBC international tradeshow, resulting in customer site evaluations.

Managed further revisions of the OTM1000 and OTR1003 including mechanical, PCB and RTL design and CE test.

### **ST Microelectronics (Imaging Division), Edinburgh**

The Imaging Division, with 100 employees develop CMOS cameras and mice.

#### ***MEng Project Placement & Part Time Employment***

***Summer 2005, Jun 2006–Sep 2007***

- FPGA VHDL
- USB microprocessor C embedded firmware,
- C++ Microsoft Foundation Class (MFC)

Successfully implemented USB Microcontroller C firmware and C++ PC application to reprogram an FPGA, finishing seven months ahead of schedule. Programming times were reduced from minutes to 8 seconds. The solution was integrated in internal and commercial camera sensor demonstration systems. The report detailing this work received a mark of 90%.

Quadrupled the VGA image frame rate through a USB camera sensor demonstration system by developing a more efficient VHDL FPGA memory controller, finishing three months early. Improvements exceeded expectations, as the project goal was only to double the frame rate. The additional time was used to extend the memory controller to capture stills and to write a decoding block enabling legacy boards, to utilise this USB system. The system is currently used by STMicroelectronics and customers.

Developed skills in project management, documentation, communication and VHDL coding and debugging. Marked as “top student in final year (MEng) Electronics for their project” and received “Sir William Siemens Project Prize”.

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## Food Refrigeration & Process Engineering Research Centre (University of Bristol)

FRPERC solved food refrigeration, cooking and processing engineering problems with 10 research staff.

### *Research Technician (Year in Industry)*

*Aug 1999–Aug 2000*

- Visual Basic
- Circuit design and manufacture
- 3D and 2D technical drawings

Awarded the Engineering Integrity Society (EIS) Innovation Prize, commended for the Smallpeice Prize and runner up for the Engineering Employers' Federation (EEF) Prize for contribution to the 'first' Air-Cycle air-conditioning system for buildings research project.

Designed and successfully implemented PC monitoring and control circuitry and software. Produced 3D and 2D technical drawings. Directed and managed other students whilst building and testing the system (including the plumbing, lagging and sound proofing) and oversaw the project during the manager's absence.

Demonstrated the finished system, worth £7 million, to sponsors and customers. Also completed a delayed project, producing a GUI for a computer simulator of industrial freezers.

## Education

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### University of Edinburgh

#### *MEng with Honours Electronics and Electrical Engineering First Class*

*2002 – 2007*

- *MEng Thesis and Placement at STMicroelectronics*: C Firmware and FPGA development (see *Employment*).
- *MEMS accelerometer design*: Co-ordinator of this 4<sup>th</sup> year project. Defined, assigned and followed up on tasks. Presented the finished system to the class. Group received top marks.
- *Other projects*: Satellite TV displayed on an oscilloscope, firmware controlling a turntable motor, display and keypad. Team leader for the winning group, to design a power network for Sri Lanka.

This period of study displays the application of theory and the ability to lead winning teams, produce and present exceptional work, demonstrated by the first class grades received by all project work.

### Pershore Business College

#### *NEBS Certificate in Management (During the 'Year In Industry')*

*1999 – 2000*

### Campbell College, Belfast

*A-Levels: A-Physics, A-Technology, C-Maths; GCSEs: A\*, 5As, 2Bs, C*

*1993 – 1999*

## Other Employment and Experience

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### Charity Work

#### *Youth Group Leader*

*1999-00, 2002 & 2005-Present*

Provide support for youth leaders. In Edinburgh organised youth events for 50-300 young people, including annual camps trips, sports days and discos.

#### *Missionary*

*Sep 2000 – Sep 2002*

Mission computer support, database and Visual Basic programming. Provided leadership, encouragement and skills training for up to 40 peers. Involved in pastoral care, counselling some members of the team who were struggling with personal difficulties. Taught and performed community work.

#### *Hann Property Maintenance, Edinburgh Stairwell Cleaner and Gardener*

*Jun 2003 – Sep 2004*

#### *McDonalds, Bangor 5\* Crew Member*

*May 1998 – Aug 1999*

## Interests

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Outdoor pursuits including water sports. RYA Level 3 dinghy sailing, Level 2 windsurfing and Advanced PADI Diver qualifications. Also enjoy spending time with my wife and family.

## Referees (Available upon request)

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### **Russell Hicks**

Consultant Engineer, OmniTek

### **Martin Turner**

Apps H/W Senior Manager, STMicroelectronics