**Curriculum Vitae**

Edward Butler

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Education: See attached training record

**Overview**:

A security cleared engineer with over eighteen years Development/ Manufacturing experience gained within automotive, medical, aerospace and commercial environments.

My career has covered software, electronic and mechanical disciplines.

My specific areas of expertise are:

* New product design, development and qualification.
* Working within and improving regulated environments.
* Systems development/ integration.

My key skills are:

* Excellent communication and interpersonal skills.
* Extensive understanding of quality systems and implementation.
* Manufacturing process and equipment understanding.
* Advanced programming/ electronics knowledge/ IT skills.

## Employment History

May 2017 – Present (3 renewals)

Airbus Defence and Space Ltd

*Gunnels Wood Road, Stevenage, SG12AS* ***Software Engineer***

Working on space based products developing Rf test equipment in C++, TCL and Python. It has also been necessary to make some adjustments to VHDL code and update PCIe drivers for same. Development of 1553B, SpaceWire and MilCAN interfaces is part of my current work.

Requirements are stored/ updated in DOORS.

I have implemented automated build/ test and release software compliant with AS9100/ NASA/ ESA requirements.

July 2016 – May 2017 (1 renewal)

Thales Optronics Ltd

*Linthouse Road, Glasgow, G514BZ* ***Senior Software Engineer***

Working on an embedded development for a defence project. The language of the project is C and has involved the writing of low level drivers and integration with Matlab and Simulink models.

To communicate with the device the MilCAN protocol is used, this means the use of Canalyzer to maintain the library and provide test data.

Requirements are stored/ updated in DOORS with Rational Rhapsody used for the creation of UML models.

I have also conducted unit testing with C Mockery, MISRA compliance with Klocwork and Bullseye for code coverage.

July 2014 – April 2016

*Standard Access Ltd, Tralee Institute of Technology, Clash, Tralee, Ireland* **Embedded Software Engineer**

Development of a new product for use in building access.

Duties included:

* Design and develop an embedded Linux solution in that allows for WiFi, Bluetooth, USB and audio communications.
* Design Android and IOS apps to interface with the device and server.
* Establish Linux server for webhosting, email server, SQL and CRM functions.

Feb 2015 – Oct 2015

*Blue Power Limited, Feltrim House, Feltrim Road, Malahide, Co. Dublin, Ireland* **Development Engineer**

Development of a data acquisition for a renewable energy product.

Duties include:

* Sensor specification and selection.
* Write a C# front end for the display and data capture from data acquisition hardware.

May 2014 – May 2015 (3 renewals)

*Olympus KeyMed Ltd, The Cordwainers, Temple farm industrial estate, Southend-on-sea, SS25RU* **Embedded Software Engineer**

Development of medical/ aerospace grade software for various developments. Duties include:

* Embedded coding (assembly, C and C++ 11) for endoscope support equipment.
* Development of Android app to control same (Android Studio/ Phonegap).
* Creation of PC (Visual Studio C#) diagnostic interface with testing database (MySQL).
* Benchmarking of communications protocols (WiFi, Ethernet, GSM, Bluetooth, CANbus, LINbus, NFC, Zigbee).
* Project management duties to ensure electronics and mechanical components were available within the required time scales.
* Development of real time image processing software to allow speed sensing for an aerospace customer (C++ 11).

January 2011 – April 2014 (6 renewals)

*Quanta Fluid solutions, Tything Road, Alcester, B49 6EU* **Development Engineer**

Development of software/ hardware and system integration within a 62304 framework for a kidney dialysis machine (class 2b) with duties that included:

* Working with Free and Safe RTOS to produce control (class b) and safety (class c) processor code in C / C++ within IAR, Keil and Eclipse IDEs.
* Use of J-tag/ J-link for debugging and fault finding.
* Use of Platform builder to produce WinCE image for GUI.
* Development of C# and Visual C++ (Win32 and .NET) applications for WinCE.
* Use of Visual Studio to develop PC based diagnostic and calibration interfaces.
* Establishing and running SVN server.
* Administer Mantis and latterly Jira issue tracking systems.
* Implementation of PC-Lint to run static analysis and ensure MISRA compliance.
* Use of Vectorcast to complete unit tests.
* Implementation of Sprint/ Scrum methodologies.
* Use of Star UML and latterly Enterprise Architect to produce design documentation.
* Control of software build with Jenkins build server.
* Ensuring EMC/ ESD compliance.
* Development of a new prototype hardware using CAN to link multiple processors.
* Requirements capture into Cognition.

June 2010 – December 2010 (1 renewal)

*Quanta Fluid solutions, Tything Road, Alcester, B49 6EU* **Specifications Engineer**

Tasked with supporting the development of requirements and industrialisation for a kidney dialysis machine. Duties included:

* Ensuring that the hardware and software controls specification met all the requirements of IEC 60601-2-16.
* I was required to ensure that the external developer was compliant with the V and V testing plan.
* Working with the machine builder to implement PC based production test software in C# that would interface to the organisations ERP system.

October 2009 – May 2010

*James Leckey Design Ltd, Kilwee Business Park, Dunmurry BT17 OHD* **Quality Controller**

* Moving the business from ISO9001 to ISO13485 and CFR21.
* Creation of document control database (using SQLite and PHP browser).
* Linking MRP system to report generation tools.

February 2009 – October 2009

*Absolute Control EPOS Solutions, Unit 15 Carrickfergus Enterprise Park 8, Meadowbank Road,Carrickfergus*, **EPOS Engineer**.

Duties included:

* Responding to customer RFQs.
* Overseeing installations and conducting installations.
* Conducting break/ fix activities within SLA.
* Required to work on Windows and Linux systems as well as Cisco and bespoke EPOS software.
* Development of repair facility for EPOS equipment.

January 2009 – Present

*Self*

**Vehicle Diagnostic Specialist**

Starting from scratch I have built up a successful vehicle diagnostic and repair business that I conduct during evenings and weekends. This started with basic diagnostic work but has expanded as the needs of the market dictated; services now cover key programming, engine re-mapping and hardware repair (including CAN and MOST systems).

I have also implemented several bespoke ECUs for motorsports applications (Megasquirt, MSD and Hondata).

To aid my work I have created some of my own software and am currently testing my first piece of commercial software (scheduled release Q4 2014).

May 2008 – January 2009 (1 renewal)

*Magna Exterior & Interior Management GmbH,* Kurfürst-Eppstein-Ring 11, Sailauf, Germany,**Project Quality Manager**

Tasked with controlling all quality functions associated with the introduction of new exterior automotive assemblies (covering mechanical, electrical and electronic modules).

* Interpreting customer requirements.
* Capture product risks in the DFMEA and planning DVP&R.
* Ensuring customer specific requirements are met (Ford GPDS, Nissan ASES).
* Managing corrective actions arising from testing failures.
* Supplier management.
* Left with very basic German and basic Russian skills.

July 2007 – May 2008 (2 renewals)

*Magna Kansei Limited,* Pennywell Industrial Estate, Sunderland, SR4 9EW, **Quality Systems Manager**

* Stabilisation of manufacturing process.
* Aligning Quality System to TS16949, ISO 14001, ISO 18001 and customer specific requirements.
* BMW, JLR and Toyota point of contact.
* Training of management and shop floor personnel in Quality management, basic statistical methods and continuous improvement tools.

October 2006 – June 2007 (1 renewal)

*Magna Intier Automotive,* Hendera Road, Ravensbank Business Park, Redditch, B98 9EY **Quality Systems Engineer**

* TS16949 implementation.
* Process improvement.
* Customer liaison/ concerns management.
* Process owner training.

January 2005 – October 2006 *Montupet UK Limited,* *The Cutts, Dunmurray,* *Belfast,* *BT17 9HU,* **Simulation Engineer**

Working within the Research and Development Department.

* Developing 3D models in Catia V4/ V5 and UG
* Running fill and solidification analysis
* Post processing results and presenting findings to external and internal customers (in a lot of cases this was done in French).
* Linking the findings to ‘real world’ defects.
* Develop two test rigs two test rigs for cylinder heads to simulate engine cycling; one was to test the thermal fatigue and the other was to test the mechanical fatigue properties. This allowed for much earlier internal testing of the parts before carrying out expensive dynamometer tests at the customer.

July 2003 – January 2005

**Production Manager (Montupet UK)**

* New product introduction a new manufacturing process.
* Customer point of contact.
* Budget control.
* People management.

2001 – July 2003

# Research and Development Engineer

Responsible for the in-house development of all aspects of the Lost Foam casting process: Polystyrene manufacture, Casting, Machining.

* Forged links with the American universities to facilitate Benchmarking activities.
* Use of conventional testing and Design of experiment to run trials.
* PC based data acquisition.
* Sensor array development.

1998 – 2001

# Wheels Research and Development Technician

* Conduct major trial for alloy changes.
* Scrap reduction tasks.
* Automated X-Ray testing validation.

1995 – 2003 *Marion Motor Works,* *163 Ladybrook park,* *Belfast* *BT11 6YJ,* **Part time vehicle technician**

Working in an independent vehicle repair facility on a wide range of vehicles including car, light commercial and heavy goods vehicles. My duties included servicing and fault finding (using both electronic diagnostics and traditional methods).

## Personal interests

I have been a competitive swimmer for 25 years and for the last 20 years have been involved with life-saving, having both competed and taught life saving. I am currently Chairperson of Belfast Olympia LSC.

My other interest is motor racing. I have been competing since 1997 in both saloon cars and single seat racing. This has involved design and build of racing cars, sourcing of sponsors and driving the vehicle. I also service and maintain my own lorry for transporting the racing cars.

## References

Available on request

## Training Record

## Secondary Education

1989 – 96 (grammar)

7 GCSE’s

2 A-levels

## Further Education

HND Mechanical/Manufacturing Engineering (BIFHE) – September 1996 to

June 1998

MSc Manufacturing Technology, Design and Management – September 2001

December 2004

Certified Diploma in Financial Management (ACCA) – September 2003

June 2004

Professional Training

* Catia V4 & V5 computer aided design
* AutoCAD (from v12 to present)
* ABB robotic training
* Telemecanique PLC training
* TS16949 training
* ISO 9001/ TS 16949 internal auditor
* NVQ Level 2 French for business
* Advanced Metallurgy
* Statistical Process Control
* Design of experiments
* 6-sigma process improvement (black belt)
* Microsoft Office (including access and project)
* DASYLab V7.0
* NVQ Assessor
* IEC 62304 awareness training