

Ian Cullimore PhD

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SYNOPSIS

Experienced hi-tech CTO-level person, yet still very hands-on (architecting, coding). Much experience both in the UK and California (Silicon Valley & LA) in companies ranging from small startups to large corporations, and in building and managing software and hardware teams. Specialize in IoT, embedded, handhelds, smartphones, mobile, operating systems, device drivers, communications, ultra-low power systems, interfacing to the Cloud. Entrepreneur; start-up and young company specialist. Raised angel and VC rounds. Taken startups to Exit. Comfortable interfacing with the Board, Investors, and sales/marketing/bizdev. Patent Expert Witness (14 cases, 10 Reports written, 4 depositions, 1 court case at trial).

Employment/Consulting/Start-Ups

6/2015 – *Iota Technologies Ltd/Crushproof Ltd/Ian Cullimore Associates*
Specialize in operating system design and development for advance small devices, IoT ('Internet of Things') hardware and software product designs, and Patent Expert Witness consulting. 14 cases to date, 4 depositions, and 1 trial testimony.

- 10/2012 – 5/2015 *Paqet Systems Corp* (Silicon Valley, CA, and UK)
Co-founder and CTO. Silicon Valley & UK startup specializing in Ultra Low Power software operating systems for Machine-to-Machine ('M2M'), Sensor Hubs, Wearables and Internet Of Things ('IoT') devices on ARM microprocessors. Two provisional patents filed. Developing ultra-low power IoT node and bridge embedded operating systems software.
- 11/2010 – 9/2012 *IOTA Computing, Inc.* (Palo Alto, CA, and UK)
Co-founder and CTO. Invented innovative combination Internet-Centric Software Operating System and MCU chip for the Internet Of Things ('IoT'). Multiple patents granted and pending. Extreme Ultra Low Power. Helped raise \$2.5m funding. Managed and grew software and hardware development team.
- 2008 – 2010 *Independent Consultant.*
Wide range of software and hardware development, consulting, and especially Patent Expert Witness litigation and forensics work.
- 2006 – 2008 *Martian Gaming Ltd* (London)
Co-founder and CTO of innovative Online Mobile Gaming platform technologies organisation. Established company. Raised Angel finance (\$1m). Launched in Ukraine with major Telecoms provider (Life). Had exclusive contract with PartyGaming. Also with Zero36, 888Mobile. Developed native and Java (J2ME) apps for mobiles phones, web/cloud server solutions (LAMP, J2EE) to interface to mobile phone network operators and online gaming platforms. Much travel to PartyGaming in Gibraltar, and Eastern Europe (especially Ukraine and Russia).
- 2004 – 2006 *CTO, Cibenix Ltd* (Dublin, Ireland)
Mobile phone On-Device Portal (ODP) software company. Led server (LAMP, Java - J2EE) and client (Symbian & Java - J2ME) development. Managed software team of 14 engineers.
Press release about my appointment:
<http://www.tornado-insider.com/press/presses.asp?pressid=7031>

- 2003 – 2004 *Independent Consultant.*
Various software and hardware development, and Patent Expert Witness work.
- 1997 – 2003 *Informal Software (UK & Santa Clara, CA, USA)*
Founder, CEO & CTO.
Established innovative software company based on my 'Informal Interface' PhD research. Raised \$8m Angel and VC finance. Licensing negotiations with Apple and Adobe. Grew company to 40+ people on both sides of the Atlantic. Won **DemoGod** Award. Worked with POS manufacturer Alphameric plc (London Stock Exchange listed company). Developed POS system ("Wireless Food Ordering System") for 3M Food Services Division (Minneapolis) under \$50K NRE contract. Also part-time Consultant. One of the Architects of the **Symbian Operating System (1997)**.
- 1996 - 1997 *Two Way TV (London)*
CTO (consultant).
Two Way TV was an innovative interactive TV company, doing user-interactive television in the latter days of analogue broadcasts, and the transitioning to digital (DVB standards).
The company designed its own set-top box (and associated systems software), custom handheld remote control, bank-end server systems, billing, and interactive program content.
- 1995 – 1996 *Xircom, Inc. (Thousand Oaks, California, USA)*
Software Director. Created award-winning innovative Ethernet/modem installer software products. Invented 'plug & play' for Windows 95 before Microsoft.
- 1992 – 1994 *Digital Research Inc. ('DRI') (Hungerford, UK and Monterey, California USA)*
Did DR DOS and Netware PalmDOS development work. Created DOS power management systems.
- 1988 – 1991 *Poqet Computer Corp. (Silicon Valley, California, USA)*
Co-Founder and Vice President, Software R&D

Established the company. Wrote proprietary power-managing ROM BIOS, DOS power management drivers. Created the whole PCMCIA ('PC Card') industry standard. Created software and hardware power management techniques to make the Poqet PC palmtop computer to run for 100 hours on two 'AA' batteries. Advised Intel on low-power CPU design (386SL).

EXIT: Company acquired by Fujitsu. Managed software team of 12 people.

1986 – 1988

D.I.P. Ltd (Guildford, Surrey)

Founder & CTO. Invented world's first 'pocket PC'. Licensed to Atari as 'The Atari Portfolio'. Wrote PC-compatible ROM BIOS. Wrote MS-DOS clone o/s. Invented hardware and software ultra low-power systems. Pocket PC ran for 50 hours on 3 'AA' batteries.

EXIT: Company acquired by Phoenix Technologies.

1984 – 1986

Psion Ltd (London).

One of the first software engineers at Psion. (Psion Software became Symbian in 1998). Video games developer. Developed hand-held PDA operating system and communications software, tool chains. Helped develop innovative POS (Point of Sale) systems for their project with Marks & Spencer retailers. Firmware, software design.

1983 – 1984

Thorn EMI (Wardour Street, London)

Video games programmer (Atari 800, Commodore 64, Sinclair Spectrum, TI 99/4A, BBC Micro). Developed video games in assembler programming languages (6502, Z80).

1981 – 1983

British Aerospace. (Brooklands, Weybridge, Surrey)

Software programmer. Projects included some work for Concorde.

Education

2004 – 2006

Honorary Senior Research Fellow, University of Birmingham, UK

1991 – 2000

PhD, Cognitive & Computer Science, University of Sussex, UK (part-time) Specialised in HCI – Human-Computer Interaction. Thesis: "An Analysis and Implementation of Informal Human-Computer Interaction"

1978 – 1981 *BSc (Honours) Mathematics*, King's College, University of London
- President of the Maths Society

Books, Appearances & Publications

Guest Panelist, *MAPOS (Mobile Applications and Operating Systems)*, London, February 2005

Speaker, *Roth Capital Investment Symposium*, Laguna Niguel, CA, February 2001

Guest Panelist, *Digivations Conference*, CA, September 2000

Live Interview, *Sky News Business Report*, June 2000

Live Interview, *CNBC Power Lunch Report*, June 2000

Live Webcasts, *CEOCast.com*, February 2000 & February 2001

"Pen & Paper, the Stylus, and Today's Computing Needs" Tradespeak.com, February 2000

"A New Pen and Paper Paradigm", Colorado Springs Business Journal, December 1999

Communicating With Microcomputers (1987), Sigma Press (Distributed by John Wiley & Sons). ISBN 1-85058-055-3

White House Papers (University of Sussex, 1992) *Informal Interfaces*

White House Papers (University of Sussex, 1994) *Informal Interfaces: Informality in Human-Computer Interaction*

White House Papers (University of Sussex, 1995), *An Application of AI Techniques to a Consumer Software Product*

Patents Held

Ultra-Low Power Single-Chip Firewall Security Device, System and Method (US 8,875,276 B2)

Massively Multicore Processor and Operating System to manage Strands in Hardware (US 8,607, 086 B2)

TCP/IP Stack-Based Operating System (US 8,335,864)

Apparatus and method of communicating with RFID tags (US 7,455,217)

Method of RFID Data Tracking (US 7,040,532)

Computer Power Management System (US 5,560,024)

Computer Power Management System (US 5,428,790)

Compact Portable Computer, EP 0479915

Annotation in a Computer System (application) (US 2002/0154120)

Patent and Other Expert Witness Work

- 2015 - *Phoenix v VMware* (for the *Defendant*). Morrison Foerster (San Francisco), ref Diana Kruze. Expert Report on technology issues written. Code Review undertaken. Deposition given.
- 2015 - *Papst Licensing GmbH v Hewlett Packard Corporation* (for the *Defendant*). Fenwick & West (Mountain View, CA), ref Charlene Morrow.
- 2015 - *Smart Skins LLC v Microsoft Corporation* (for the *Plaintiff*). Proskauer Rose LLP (Boston, MA). Ref John M. Kitchura, Jr. Claims Construction Expert Report written. Validity Expert Report written. Infringement Expert Report written. Deposition given (April 2016).
- 2013 - 14 *Monec v Samsung* (for the *Defendant*). Fish & Richardson (Washington DC). Expert Report written. Deposition given. Ref Linhong Zhang, Chris Winter, Joseph Colaianni. Re Smartphone design issues.
- 2013 *Cradle IP v Texas Instruments* (for the *Defendant*) Covington & Burling (Redwood City, CA). Expert Report written. Ref Anupam Sharma, Hyun Byun. Re Power management issues.
- 2012 *St. Clair Intellectual Property Consultants, Inc., v. Motorola Mobility Inc.* (for the *Defendant*). (Representing Motorola Mobility; case stayed).
- 2012 *Zynga v King.com* (for the *Defendant*). Origin Ltd, London. Ref Peter Langley, Colm MacKernan.
- 2011 *Optimum Power Solutions LLC v Apple, Inc.* (for the *Defendant*). Hogan Lovells (Washington DC) Ref Joseph Rafferto, Celine Crowson.
- 2011 *St. Clair Intellectual Property Consultants Inc. v Acer America Corporation, Acer Inc, Dell Inc, Gateway Companies Inc, Gateway Inc, Intel Corp, Lenovo (United States) Inc, Microsoft Corporation, Toshiba America Inc, Toshiba America Information Systems Inc., and Toshiba Corporation* (for the *Defendants*). Fish & Richardson (Washington). Expert Report written. ref Scott Elengold. 'The Function Call Monitoring Patents'. (Power management issues). Also counter claim led by Microsoft: *Microsoft Corporation v St Clair Intellectual Property Consultants Inc.* For the *Plaintiff*.

- 2011 *St. Clair Intellectual Property Consultants v Apple Inc. (for the Defendant)*. Cooley LLP (Palo Alto) Ref Timothy Teler.
- 2008 *Microsoft Corporation v Tom Tom; SPT v Tom Tom; Garmin v Tom Tom; Bosch v Tom Tom. (for the Defendant)*. Expert Report written. Origin Ltd, London. Ref Peter Langley, Colm MacKernan
- 2008 *Symbol Technologies Inc. v Janam Technologies LLC (for the Defendant)*. Expert Report written. Deposition given. Kenyon & Kenyon, New York, ref John Kenny.
- 2004-5 *Khyber Technologies Corporation v Hewlett Packard Company (for the Defendant)*. Expert Report written. Deposition given. Kenyon & Kenyon, New York ref Michael J Lennon
- 1986-87 *The Crown v Dyer et al. (for the Plaintiff)*. Expert Report written. Computer Forensics Expert Witness in Old Bailey (Central Criminal Courts, London) case, largest drugs bust case to that date. Defendant had saved deleted data on his computer, which I was able to retrieve.
- 1985 For *Wilkinson Kimbers* (London). Copyright infringement case concerning video games ROM code. Extracted ROMs from motherboards, did forensic examination on code to show copying had taken place.
- present One Court appearance (UK)
- Four Depositions given (USA)
- Ten Expert Witness Reports written.
- Multiple hardware and software projects giving in-depth technical advice to patent lawyers.

Technologies

Extremely fluent and experienced in Assembler, C, C++, Java, Prolog, PHP, etc, some VHDL, Verilog, etc. Multiple Operating System and CPU designs and architectures. All aspects (almost) of Software and Hardware. Web technologies. Communications and Internet protocols. Specialise in Power Management, PDAs, palmtops, operating systems, HCI (Human-Computer Interaction).

Awards

DemoGod Award, Demo 2000, Palm Springs

PC Magazine Award for Technical Excellence, Comdex Fall, Las Vegas, 1989

Other Associations for 'Full-Disclosure' (Start-Ups, Consulting, Contracting)

3M Rochford Thompson (Newbury, UK) – passport scanner software.

BTS Technology Inc (Santa Barbara, CA). RFID and wireless PDA applications for the Wine industry.

Indigo (Santa Barbara, California) – Omega IR camera control software.

3M (Food Division, Minneapolis) – PDA Wireless Food Ordering System.

Mobile Travel Technologies Ltd (London) – mobile applications for travel planning and booking.

Nokia (Tampere, Finland) – Research report on *Global Software Development Strategies*.

Psion Dacom (Milton Keynes). Advised on GSM Stacks in Symbian OS.

Microscribe (Wales, 1991) Developed an MS-DOS version of their CP/M ruggedized handheld device.

Brandwidth (Windsor, UK) – Windows Mobile software development for Toyota Cars.