Curriculum Vitae
David Annett

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Profile

I have extensive expertise in hardware, software, management and manufacturing aspects of product development on a wide range of equipment. Working directly with customers I enjoy creating a specification and handling the development and production of solutions.

I have provided solutions for 4 of the world's top 10 tech companies working directly with their tech teams. I have managed development teams spread across the globe and have worked with Chinese production facilities for 17 years.

Employment History

Embedded Product Developer, Contractor

Period: 1992, Current position

Employer: Annett Computer Company Limited

Work Done: Contract embedded system development including hardware and software development for companies such as Virscient, Lynx Innovation, Fusion, Zephyr, Impact LED and others. Work ranged from short term problem solving for companies struggling with part of a project or staffing shortage through to longer term product development and support. I have my own facilities but can travel and work on site as the need arises.

Director of Technology

Period: May 2017, November 2022

Employer: Outform

Work Done: Oversee the technologies used by Outform to provide advanced interactive customer experiences. Work with USA based customers to address their specific technical needs. Managed the China based development teams. Oversaw the technical implementation of the Amazon Alex interactive retail display at Best Buy and the Google Home interactive retail displays used worldwide. Developed a media player for Bose for their retail headphone displays. Created a modular range of ARM based electronic devices and a high end Android media player they interconnected with.

Senior Software Engineer / Project Engineer

Period: September 2014, May 2017

Employer: Fusion Entertainment/Garmin Limited

Work Done: Developing the next generation of consumer multi-zone AV entertainment systems including the initial software development of the new RA70 and BB100 marine products. Lead the development of a vertical market double DIN infotainment systems, the RV-IN801, used by Airstream and other iconic USA RV companies. As project engineer for this product I managed the technical work of the software, hardware and mechanical teams located in the USA, New Zealand and Taiwan.

Head of Electronics

Period: April 2012, April 2014

Employer: Lynx Innovation, China

Work Done: Managing a team of hardware and software developers as well as doing some hardware and software development myself. Developing Linux and Android based media players and tablets used for interactive shop retail displays used by major US retail chains. Creating high quality digital audio headphone displays used by ██████ in their retail displays. Dealing Chinese manufactures and technology suppliers.

Lead Engineer

Period: April 2010, April 2012

Employer: Lynx Innovation, New Zealand

Work Done: Managing a global team of developers creating interactive shop displays for major US retailers. Required delivery of custom systems in volume with short time frames. Products developed included technologies such as Linux based 3D HD media players, touch controllers and AVR processors.

Technical Manager

Period: August 2008, April 2010

Employer: eWatch Limited

Work Done: Managing a team of developers creating innovative home automation solutions. Working all all levels and aspects of the project including design and specification. Technical reviews and mentoring. Project planning and budgeting. Customer requirements discussions. Products developed included technologies such as OLED displays, Cortex ARM processors and embedded Linux controllers.

Hardware Team Leader, Wireless Data Group

Period: August 2005, February 2006

Employer: Navman NZ Ltd

Work Done: Navman's Wireless Data Group had grown to be a division in it's own right, the Wireless Data Division. My role was heading the team developing the next generation of hardware for the Wireless Data Division.

Senior R&D Engineer, Wireless Data Group

Period: September 2002, August 2005

Employer: Navman NZ Ltd

Work Done: The Mobile Data Group was very successful so a new larger group, the Wireless Data Group, was formed to allow increased worldwide roll out. This included some expansion into Europe and operations in New Zealand and Australia. During this period I worked on the

development of a new in car version of the Halo Dome called the Halo Qube. I then added telephone voice functionality to the Halo Qube. I also did much of the early development of the new I/O expansion unit. I developed the first commercial navigation product, the M-Nav 650 which took the consumer iCN650 product and interfaced it to the Qube product to combined messaging, tracking and navigation into one system.

Technical Group Leader, Mobile Data Group

Period: July 2000 to September 2002

Employer: Talon Technology (later renamed to Navman)

Work Done: I lead the initial technical team that architectured Navman's vehicle tracking and communications system. It is know as the OnlineAVL system and the UK operation was feature in a TV documentary when Navman won the NZ Supreme Export Awards in 2002. The concept of the Halo Dome tracking product was my idea and the unique ideas in it have been granted US patent 6,789,013. I did most of the hardware development of this product and wrote the API libraries and test code for it. I wrote the application and test code for the MDT800 data terminal along with some of it's SDK and did much of the final hardware development needed to get it into volume production.

R&D Engineer

Period: June 1999 to July 2000

Employer: Talon Technology

Work Done: I performed software and hardware development of marine instruments. I also undertook support of manufacturing processes and test engineering of marine products. I worked with the dealer network worldwide to coordinate software release and resolve customer issues. I installed a Linux Internet gateway to allow the

network users to access the Internet from the company LAN.

Technology Manager

Period: October 1997, May 1999

Employer: Smartcash Systems Ltd (was Scandic)

Work Done: In addition to my role with Scandic I also redeveloped much of the Australian developed Scandic product to create a more reliable product. With the introduction of a new NT based product I was responsible for the general layout of the system as it is used in New Zealand and the creation or upgrading of those parts needed to make the system supportable and reliable. Many of my enhancements were sold back the original developer. I also took on the establishment of www.smartcash.co.nz to give the company it's first web presence. I developed new looms and interfaces for the new generation of gaming machines for both cashless products and saw them through lab testing in Australia for approval to be use locally.

Information Services Manager

Period: March 1996 to October 1997

Employer: Scandic NZ Ltd (was GMS)
United Gaming Limited (UGL)

Work Done: In addition to my original role with GMS I also upgraded and look after UGLs LAN and any advanced technical requirements they need. I created a new version of the Smartcard POS software to replace Scandic DOS program which was causing performance problems in a multitasking environment.

Technical Support Manager

Period: June 1995 to March 1996

Employer: Gaming & Monetary Solutions (GMS)

Work Done: Designed and set up a service workshop. Managed the day to day running of the workshop and it's staff. Solved any problem with GMS's Cashless systems and other products which where beyond the scope of the other technical support staff. Developed tools to aid in technical support operations. Provided technical support and staff training for the IGT dealer network nation wide. Supported the operation of 30 cashless sites from Whangarei to Invercargill, implemented remote modem support. Co-ordinate with Scandic (Australia) on cashless upgrades and supply. Deal with repair of Ardac (USA) note acceptors used in 600 gaming machines at the AK casino. Installed and maintained an OS/2 Warp Server LANs. Developed a XBase application for tracking of parts stock, customer details and cashless site information.

Software / Electronic Engineer

Period: April 1994 to June 1995

Employer: Cadac Ltd

Work Done: Development of hardware and software for motor controllers for Cadac's brushless. Motor controllers included a low noise ceiling fan controller which employed modulation of the PSU output voltage during commutation and a washing machine controller which could be configured via a PC to control agitate angle, spin speed profiles and power limiting. Development of custom test hardware and software, including the use of LabView, to allow performance profiles to be measured and to aid in manufacture. Installation and day to day running a Novel network including related remote dial in software.

Systems Engineer

Period: July 1993 to April 1994

Employer: Kiwisoft

Work Done: Development of high resolution CCD imaging system. This system used 4K x 4K CCD directly from the chip manufacture in California in hardware developed at Kiwisoft. The two output channels where digitized, hardware JPEG compressed, converted to packets and sent down a fiber optic link to a custom buffer card in a PC for wireless transmission to a DEC Alpha for processing.

For earlier positions please contact me directly.

Hardware experience

I have experience with both analogue and digital circuit design and the use of KiCAD, PADS and Altium (Protel) for schematic and PCB design.

Software experience

I have experience in programming in Go, C++, C, C#, Python, Java, QT, Lazarus, Delphi, Kylix, Modula II, Basic, PHP, assembler, MySQL and XBase. The processors I have dealt with at assembler level include the following: Arm, AVR, M16, 80x86 (PC), 680x0, 68HC11, 6502, 68x00 , 8048, 8051, 8085, Z80, CP1600 and the 1802.

I have worked with Android (AOSP system), Linux (Arm, Mips, x86), Windows, WinCE, OS/2 and DOS operating systems as well as virtual machines.

Education

Tertiary:

2000 to 2005
AUT

1988 to 1990 Part Time
Hutt Valley Polytechnic

1981 to 1988 Part Time
Wellington Polytechnic

1980
Victoria University

Secondary:

1976 to 1979
Hutt Valley Memorial Technical College

Primary:

1974 to 1975
Hutt Intermediate School

1972 to 1973
Carolside Primary School

1968 to 1971
Muritai Primary School

Qualifications Held

2012
Chinese Driver's License, car and motorcycle

2003 (Incomplete, 2 courses remain)
Undergraduate studies for BE Electrical at AUT

1996
Casino Control Act 1990 Certificate of Approval

1990
NZCE, Electronics and Computer Technology,
including Stages 1 & 2 Radio Technology

1986
Restricted Electrical Certificate

1980
B.Sc. Related Courses

1979
University Entrance and Sixth From Certificate

1978
School Certificate

1978
Drivers Licence, A+B

1977
Amateur Radio Licence, ZL2TPW later
ZL2DAA

Personal Details

Date of birth:	6 January 1963
Marital Status:	Single
Children:	Two adult children

Interests & Hobbies

Battery electric vehicles.

Motorcycles, trail, trials and touring.
Ham radio, video systems and computers.

Availability

4 weeks notice (less possible)

Languages

Native English.
Basic Mandarin, Japanese and Russian.

References

Referees are available and can be supplied on request.