

Curriculum Vitae

David Annett



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Profile

I am a developer with extensive expertise in both the hardware and software aspects of development on a wide range of equipment. I enjoy taking a specification and producing the hardware and software to implement it. My knowledge of both software and hardware means I know the pros and cons of both and find the right balance for the task. I have experience with plastics and other mechanical issues and the whole volume manufacture and testing process. My management experience allows me to deal with all aspects of a project.

For a more recent and detailed version of this document please visit <http://www.annett.co.nz/resume/david.htm>

Employment History

Senior Software Engineer / Project Engineer

Period: September 2014, Current position

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. Most recently working on 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.

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 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.

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 major players in the headphone market. 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 Division

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 architected 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 were 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 refer to <http://www.annett.co.nz/resume/employ.htm>

Hardware experience

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

Details of some hardware projects undertaken can be found at:

<http://www.annett.co.nz/resume/hardware.htm>

Software experience

I have experience in programming in C++, C, C#, 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.

Details of some software projects undertaken can be found at:

<http://www.annett.co.nz/resume/software.htm>

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

Phys 131	B2
Info 151	C

1979

University Entrance and Sixth Form Certificate

Physics	79
Mathematics	63
Chemistry	62
English	53
Economics	52

1978

School Certificate

Mathematics	83
Science	80
Electricity	79
Technical Drawing	79
Economic Studies	65
English	54

1978

Drivers Licence, A+B

1977

Amateur Radio Licence, ZL2TPW later
ZL2DAA

Personal Details

Date of birth: 6 January 1963

Marital Status: Married

Children: Two adult children

Interests & Hobbies

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

Availability

4 weeks notice

References

Referees are available and can be supplied on request.