# 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 <a href="http://www.annett.co.nz/resume/david.htm">http://www.annett.co.nz/resume/david.htm</a>

# **Employment History**

#### **Technical Manager**

**Period:** August 2008, Current position

**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.

#### **Embedded Product Developer, Contractor**

**Period:** February 2006, Current position

**Employer:** Annett Computer Company Limited

**Work Done:** I am currently also working as a contact developer to a few high

tech companies in Auckland doing development work on a range of equipment. Work includes development of both hardware, software, and complete product development. I have recently worked on consumer and commercial products used in home, automotive and industrial environments. Some of the companies I

have recently performed development work for are:

Audio Lynx
Fusion
Impact LED
Lynx Innovation
Reel Skill Games

Zephyr Technologies

#### 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 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 <u>US patent 6,789,013</u>. 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 <a href="www.smartcash.co.nz">www.smartcash.co.nz</a> 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.

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## 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 refer to <a href="http://www.annett.co.nz/resume/employ.htm">http://www.annett.co.nz/resume/employ.htm</a>

# 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: <a href="http://www.annett.co.nz/resume/hardware.htm">http://www.annett.co.nz/resume/hardware.htm</a>

# **Software experience**

I have experience in programming in C++, C, C#, 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), 680x, 68HC11, 6502, 68x00, 8048, 8051, 8085, Z80, CP1600 and the 1802.

I have worked with Windows, WinCE, Linux, OS/2 and DOS operating systems as well as virtual machines.

Details of some software projects undertaken can be found at: <a href="http://www.annett.co.nz/resume/software.htm">http://www.annett.co.nz/resume/software.htm</a>

## Education

#### Courses Attended:

# 2006, Ongoing

Russian language night classes

## 2003, 1 Week

Embedded Systems Conference, San Francisco

**1995, Year** (Cut short due to new job)
Engineering Maths 1 for B.E. at Auckland
University

# 1993, 3 Days

Object Oriented Analysis and Design

## 1989, 1 Week

Structured Program Design & Testing

# 1988, 2 Days

**HDLC Communications Course** 

# 1988, 3 Days

Terminal Servicing Course

# 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**

**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 From Certificate

Physics	79
Mathematics	63
Chemistry	62
English	53
Economics	52

# 1978

**School Certificate** 

Mathematics	83
Science	80
Electricity	79
Technical Drawing	79
<b>Economic Studies</b>	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: Single

**Children:** Tony - 24

Candice - 23

**Interests & Hobbies** 

Motorcycles, trail, trials and touring.

Ham radio, amateur television, video systems and

computers.

**Availability** 

Immediate, subject to workload.

References

Referees are available and can be supplied on

request.