Curriculum Vitae

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Zen Web Engineering - Networks

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Summary

I have been coding now for thirty three years full time. Primarily as a contractor. I still get a kick out of development. I have high level skills in PHP, CSS3/2, HTML5/4, Javascript (jQuery), Perl, PL/SQL, C. I have a passion for developing quality applications.

I was the founder and first chairman of the QLD AUUG (Australian Unix User Group).

I have used RDBMS systems for over two decades and am considered an ORACLE and MySQL capable DBA/coder. I have experience with Microsoft MSQL, DB2, Ingress, Informix, PostgreSQL. I am currently including noSQL support into my development toolset. I am using MongoDB as my testbed.

I have a strong background in networking, holding senior engineering roles with Telstra, OPTUS, iiNet, Paradox Digital, STALLION and AWA Defence Industries.

I have had experience working as a PHP/CSS/Javascript developer and as an Architect in an academic environment having carried out contracts at Deakin University, Geelong campus, and the Queensland University of Technology.

I have experience in Petroleum, Gas and Minerals. Working as a coal miner in Sth. Yorkshire, Brodsworth Colliery (Mech. Eng. Cadetship), working as a Lead miner/process worker, Mt. Isa mines. I developed the CAMEL system in QLD (Coal and Minerals Electronic Link). This system integrates QLD Rail coal movements between Qrail, DBCT and BHP. I spent time on site carrying out workflow analysis. I carried out a thorough business and workflow analysis of the Port of Newcastle Harbor that included shipping frequencies, mineral loader availabilities, Tug allocations, Rail and Road transport interfaces and Labour availability. This analysis was to support a new extension to the K1-K2-K3 facility. I was the sole author of this model. I held the position of senior administrator of the Port of Newcastle. Duties included loading and berthing scheduling. Moving away from a technical position I carried out a contract as Manager, Infrastructure and Network Operations, Department of Minerals and Petroleum, WA State government. This saw me providing support to some 5000 geoscientists, hydroscientists and related support staff, drillers, data capture technicians. I implemented ESRI and MapInfo as a part of this role and was instrumental in the design of the ZF39.50 Geospatial mapping data.

I spent time in the UK implementing statistical and operational process control for Ford, Rolls-Royce, Jaguar , British Steel and Du Pont.

I have worked for several government departments, state and federal, mostly as a contractor in senior positions. The Australian Bureau of Statistics, CITEC, Queensland Rail, Fremantle Port Authority, Department of Minerals and Petroleum WA, Department of Public Works QLD and the Australian Defence Force.

I have a strong interest in education and a I plan to sit a Certificate IV in Training and Assessment (TAE40110) this year (2014).

Experience

2010 – Current

Home page. http://www.addinall.net

Freelance work as it comes and goes. Usual suspects, PHP5 (OOD/OOP), HTML5, CSS3, Javascript, jQuery, node.js, Perl, Modern Perl, mySQL, ORACLE

PL/SQL, postgreSQL, Python.

Recent work includes:

Over the XMAS period I constructed a membership form addition to be added onto the RAAMC (Royal Australian Army Medical Corps) National page. RESPONSIVE HTML5/CSS3.

They liked it enough to ask me to redesign and build a new web site for them. The initial wire frame is here.
http://www.addinall.net/RAAMC-saved

This is very rough of course as it is the very first stage of development. I am working on this right now.

A quick job for a Health/cosmetic company in South Africa. RESPONSIVE HTML5/CSS3.

http://natural.addinall.net/

A website for a local company. HEAVILY modified WordPress.

http://www.crosscitydjs.com.au/

I am writing a development platform and set of PHP libraries that will enable RESPONSIVE web applications over a wide variety of devices. Smartphone, Fondleslabs and computers. All using HTML5 and CSS3 (and a touch of Javascript to make IE8 behave).

Code examples on GIT.

http://addinall.github.io/HTML5-Toolset/ - HTML5/CSS3 Framework
http://addinall.github.io/eHealth/   - eHealth technologies
http://addinall.github.io/Quicktools/   - Network monitor tools
http://addinall.github.io/BREAKOUT   - A game in HTML5 and Javascript
http://addinall.github.io/COBWEB/   - Web 2.0 Framework in COBOL

Most of my work can be found on GITHUB these days.

Also some experimental "state of the art" CSS3 work. You need Chrome or Firefox to look at these. They are purely for my R&D benefit.

http://movies.addinall.org

http://ehealth.addinall.org
http://www.addinall.net/css3box/

Recent past work includes:

http://www.flsc.com.au
http://www.africa-adventure.com
http://outbackencounter.com

Education

Past Education.
RAAMC School of Army Health.
MEDORD.

1st MIL HOSP.
MEDASST.

Sheffield Polytechnic
Master of Science. Information Technology.
High Pass.

Recently completed.

University of Maryland, College Park
Genes and the Human Condition (From Behavior to Biotechnology)
Course work: 100%
Mid term exam: 100%
Final exam: 100%

University of Michigan
Internet History, Technology, and Security
Final aggregate score: 114%
Nominated for Student Hall of Fame for helping others.

Columbia University
Virology I: How Viruses Work
Distinction. Final aggregate score: 93%

Enrolled. Starting in 2014.

Columbia University

Virology II: How Viruses Cause Disease

Icahn School of Medicine at Mount Sinai
Introduction to Systems Biology

The University of Melbourne
Epigenetic Control of Gene Expression

The University of North Carolina
Epidemiology: The Basic Science of Public Health

Israel Institute of Technology
Nano Technology and Nano Sensors

Employment History (long).

February 2010 – August 2010
Web Programmer/Systems Administrator (AO6)
CITEC.   Department of Public Works

- UNIX (solaris) systems administration
- Linux (mostly Red Hat) systems administration
- Perl programming
- PHP programming
- mySQL database design and support

April 2009 – February 2010
Self Employed

- I made a "sea-change" move to the Sunshine Coast. I built a home and office in Coolum Beach. I was considering contract and/or part time assignments in the area of Web page design and publishing and the design and implementation of Web applications. Doing this from Coolum was impractical so I moved back into the city of Brisbane.

January 2009 – End May 2009 – brafit direct
Senior PHP Developer/Linux-Windows/Web Administrator

- My major role in this company was the design and build of a custom content management system to provide content for dynamic web pages that are designed to sell bras and other underwear to on-line shoppers.

- Building, configuring and supporting **Linux** and **Windows** servers servers, here in Brisbane. **MySQL** database administration, network security, **LAMP/WAMP** architecture.

January 2008 – November 2008 - KOOLIVOO
Senior PHP Developer/Linux-Windows/Web Administrator

- My major role in this company was the design and build of a custom content management system to provide content for dynamic web pages that are designed for clients in the travel industry. The project is released now in two customers, one in Adelaide and one in California. The program uses an **OOD/OOP** paradigm.
- Building, configuring and supporting **Linux** servers, here in Cairns, Adelaide and overseas. **MySQL** database administration, network security, **LAMP/WAMP** architecture.
- Mentoring junior staff in the design and application of modern commercial Web sites. **CSS** philosophies, code re-use, **Web 2.0** concepts, **AJAX, SOAP** etc.
- Integrating the resultant customer web page into **Sugar CRM** via a PHP plugin.
- Installing a backup regime for the company's Linux and Windows servers.
- Customization of **Apache** 2.0.63 and 2.2 and **PHP** 5.x to incorporate **ImageMagick** native **PHP** modules, **MagickWand**.

November 2007 – December 2007 - OPTUS
Senior Red Hat Linux Network Engineer ISP division

- Short term contract writing some Perl scripts to handle changes in the **AAA** architecture of the **OPTUS** dial-up and broadband ISP products.
- **PostgreSQL** database.

May 2007 – October 2007 - Neller Pty Ltd
Senior Architect – Technical Consultant

- Helping Neller with an architectural plan to move the existing **AS400** suite of software into a **LAMP/WAMP** environment.
- Designing, with other members of the company, benchmarks and prototypes.
- Installing and configuring the new **Zend PHP** engine on the **iSeries** development machines.
- **Apache II** configuration.
- **PHP** programming as a part of an R&D project running on an IBM iSeries (AS400) minicomputer.

- **C/C++** programming in an IBM iSeries (AS400) minicomputer.
- **SQL** programming related to the same. **DB2.**
- Documentation of existing and new procedures.
- Publishing "**Data, Data Warehousing and Business Intelligence**" for internal management and technical staff.
- Designing future-proofing concepts. **Web 2.0, LAMP, AJAX** etc.

February 2007 – May 2007 – SA Lotteries
Engineer – Data Warehouse/Betting systems - Windows

- **Perl** programming of the **Data Warehouse Load,Update and Rollup** calculation functions.
- Implementing new **Keno** functionality in the **MISWAG** calculation systems.
- Creating **on-line documentation** of the functions and related star schemas, data sets and tables used by the **Data Warehouse**.
- **SQL** programming related to the same.
- Microsoft environment, **MS-SQL, MS Windows Server 2003, Windows XP, .NET.**
- Documentation of existing and new procedures.
- Designing documentation standards.

January 2007 – February 2007
Study Break

- **Perl/PHP/C/C++** programming for Bioinformatics.
- **MySQL, ORACLE, MSSql** database for Bioinformatics.

November 2006 – January 2007 BoxSentry
Senior Engineer Perl Development/UNIX – Linux Systems Administrator

- Writing **Perl** programs to manage a **secure email** systems world wide.
- **MySQL** database.
- **Red Hat Linux** systems Administration. Mail, **Apache** and firewalls, including **BASH** Scripting, **C/C++, Tk/TCL** programming.

June 2006 – October 2006. Energex Pty Ltd.
Senior Engineer SCADA – Technical Consultant

- Re-Designing and implementing new **Data centres** including new **servers, storage (NAS and SAN), power supplies, failover technology, security (site), environmental control, fire control.**

- Porting **SCADA** systems from **Tru64 UNIX (OSF1)** to **Linux 2.6.x x86 64 SMP (RedHat ES 4.2)**
- **Building** and **configuring RedHat ES** Dual-core 2XCPU **AMD Opteron (HP DL385)**
- **Building** and **configuring storage** – RAID 0+1, RAID5
- **C** programming
- **Perl** Programming
- **GIS** programming

- **BASH** scripting

- Designing new **High Availability Linux Clusters.** Develop the **Heartbeat/Failover** code from scratch.
- Building **High Availability hardware/networks.**
- **Consulting** regarding **emerging technology, High Performance, High Availability** and **Best Practice.**
- **Technical writing.** System documentation.

February 2006 – May 2006 iiNet LTD
Senior Programmer/Analyst

Designing and developing new routines and equipment to manage the entry **T0** points into a very large national **ISP. Data** and **VoIP. ADSL/2, ADSL** and **PPP.**

- **MySQL** Programming.
- **Perl** Programming.
- **C/C++** Programming.
- **Network** Design – **Mapinfo** and **ESRI**
- **Data Centre** re-build
- **Solaris** Administration.
- **CISCO/WAN** configuration

July 2005 – February 2006 Australian Bureau of Statistics
Senior Programmer/Technical Lead

Designing and developing new programs that manipulate and display statistical results from various diverse data sets for the Australian Federal Government. Very large data warehouse and cube analysis techniques.

- **ORACLE PL/SQL** Programming.
- **ORACLE SQLPlus*** Programming.
- **ORACLE LOTUS** Interface Programming.
- **ORACLE DBA.**
- **Statistical** methods.
- **Data warehouse** optimization.

- **Solaris 9 - Clustered**

April 2005 – July 2005. Deakin University, Geelong Waterfront
Web Programmer/Team Leader.

Preparing an Infrastructure analysis and audit study in regards to W3C standards required by the University's web standards, notably P1 and P2 accessibility. Re-design of a large number of the University's outward and inward facing web pages. PHP programming on the ongoing content-management system.

http://www.deakin.edu.au/openday/

- **W3C** Audit using "Bobby".
- **PHP Web** Programming.
- **ORACLE** O18 Programming.
- **PL/SQL** Programming.
- **ORACLE DBA** using **TOAD**.
- **Solaris 9 – Sunfire 20x**
- **Windows XP Pro. Dreamweaver.**

January 2005 – March 2005. Department of Public Works, QLD
Architect Infrastructure – Technical Consultant

An "Urgent" short term contract. Preparing an **Infrastructure analysis** and feasibility study in regards to the **consolidation and re-build of several of the departments' computer and communications data centers.** An emphasis on **risk analysis** and the **security** of the infrastructure. Proposing a number of physical infrastructure recommendations that include the subjects:
- **Data Center** geographic location.
- **Re-location** planning.
- **Security** standards analysis.
- **Server** consolidation.
- **Switch/Router** organization.
- **Physical access security**.
- **RAS**.
- **Power** requirements.
- **Environmental** control.
- **Fire control.**
- **Floor** architecture.
- **SLA** and **KPI** management with vendors.
- **Microsoft** tools used for this project.

Part time in March – Bonsai Web Productions
Web Programmer – Windows environment

- **PHP** programming. **OOP** and **OOD**.
- **Perl** programming.
- **"Smarty"** Template creation.
- **MySQL RDBMS** design, creation and **MS-SQL** programming.
- Customer **support**, 1st - 3rd tier.
- Product **testing**.
- **Windows 2003**.

September 2004 – January 2005. Queensland University of Technology Infrastructure Architect – Technical Consultant

I ran a project for the Faculty of Information Technology that was a **Server** and **NOS** consolidation project. The Faculty ran 42 servers of differing designs, combining 8 different UNIX and UNIX like operating systems, Windows NT and Windows 2000. My task was to produce a design after a **discovery phase,** which would accommodate the functionality of these machines on a more up to date infrastructure with a smaller footprint. One of the objectives was the supportability of the design over the next 5 years.

- **Systems** investigation. A discovery process encapsulating all the legacy servers, **NOS**s, **DBMS**s' and applications.
- **Network Architecture**. Investigate and document current network architecture.
- **Security Architecture**. Formulate the required build **SOE** for **Windows 2003** and **Linux**.
- **Data centre rebuild. Re-locate** consolidated networks in a purpose built location.
- **SAN/NAS**. Investigate and document storage requirements and potential solutions from **IBM, Sun, Hitachi** and **EMS.**
- **Planning server room relocation.**   New rack installation.
- Building **test bed** using **Sun Solaris 10**. Sparc **VT240/440** environment.
- Building **test bed** using **Linux Red Hat** Enterprise v3 and **Dell** hardware.
- Building **test bed** using **Microsoft Windows 2003** and **Dell** hardware.
- Installing **portal** technologies. Sun, Open source and Microsoft.
- Liaising with vendors and potential vendors, **Microsoft, IBM, Sun, Hitachi, EMS, AlphaWest, Dell, HP, Red Hat**.
- Negotiating **SLA**s and **KPI**s.
- Project **documentation** following **ISO9000** standards.
- Assisting in the build of CITR Linux/Windows **Beowulf/Grid Super-computer** cluster.
- Giving **presentations** to staff. Planned and impromptu.

April 2004 – August 2004. Telstra Internetwork Specialists Brisbane, QLD
Senior Development Engineer. Network Specialist.

Author of a suite of software providing an easy to use, friendly interface to the 20,000 routing devices owned by Telstra Australia and operational in **managed WANs.** The **QuickTools** software suite will provide some thirty reports specific to routing devices, and a dozen reports that can be applied to routers, switches or machines. The tools, written in **PHP** and **PERL** have been developed using an **OOD/OOP** paradigm.

The languages and techniques used are :-
- **PHP.** Used to code the server-side **Apache**-httpd routines.
- **JavaScript.** Used to code the client side GUI elements.
- **Perl/Tcl.** Used to code the lower-level **SNMP** CISCO IOS routines.
- **C/C++** used to code the multi-threaded UNIX systems routines.
- **SSH/SSL.** Used to provide the security requirements over the network.
- **LDAP.** Used to store the location and security level of potential users.
- **Oracle.** DBMS used to store Customer, Network and Device information.
- **Solaris, Linux, Windows XP.**
- **SNMP** trap and event reporting (SNMP2/3).
- **SNMP** OID **MIB**/2 reporting.
- **HP-Openview** tool integration.

The software controls and reports on the **WAN(s)**:-
- **TCP/IP – UDP/IP** Tables
- **ISDN** BRI States
- **PPP** connections
- **Ethernet**(s) status
- **Frame Relay** States
- **ATM** States
- Virtual LAN Statistics (**VLAN**)
- **RADIUS** WAN access and accounting integration.
- **TACACCS+** WAN access and integration.
- **IOS** configurations EGRP (BGP), RIP and OSPF.
- **VSAT** connectivity
- Security Device configuration, **PIX, Firewall-1.**

Oct 2003 – March 2004. BCC Legal Department - Brisbane, QLD
Library Technician
Archiving government publications. Computer records management. Loose-leaf and legislation updates. Designing and implementing a catalogue system using

XML, MySQL, Apache and **PHP. Novell, ZenWare** and **Groupware 6. Microsoft Windows** 2000.

July 2003 – Oct 2003 Pirates Backpackers
Fremantle, WA
Assistant Manager
A "fill in" job. I took a holiday, went mountain climbing, and fell off. This little 'trip' got me out of IT for a few months! My duties included the usual administrative tasks associated with hotel/hostel management. Looking after a small Windows/**ADSL** Internet Café network. **Microsoft Windows** 98.

Nov 2001 – Mar 2003   Self Employed   Mandurah, WA
Systems Developer – Architect
Designing project **KOOKABURRA**. A mobile, automated alerting system that will report air or water born contaminants. In general, it is a testing device built using **LASER** Induced Breakdown Spectroscopy equipment, housed in a modified shipping container and controlled and interrogated by being a node on a private **WAN. Red Hat Linux** used as the controlling OS.

- **Security** investigation. Technologies in 2002. Storage Area Network security.
- Investigation of new government data transmission and storage technologies. DIF. Z39.5 (geospatial) and **HL7 (health), XML**. Advising departments and developers of strategic IT directions.
- Started investigation of new **Bioinformatics** techniques and tools. **BLAST**, **FASTA** formats etc.
- **Perl** programming. Data manipulation, formatting.
- **C/C++** Systems programming.
- **Tk/TCL** programming. **Solaris** and **Linux**
- Database installation and maintenance. Postgres SQL and MySQL.
- Firewall implementation including NAT.
- **Solaris, Linux, HP-UX, AIX, SCO UNIX, NT, Win2000 support**.
- **Apache** webserver configuration.
- **Samba** – Windows configuration.
- **CISCO** IOS Router configuration.
- **Stallion** Terminal server, **VPN** configuration.
- **Java** programming
- **JavaScript** programming.

Jul 2001 - Nov 2001   Department of Minerals and Petroleum Perth, WA
Manager, Network Operations and Infrastructure
A contract position at **PS8** level. The department has an **IBM** mainframe in East Perth (managed by CSC), one **IBM** mainframe in the City for fail over use, twelve large **Sun** servers in Mineral house (**Solaris7**), twenty large **Compaq NT** servers in Mineral house and a thousand PCs. **Novell Netware** and **Lotus** notes were supported in several departments. The department has a dozen regional sites,

Kalgoorie etc. The **WAN** comprises **Token Ring** and **Ethernet LANs TCP/IP** and **SNA LU6.2 APPC, Fiber** around town, **Frame** out to the regional offices. **Wireless** in several locations.   My specific duties included:

- **Capacity planning** for **Oracle** DBMS (Solaris and NT).
- Firewall planning and installation. Checkpoint **Firewall 1** and **CISCO Pix, IPSec**.
- Installations of DBMS, **Oracle, DB2** (Solaris and NT).
- **RAS** configuration (Solaris, NT, Novell and MVS)
- Network configuration. Including **CISCO IOS QoS** and **BGP**.
- Management of a 5000 user **voice** network.
- Management of a 5000 user **enterprise messaging system**. Windows NT, 2000 and 98.
- **Office** and **server room re-location** of a large **government** department's **data centres.**
- Traffic shaping, configuration management, Compressed Real-time protocol.
- Providing **UNIX** and Network support to various development projects including scripting, patching, **GIS** programming.
- Providing strategic information regarding the use and benefit of **Open source** software and the **Linux** operating system.
- **Security reviews** as a result of **audit** (internal and external) and technology change.
- **Backup planning** and management. **Terabyte** of data.
- Business and Systems analysis of state government, local governments' requirements including interdepartmental projects (DOLA etc), **and cross-cultural projects (Native Title etc.).**

Aug 1999 – Mar 2001   That's IT Pty Ltd Darwin, NT
Technical Manager - Consultant

Varied positions in this small company. Of most interest was designing the wide area network for the Traditional Credit Union in remote Arnhem Land. Investigating appropriate new technologies and the security for a banking network with an immense satellite coverage was of great interest. Providing the channel banking over the network from an island offshore Arnhem Land through to the Facilities management house in Brisbane was challenging and interesting.

- Business and Systems analysis of the requirements of a remote banking system, security, **WAN** topology, cross-cultural issues (native land management, English as a second language, educational demographics etc.) and liaising with councils and local governments. The logistics part of the business analysis was challenging and exiting. How to build in areas that have no road or rail transport available

proved to make this a very different proposition to building a satellite **POP** in the City.

- Build and support a **satellite WAN** based on **PAS2/Ku** band and **frame relay** earth lines. Sat earth stations at Wadeye, Burunga, Maningrida, Millingimbi, Ramingining, Galiwinku and Gapuwiyak covering a large portion of remote Arnhem Land. The network supported a bank. **TCU.** Security of the banking **WAN** from customer through to facilities manager. This network was built on a **FIFO** basis with me alternating between the different sites in remote Arnhem Land.
- Provide operator training for users of the Banking system.
- Working at the **Menzies School of Health Research**. Assisting scientists with networked and clustered computer system. Providing **UNIX** and **Perl** support.
- Building and support of **SCO UNIX** 5.05 on IBM Netinfinity. 512MbRAM, 60 GB Disk – **RAID5**. **LAN Cat5** copper and IBM Fiber. **Korn** shell scripting.
- **Server re-location** and **data centre design** and build.
- Support of ALPA **SCO UNIX** 5.05 on existing Compaq. OS upgrade due to Y2000.
- Network configuration. **CISCO** Routers, **Stallion** Terminal servers.
- Systems Administration of **Red Ha**t **Linux** and **FreeBSD** Intel machines. **Perl** programming, **Korn** shell scripting, **Tk/tcl** scripting.
- **Perl** programming
- **JavaScript** programming.
- **C/C++** programming under **UNIX/Linux**.
- **Apache** webserver installation and management.
- Windows support and installation. 98, 95 and MS-DOS.

Jun 1999 – Aug 1999   DCIS Darwin, NT
UNIX System Administrator – Technical Consultant. Department of Communications Information Systems

- **Data centre planning and implementation.** Underground facility.
- **Solaris SPARC** support for the Department of Mines and Energy.
- **AIX** support for the NTU (RS6000 BJ40, RS6000 BJ50).
- **SCO** support for the Department of Births, Deaths and marriages.
- **DEC OSF-1** support for the NT Police department.
- **NT** support for DCIS and Department of Mines and Energy
- **Business analysis** of the requirements of the various government departments
- **Systems analysis**
- Installation and maintenance of **Oracle** DBMS (Solaris).
- Installation and maintenance of **Ingress** DBMS (Solaris)
- Installation and maintenance of **Universe** DBMS (SCO).
- Assist the implementation of **S/390 UNIX** on the mainframe.
- Ongoing network **security.**

- Daily **backup** schedule for all systems.
- **Korn** Shell, *C/C++,* **Perl** programming.
- **Mail** administration (all of **government**).
- Printer administration.
- User administration.

Jan 1999 – Jun 1999   Port of Fremantle Authority   Fremantle, WA
UNIX System Administrator

- **Solaris SPARC** support for the Fremantle Port (E3500, Solaris).
- **NT** Support of six development workstations
- Network planning and security.
- **Apache** webserver configuration and maintenance.
- **Korn** shell scripting.
- **Perl** programming.
- Installation and maintenance of **Oracle** DBMS (Solaris).
- Installation and maintenance of **COSMOS** system administration suite.
- Daily **backup** schedule for all systems.
- **Mail** administration.
- **Printer** administration.
- **User** administration.
- **Data centre** planning and implementation.
- Access list administration
- *C/C++* programming.

Jun 1998 – Jan 1999   Paradox Digital Pty Ltd   Perth, WA
Technical Manager - Consultant

- Provide bandwidth to **ISPs** in Australia.
- Manage bandwidth from **PAS2/ PAS8** to various **satellite POPs** in Australia.
- Manage bandwidth from **Optus** and **Telstra broadband**.
- Installation and support of **Linux Red Hat**.
- Network **security**. Satellite and land broadband.
- Travel to Adelaide to build a 5m satellite **POP** at 97 Pirie Street. This including designing and building a new **data centre** to house the **POP**.
- **CISCO IOS** QoS configuration. Traffic shaping, congestion management, data balancing, load balancing.
- **Apache** webserver configuration and content management.
- **CGI** programming in **Perl.**
- Device driver programming in *C/C++.*

Jan 1997 – Jun 1998   Technology Partners Pty Ltd   Adelaide, SA
Consultant/Project Manager

- **Solaris SPARC** support for the ETSA **CAD/CAM** section.

- **NT** support for in-house servers
- **Oracle** DBMS preparation for Y2K upgrade.
- Y2K Review for ETSA.
- Report writing. Security review.
- Y2K test plan creation for **UNIX** systems and embedded systems.
- **Java** programming.

Jun 1996 – Jan 1997   Mildura Base Hospital   Mildura, VIC
UNIX System Administrator
- **UNIX** support AT&T V.4 – DRS6000 4XCPU server for the hospital
- **Linux** support, Red Hat , Slackware, in house systems.
- Database design, support and configuration. **Ingress** and **Informix.**
- **Windows** 95 support.
- Writing programs in **C/C++, SQL** and **Ingress 4GL** to calculate the WIES accounting schedule for the **hospital.**
- Writing programs in **Perl** and **SQL** to implement medical data warehousing.
- Writing programs in **Perl** to implement message distribution to remote health workers.
- Writing **UNIX** scripts, Csh to provide routine system tasks.
- Writing programs in **Perl** to schedule (surgical) operating system resources.
- User account management.
- Daily backup procedures.

Apr 1994 – Jan 1996   Queensland Rail   Brisbane, QLD
Project Manager – Messaging Systems
- Design and rollout a 5000+ user enterprise **messaging** system.
- **Business requirements** analysis.
- **Integration** between Hitachi PCMF (3090), DEC UNIX, Solaris UNIX, OS/2 and Microsoft Windows (NT, 95 and Win 3.11).
- Database support **CICS IMS** and **DB2.**
- Design and coding in Perl for the integration of messaging systems into the CAMEL **Intranet**. Introduced a **Linux** development machine to the project team. I am reasonably sure that this was the first **Linux** box to be seen inside a **government** IT department.
- Installation and support of Solaris webserver. **Netscape** on Sun Netra.
- **Perl** and **C/C++** programming.
- Project **documentation.**
- Preparation of training plans and resources.
- Chairing development board regarding enterprise electronic mail.
- Assisted in the enterprise **NOS** review.

Apr 1992 – Apr 1994   AWA Defence Industries Sydney, NSW

Senior Defence Software Engineer

- Design of the **Australian Army** tactical communication network, **PARAKEET**.
- Installation and management of **SCO UNIX** development machines.
- Database evaluation for suitability (**Oracle** and **Ingress**).
- Configuration of **Stallion X.25** IO cards and software.
- Writing programs in **C/C++** to build a RDBMS on top of **C-ISAM UNIX** primitives.
- Writing programs in **C/C++** to interface with **Tk/TCL** MMI GUI.
- Writing programs in **C/C++** to access low level services – **X.25** communications controlling the **WAN**.
- Writing programs in **C/C++** to access low level services – **SNMP MIB.2.** Controlling the **WAN**.
- Electronic warfare. Noise reduction in **ELINT** counter-measures and counter-counter-measures.
- Project documentation.
- Technical presentations to the **Australian Army**.
- Full trusted system **security** design and test.

Jan 1991 – Mar 1992   Stallion Technologies   Brisbane, QLD
UNIX Development Manager

- Design and build of **UNIX software/hardware** communications devices.
- Form part of a project team with **VicTAB** and **QLDTAB** to design and implement the betting **WANs**.
- Installation and support of Intel based **SCO UNIX, AT&T V.3.4, AT&TV.4, Interactive UNIX AIX, Linux** and others (including very early Linux).
- Programming in **C/C++** at a device driver level.
- Porting **UNIX STREAMS** technology to embedded systems.
- Writing programs in **C under MS-DOS/Windows** to write an ANSI terminal emulator (EasyTerm – Still available on any Stallion CD-ROM).
- Interstate and overseas travel as part of a business requirements team.
- Designing and establishing a new data centre in California to support Stallion's USA operations.

Feb 1989 – Dec 1991   British Steel (Technical) Rotherham, UK
Senior Programmer/Project Manager

- IBM mainframe programming **TSO-ISPF, FOCUS, MANTIS, COBOL**
- IBM mainframe systems programming, **JCL, JES/2, CICS**.
- Analysis using **SSADM** and **LBMS**.
- Writing programs in **C** under **OS/2** at an application level to interact

with mainframe **CICS** transactions.

- Writing programs in **C/C++** under **OS/2** at a low level to interact with mainframe **CICS** transactions, **APPC LU6.2 – PU2.1** interfacing to **CICS TS-Queue.**
- Design and coding a **TSO** Terminal emulator under **MS-DOS/Windows 3.1** using **assembler** and **QuickBasic. OOD.** (still in use)
- Evaluation of **Next UNIX** and tools for suitability in British Steel.
- Project documentation.
- Providing training plans and career mentoring for 12 junior programmers.
- Presentations to members of the scientific and technical staff (up to 100 people).

Jan 1988 – Jan 1989   CADAR Systems   Sheffield, UK
Senior Software Engineer

- Writing programs in **C/C++** to collect and evaluate real-time data input for **statistical and operational process control.**
- **Statistical collection and reporting** systems developed for Rolls-Royce, Ford, DuPont, and Jaguar.
- Database support and configuration. Built in-house under **C-ISAM.**
- Design of mathematical algorithms to compute statistical results from real-time data.
- Support of external **Novell** networks, Ford, Jaguar, and DuPont.
- Development of source code control procedures.
- Development of Small Systems Design Methodology.
- Project documentation.

Feb 1986 – Dec 1988   Advanced Computer Systems   Adelaide, SA
Senior Software Engineer

- Writing programs in **Pascal** under **UCSD P-System** to implement an insurance financial accounting package.
- Writing programs in **68000** assembler to support the above **Pascal.**
- Installation and support of **UCSD P-System** on **68000 mini-computers** and Intel based microcomputers.
- Writing programs in **80x86** assembler to support the Intel installations.
- Travel interstate and overseas to support products.
- Installation and support of Motorola AT&T **UNIX V.3.2** on 68000 mini-computers (Stride 440 and others) for development evaluation.
- Project documentation.

Feb 1984 – Feb 1986   Sybiz Software Pty Ltd   Adelaide, SA
Junior Programmer to Team Leader

Moved into IT as an emerging industry. This made me one of the first commercial computer programmers in Australia.

- Writing programs in Microsoft Business BASIC to present an integrated accounting system on the newly released personal microcomputers.
- Writing programs in **8086** assembler to support the above applications.
- Database design and implementation.
- Writing programs in **Pascal** in a **MacOS** environment.
- Writing programs in **68000** assembler to support the **Macintosh** applications.
- Direct end-user telephone support.
- Dealer and Distributor support.
- R&D of voice technologies (Texas Instruments).
- Porting software across platforms.
- Project documentation.

1980 – 1982 Mining Mt Isa Mines

Jun 1976 – Nov 1980   Australian Army (Regular) All Australia
Soldier. 319381 Addinall M.

Jan 1975 – May 1976 Coal miner
(Mechanical Engineering cadetship)
National Coal Board, Brodsworth Colliery
Sth. Yorkshire. UK.

Interests
Varied.

- Guitar (Electric and acoustic)
- Painting and drawing (Watercolour and Crayon)
- Member of The International Society for Computational Biology.
- Surfing