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[word version](#)
[online version](#)

Senior IT Architect

Extensive Design, Development and Management Experience

Highly qualified Senior Architect with over 15 years commercial experience in the Enterprise and Security computing fields. Successfully designed, implemented and delivered numerous complex projects, and has managed teams in both small and large organisations. Able to go beyond the base project to provide services such as marketing collateral, documentation and user training.

Regular speaker at conferences and trade shows. Originally from a strong research background with a BSc(Hons), a BEng(Hons), a PhD, and various academic prizes. Now working as an Enterprise Architect with a focus on Security and Services. Key technical expertise in in the security (PKI, SSL), directory (LDAP, X500, JNDI) and web services (XML, UDDI, SAML, XKMS etc.) space.

Currently employed as an enterprise architect at Sensis, but may be available to move to a senior role with a leading edge company or startup.

Note for overseas recruiters: Australian Citizen with U.K. Residency. Does not have a U.S. Green Card, and while travel and remote work are welcomed, for family reasons is not interested in permanent work in the U.S.

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General and Technical Skills

Summary

Expert software developer with architecture, design and project management experience. Skilled in security, web services, directory technology and scientific/numerical programming, with over two decades of programming experience.

Experienced in both Enterprise and Start up environments, and a range of SDLCs, with both personal and managerial experience of the various 'extras' that make a good project outstanding, from requirements gathering, business case support, technical documentation, training materials, visual aids, marketing collateral, online help, internationalisation, installation packaging, executive presentations, performance testing and so on.

Technical Skills - Software

Familiar with many other java based technologies and many standard tools, especially the open source family; Apache, Axis, Tomcat, junit, cvs, svn, ant, maven, log4j, etc. This is short summary of searchable keywords with a rough competency rating from 1-10:

Java (10) LDAP(10) HTML (9) XML (9) DSML(9)
SSL (8) PKI (8) X500 (8) JDBC (8) Javascript (8) JNDI (8)
SAML (7) XACML (7) JAXB (7) JAXP (7) SVN(7) CVS (7) PHP(7)
RMI (7) C++ (7) SQL (7) UDDI (7) Perl (7) JAXRPC (7)
Visual Basic (6) Delphi (6) C (6) Ruby on Rails (6)
FORTRAN (5) BASIC (5) Pascal (5)

Operating Systems

Windows (7) Dos (7) Mac OSX (7) Linux (6) IRIX(6) Solaris (6)

Management and Project Skills

Architect (10)
Developer (9) Project Manager (9)
Presenter (8) Documentation Writer (8)
Mentor (8) Trainer and Educator (8)
Agile Development (7)

Academic Qualifications:

Initially completed a five year 'double degree' in science and engineering. Returned a couple of years later to do an honours year in computer science and then a PhD (completed part time while employed).

Qualifications

- 2000: PhD Computer Science (with a bioinformatics component)
Thesis topic: "[Nanosimulation of the Cytoskeleton](#)"
- 1993: BSc.(Hons, 1st class) Computer Science
Thesis topic: "[Real-Time Simulation of Special Relativity](#)"
- 1992: Graduate Diploma, Asian Studies
- 1990: B.Eng.(Hons) Electrical Engineering
Thesis topic: "Catastrophic Superconductor Breakdown"
- 1988: BSc. Maths/Physics

Distinctions:

- Computer Science Honours Thesis rated best of the year 1993
- Graduated 2nd in class, Monash Dept. Computer Science 1993
- Control Data Corporation Prize for Best Computer Engineering Student (1989)
- Electrical Engineering Honours Thesis rated in top three, submitted for IEEE world prize.
- Various school prizes.

Employment History

Sensis: October 2006 - present

ENTERPRISE ARCHITECT: Shared Services, Security, CMS, Transaction

IDENTITY ARCHITECT: Shared Services and Security

Technical leadership of the Sensis-wide shared services and services oriented architecture project. Projects include SOA infrastructure, a company wide content management initiative, a company-wide Identity and Single Sign on Solution, employee enablement initiatives and various confidential projects.

Technical liaison between Sensis, Telstra and Big Pond.

Highlights

- Architecture of Sensis Identity Solution.
- Technical and Code review of existing Sensis search and content engines
- Successful Establishment of 500+ user Sensis-wide wiki (Atlassian Confluence)
- Senior technical advisor for Sensis SOA implementation.
- Key contributor to various business cases.
- Permanent member of both Sensis and Telstra Design Authorities

Pegacat Software: May 2005 - present

ARCHITECT/CONSULTANT: Medical Imaging Software / Social Networking Software

Projects in the Medical ("OzPACS" Radiology program) and Social Networking space ("NetMind" and "FriendHerder"). Focus on java, web, security, mobile and directory technologies.

(JNDI, LDAP, VELOCITY, TOMCAT, SERVLETS, DICOM, CSS, PHP).

Monash University February 2006 - September 2006

RESEARCH SCIENTIST: Bioinformatics

Working on bioinformatics systems with the Monash Department of Biochemistry and Molecular Biology Protein Folding Group. Lead for global protein folding database.

(PHP, MYSQL RDBMS, R STATISTICS, NUMERICAL PROGRAMMING)

Computer Associates: March 1999 – May 2005

ARCHITECT: Web Services Security (2004 - 2005)

PROJECT MANAGER: Web Services Infrastructure (2002 - 2003)

PROJECT MANAGER: eTrust PKI / OCSPPro (2001 - 2002)

ARCHITECT/DEVELOPER: Java Directory Projects (1999 - 2001)

Initially recruited as a senior java developer/designer working on a variety of X500/LDAP [eTrust Directory](#) projects. Moved to manage a pair of security products (eTrust PKI and eTrust OCSPPro), both of which were delivered on schedule in 2002. Moved again to take over the early web services infrastructure projects and start-up web services security within CA.

Technical focus was on Java, and related tools such as junit, log4j, tomcat, axis, and various XML toolkits (Apache, Sun's JWS DP etc.). Heavy exposure to Directory technology (X500, LDAP, JNDI), Security technology (PKI, public/private key crypto, SSL, GSSAPI, Kerberos) and web services (JWS DP, XML, XACML, XKMS, UDDI, DSML, SAML, SPML, WTFML).

Highlights

- Lead Architect and Project Manager for the eTrust Web Services Security project (beta delivered in December 2004).
- Managed and co-developed a UDDI server (v1, v2 & v3), a DSML server, a SAML/XACML server, and toolkits for working with SPML, SAML and XKMS.
- Managed a twelve person security team developing Public Key Infrastructure product (eTrust PKI) - version 2.0 delivered on schedule in 2002.
- Managed maintenance release of Online Certificate Status Protocol server (eTrust OCSPPro) and first cut of eTrust ETPKI, a general purpose cryptography library.
- Steered Computer Associates first open source product to release (the JXplorer LDAP client), and led the open source team maintaining it on sourceforge.
- Numerous side projects involving web services, directories and security, including marketing collateral, tender documents, client presentations, etc.
- Introduced unit testing and automated system testing using junit to above projects, and ran seminars on refactoring, java performance and other technical topics.
- Introduced internationalization (i18n) toolkits and methodologies.

Imaging Technologies / Zoom Systems: 1998 - 1999

TECHNICAL LEAD: Distributed Devices

Technical lead on internet operated vending machine project: [Zoom Systems](#). Work involved heavy Java networking and GUI development (Java, JDBC, Swing, RMI, HTML), as well as creating and being DBA for an Oracle database (SQL, Oracle).

LookSmart: 1996 - 1997

DESIGNER/DEVELOPER: Internet Search Engine

Design and implementation of a Web Search Engine similar to Yahoo (see it at www.looksmart.com). Written client side in Java and JavaScript, custom server in C, C++.

Design was leading edge, and exposed many of the difficulties of using early java and (especially) JavaScript to support delivery to multiple platforms, but produced a very impressive product that, once downloaded, operated an order of magnitude more quickly than equivalent web search engines.

VIPAC Engineers and Scientists: 1995 (5 month contract)

DESIGNER/DEVELOPER: Vehicular Test Harness

Design and implementation using C++ of a test system for a vehicular controller/telemetry unit for Melbourne Trams. The project was designed and co-written with a single associate (Zik Saleeba). It involved writing a Turing-complete test language, some hardware work, and complete user, program and technical documentation. The program was finished ahead of schedule.

Leigh Mardon Datacard: 1994 (4 month contract)

DESIGNER/DEVELOPER: RTA Licencing System

C, C++ programming for an on-the-spot licence system, interfacing with the RTA's Drives system. Product photographs the licensee, takes their details and produces the final drivers licence. Product now used by the South Australian RTA, and similar systems are in use across Australia. Developed user interface, graphics code and documentation, as well as code for hardware I/O and utilities.

Monash University: 1994 (4 months)

Research Fellow working on statistical analysis and report preparation using SPSS / Quattro Pro.

Monash University: 1992 - 1993 (6 months)

Research Assistant working on preparation, analysis and reporting of survey data using SPSS.

Microcraft Pty Ltd : 1991 - 1992 (part time through 1993)

DESIGNER/DEVELOPER: Computer Based Training Software

General programming for the Microcraft "AUTHOR" Computer Based Training (CBT) and Computer Managed Learning (CML) project. Wrote a windowed, networked database student management program using several versions of BASIC and Visual Basic, using Microsoft Programmer's Workbench, DBASE, FOXBASE and Delphi.

Work involved writing database utilities, graphical design, graphics utilities and windowing utilities including low level mouse handling, button / edit field creation etc., in DOS BASIC. Essentially the project was writing a "Visual Basic" equivalent in the days before Visual Basic was available.

In 1993 designed and managed a complex report writing utility. Four person team finished early.

Moldflow: 1990 (2 months)

Wrote a Primos print file -> word perfect conversion utility.

Melbourne Weather Bureau. 1988 (3 months)

Wrote historical weather data conversion/numerical programs using FORTRAN and JCL.

Short Term/Casual:

- Monash University 1989 - 1995: Tutor/Mentor, Dept. Computer Science & Engineering.
- Monash University 1992: Visual Basic/SQL Software developer.
- M-Dec Cabling Pty. Ltd. 1992: Turbo-Pascal Programmer and Systems Administrator.
- Equinet 1989: Emergency / weekend mainframe operator for financial services company.
- Ren-Master 1989: XENIX Software Maintenance for medical services firm.

Academic History

PhD Thesis and related work 1994 - 1998

Written in C++, under IRIX 5.3 on an SGI Indigo2 graphics workstation, the Thesis involved simulating the 'self assembling' behaviour of very small particles, concentrating on a related group of plant cell protein structures (actin filaments, microtubules, plasmodesmata and viral proteins).

The work involved writing 3D model viewers, image processing modules, modelling and scripting languages, and protein assembly simulators, as well as various numerical routines, class libraries for fast graphics, fast vector mathematics and fast 3D modelling.

This work has been presented at a number of international and local scientific conferences, and involved both public speaking and a great deal of writing. The full Thesis is published on the web, and is on line at the ['Nanosimulation of the Cytoskeleton'](#) web page.

Honours Thesis 1993

A real-time [relativity simulator](#) written in C++ which was three orders of magnitude (1000 times) faster than the fastest previous simulator (published in the Journal of Visualisation and Computer Animation).

Articles and Conference Presentations

Presented at various International Academic and Industry conferences, including RSA Show, Asia Pacific PKI Forum, CA World and CA Expo. A partial list of conference presentations, academic articles and technical notes is available on request.

Patents

Software patents are a regrettable cost of doing business in the U.S. In order to defend against unscrupulous litigators, it is a requirement in many IT fields to file patents that document a project's progress. While strongly opposing the use of improperly granted software patents for offensive purposes, patenting one's work has become a requirement in leading edge R&D.

The following 23 patents have been filed during work with CA.

- Fast Directory Searching using Concatenated String Values of Child Entries
- Automatic XML Validation Handling of Unimplemented Code
- Customer Detail Publication in an Internal UDDI
- Simplified Retrieval and Sorting from a Directory Using Sequential Entry Names
- Automated Patching of Code into XML Schema Derived Java Classes
- Web Service Address and WSDL Translation via an Intermediary
- Efficient Storage of XML in an LDAP or X500 Directory
- Using Casting Errors and Automatically Generated Code to Simplify a Server
- Automatic Validation Handling of Unimplemented XML Code
- UDDI challenge response Security Authentication
- SPML implemented on Directory
- Supporting Multiple Versions of UDDI via Fast-Find Indexing
- A UDDI Proxy for Non-UDDI Aware Applications
- UDDI Proxy for Balancing Load Requests and Fail-Over
- A Method of Storing a Multipart XML Document
- A Layered Architecture for Web Services Firewalls
- A Web Services Firewall as a Hardware Appliance
- A Method for Automated Testing of XML Servers
- Automated Creation of Web GUIs for XML Servers
- Automated Creation of HTTP to XML Translation Servers
- Automated creation of Model and View code from XML Schema
- Cascading Configuration Using Multiple Configuration Trees
- Distributing Software Elements via Cascading Configuration

The following 2 patents have been filed in support of recent Start Up work.

- A System for Re-entrant Collaborative Polling with Notifications (for 'FriendHerder')
- A Hierarchical System for Knowledge Management (for 'GroupMind')

Open Source and Hobby Programming

Involved in a large number of minor recreational projects, in C++, HTML, Java, Javascript and Perl.

Lead Developer on the JXplorer Project. JXplorer is an advanced open source LDAP browser and administrative tool with a large feature list and flexible architecture. Responsible for maintaining the JXplorer web site and the JXplorer_sourceforge repository. JXplorer has been very successful, and has steadily increased its downloads since first launching and reached 500,000 downloads by early 2008.

Also writes code for a non-commercial computer game - "Voyager" (which pre-dates the Star Trek series, and has been in continuous development for over twenty years) is a multi-player galactic conquest game written by a group of friends. Wrote the alien race generation GUI and the spiral galaxy star map generator, as well as a pluggable client framework.

Start-up Development

Currently technical lead for two small, but potentially commercial, start-ups.

"GroupMind" is a java based web 2.0 social networking project based on a hierarchical wiki data model with security, ratings, cascading configuration and an extensible programming model.

"[FriendHerder](#)" is a simple PHP based social organiser, extending the concepts of programs like Google calendar to cover generic agreement or voting on topics of interest (such as 'which film will we see tonight?').

Web Sites

Implemented and maintains the following Unicode web sites:

- Teach Yourself Ancient Greek (<http://tyancientgreek.org>)
- Teach Yourself Latin (<http://tylatin.org>)

The work involved heavy use of Unicode and Perl, including automated translation of a proprietary ancient Greek text base into 150+ pages of formatted HTML.

Hobbies

When not coding or wrestling small children, is a keen reader, writer, roleplayer, carpenter and clock maker. Has built from scratch a number of complex mechanical clocks of which he is inordinately proud, and a large quantity of wooden bookcases, beds, tables and so on, of more variable quality. Very occasionally manages to find the time to go flying or diving. Also working on the great Australian novel, release date and publisher yet to be announced.

Licences

- Australian Driver's Licence
 - Australian Private Pilot's Licence
 - Open water SCUBA licence
 - Australian Passport (U.K. permanent residency)
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Salary and Role Expectations

Looking primarily for contract work, especially in the overlapping areas of java, directories, security and web services. Would consider a permanent role as CIO or similar with an appropriate start up, or a senior position in an established company doing leading edge work.

Salary expectations are for pay at a senior level, but flexibility in packaging that includes equity or other benefits is welcome.

Referees:

(These **must not** be contacted without first informing me). Other referees may be available on request.

Mr. Scott Thomson
Chief Technology Officer
QDC
(ex. CA eTrust Senior Architect)

Mr Tim Bentley
Project Manager and Architect
Computer Associates
(eTrust Web Services)

Dr. Damian Conway
Senior Lecturer
Monash University,
Dept. of Computer Science