Bernd Wechner – Curriculum Vitae

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Skills

Math and Physics, Software Engineering, Programming, Networking and network management, Project management, Team management, Technical writing, Training course design and delivery, Quality assurance, Process automation, Language and cultural awareness.

Professional Summary

Full Stack Developer

With a masters degree in Information Technology and Telecommunications, I manage a LAN, with servers, and develop websites for personal and community use. Strengths include all levels from bare metal up to the UI (though I favour good designers for UI work support). My favoured stack at present includes: Ubuntu, Lighttpd, uWSGI, memcached, PostgreSQL, Django and naked JS client side with modest jQuery support. I have worked with Redhat, MS-Server, Apache, IIS, ASP, C# .NET, PHP and can bring into service any framework on demand of course, not least any of the front-end frameworks be that React, Angular, Vue, Svelte ... they all require modest familiarisation effort.

Automation Engineer

I am a great champion of automation where it is possible. I cut my teeth on supervisory automation systems for cold rolling steel mills (FORTRAN on MicroVax VMS) and more recently was automating software testing for Echoview (Hydroacoustic data processing software with strong stability) including UI automation. I actively automate server management tasks dominantly in bash and Python. I have consistently resisted the false economy of not automating. With very few exceptions such resistance has been predicated on the false premise of no repetition foreseen. **My mantra:** When should you automate? When you can. You will not regret it.

Quality Assurance Manager

I started formal testing on payphone systems, have professionally tested Tasmanian Government websites in development, supported development of a regression testing automation system, managed a quality assurance team across three corporate divisions (stable software releases, venture software development and hardware measurement systems), implemented testing in Python and with Django and with pywinauto and Selenium (browser testing). I champion quality both hands on and at a policy and organisation level.

Technical Writer

I have co-authored a few papers, written extensive technical documentation for and the English help systems for the payphone management systems REMAS III, and for the Hydroacoustic data processing software Echoview and managed delivery of same for the Data fusion software system Eonfusion. I have written extensive internal documentation on algorithms have also written extensive material in support of training courses, and published research on Suite 101 and publish on dev.to today, and may start up on substack some time. My preferred tools for mathematical documentation are LaTex in the LibreWriter at present.

Software Trainer

I developed and delivered training courses for payphone management systems in English, German and French, and subsequently for hydroacoustic data processing software (Echoview). I have delivered training courses across the world and online and presented at numerous conferences and trade shows.

Sales and Partnership Manager

I managed sales for Echoview, bringing revenue over $2 million per annum on a trajectory to $3 million per annum. Specific areas of focus and reform including marketing, licensing, pricing and global reseller network development and empowerment. I completed the High Performance Sales course.

Software Project Manager

I brought Eonfusion project (a data fusion software product) to market, on budget, on time by implementing McConnell's 3-point estimation PERT variant training teams in its use and professionals to deliver off the cuff estimates comfortably, and useful for planning (the power of best, worst and most likely case estimation). I have completed numerous management courses (People in Projects, High Performance Communication, Practical Project Estimation, Project Management Advanced, CMMI-SE/SW for Senior Managers).

Mathematical Modeller

An A-grade math student, with the school Physics prize, and a degree in Mechanical Engineering, I modelled the cold steel deformation process (a system of simultaneous non-linear differential equations) using polynomial approximations in a time before desktop PCs (pencil and paper and micro-computers implementing said model in FORTRAN - it is quite likely still in service at the cold rolling mill at BHP in Port Kembla). I have studied Microsoft's TrueSkill Rating system (a Bayesian algorithm and generalisation of the ELO Chess ranking system) extensively and have been documenting it openly. I headed-up the validation of wideband signal processing algorithms at Echoview.

Career

2019 — 2024	Quality Assurance Engineer, Echoview Software Pty. Ltd.
2015 — 2019	Global Partner Manager, Echoview Software Pty. Ltd.
2015 —	Full Stack Developer, Self-driven side gig
2011 — 2015	Global Sales and Marketing Manager, Echoview Software Pty. Ltd.
2010 — 2011	Sales Support (Infrastructure and Asia/Pacific), Echoview Software Pty. Ltd.
2006 — 2010	Project Manager, Myriax Software Pty. Ltd.
2003 — 2010	Manager of Support, Quality Assurance and Documentation, SonarData Pty. Ltd.
2002 — 2003	Manager, User Support and Training, SonarData Pty. Ltd.
2002	Test Engineer, Dytech Solutions Pty. Ltd.
2000 — 2002	Software Engineer Larrisun Pty. Ltd.
1998 — 2000	Customer Support Engineer, Landis and Gyr Communications
2000 — 2001	Traveller Australia
1997 — 2010	Company Director, Larrisun Pty. Ltd.
1997	Technical Consultant, BHP Research
1995 — 1996	Telecommunications Engineer, Swiss Telecom PTT
1995 — 2003	Contributing Editor, Suite101.com
1993 — 1995	Traveller Asia and Europe
1992 — 1993	Research Engineer/Liaison Officer, BHP Sheet and Coil Products Division
1991 — 1992	Traveller Europe
1986 — 1991	Research Engineer, BHP Sheet and Coil Products Division
1983 — 1986	Mechanical Engineering Trainee, BHP Coated Products Division
1979 — 1980	Newspaper delivery, Northwest Star

Experience

Ongoing

Full stack developer, Self-driven side gig 2015-

Customers I served in sales were automating our software product (Echoview) with Matlab, Python and R. I set out to learn Matlab (by completing a Robotic Vision course at the QUT) and Python because I found Microsoft's TrueSkill algorithm implemented in Python and the Django web framework so whipped up a quick website to manage learderboards for our local games group. Running hand-me-down servers from my basement I was soon hosting numerous services focused not on the (in)famous LAMP stack (Linux, Apache, MySQL, PHP) but what I coined as the LLUPP stack (Linux, Lighttpd, Uwsgi, Python, PostgreSQL), behind an OpenWRT reverse-proxy. I have maintained a live and sandbox server since and run various services from them primarily on that stack but also doses of PHP thrown in so LLUPPP.

The SonarData/Myriax/Echoview years

Quality Assurance Engineer, Echoview Pty. Ltd. 2019-2024

Having revised all the sales processes, infrastructure, tools and built a solid reseller network empowered to demonstrate and quote independently, I yearned for more creative expression once more and negotiated a return to the development team into one of the least developed areas therein, Quality Assurance. In my tenure there I focused on:

1. **Automation**: Using Python to integrate with our existing infrastructure including integration with Microsoft Access, Subversion, Gitlab, Jenkins and UIA (to automate User Interface testing) and more.
2. **Rigour**: hand in hand with reducing manual steps to automated steps in test procedures much greater rigour (reduction in human error and human limitations)
3. **Data Science**: Complex (in both senses of the word) mathematical implementations like wide-band analyses (analysis of wide-band hydroacoustic data) were in my camp as well as binary data file analyses (echosounder data files supported by Echoview).

Departure: position declared redundant in response to poor revenue performance the year prior.

Global Partner Manager, Echoview, Echoview Pty. Ltd. 2015-2019

With an expanding reseller network and related work, I focused formally on the growth and support of the reseller network across the globe and strengthening the relations we had with echosounder manufacturers and collaboration with them. I managed individual sales representatives employed for the distinct regions of North America, Europe, Asia/Pacific and Latin America.

Departure: Desire to move back into a creative role within the development cycle (out of the sales and administration areas)

Global Sales and Marketing Manager, Echoview, Echoview Pty. Ltd. 2011-2015

I brought the business over the $2 million annual revenue threshold and set it on a trajectory to reach $3 million annual revenue by augmenting and altering the preexisting direct sales approach with:

1. **Branding revision** (uniforms for direct sales staff, conference bling, DL format brochures and more)
2. **Investing in marketing** (hiring a marketing professional, website revision, research into ROI of various marketing channels)
3. **Review of pricing** (moving from a very complicated pricing model that required resellers to request quotations from us, to a much simpler model that empowered resellers to quote from a price list)
4. **Revision and expansion of our reseller network** and the contracts we had with them, empowering them to demonstrate and quote more independently.
5. **Strengthening ties with key hardware suppliers** whose products we complement, at the outset Simrad (Kongsberg Maritime), BioSonics and HTI, courting also Sound Metrics and BlueView.

Departure: Growth of sales team, acquisition of a new Sales manager and desire to focus on our greatest opportunity for growth (our partner relations (resellers and hardware suppliers).

Sales Support (Infrastructure and Asia/Pacific), Echoview, Echoview Pty. Ltd. 2010-2011

Moved into Echoview sales, to enhance and maintain the in-house developed License manager (ASP, C# .NET) and support direct sales taking on the Asia/Pacific region of direct sales and managing a small number of resellers in that region. Continued to maintain the in-house License manager until 2024.

Departure: Resignation of existing Sales Manager created an opening. Invited to fill that role (best candidate).

Project Manager, Eonfusion, Myriax Pty. Ltd. 2006-2011

With Eonfusion project running behind schedule, over budget and at risk of failure I was appointed project manager to bring this product to market. I implemented Steve McConnell's three-point estimation, training staff in its use and subsequent application to confidence based forecasting and budgeting. Using that with team support we got the product to market and a version 1.1 service release reliably budgeted and delivered on time. Sales however under-performed (too little too late) and capital ran dry.

Departure: position declared redundant after radical team size reduction in response to poor revenue performance.

Manager of Support, Quality Assurance and Documentation, SonarData Pty. Ltd. 2003-2011

Managing the Support, Quality Assurance and Documentation (SQuAD) needs across three corporate divisions (Echoview, AQ1 and Eonfusion) with a team of up to 10 members.

Departure: position redundant after sale of AQ1 and radical reduction in Eonfusion team

Manager, User Support and Training, SonarData Pty. Ltd. 2002-2003

Tasked with the design and delivery of a three day training course in basic hydroacoustics and Echoview software, with 12 weeks lead time. Managed customer support and worked on the Echoview 3 help system in parallel to garner the skills needed. After a very successful and well received course delivered in Seattle and Anchorage, continued managing the ongoing user support, training and documentation needs, delivering this training course as needed.

Departure: growth of business and demand for user support, documentation and quality assurance created an attractive opening there.

The Telecommunications years

Customer Support Engineer, Landis and Gyr Communications 1998-2000

Technical and administrative support of customers for telecommunications software systems, including:

- product documentation (developing and maintaining user and installation guides),
- testing of payphones and the management system.
- product packaging and delivery (personalised for large corporate clients),
- customer training (designed and delivered 2 to 4 day courses to 2 to 20 engineers at a time),
- post-sales consultation and warranty management (telephonically and on-site)

Two major products and a few minor products with around 30 active customers (national Telecoms in Europe, Asia, North Africa and Latin America). Delivered courses on site predominantly in English and German, occasionally in French, produced documentation in English.

Departure: resigned with a desire to repatriate to Australia and travel less. This job eventually saw me in planes every weekend for a year, eating into opportunities to build local relationships.

Telecommunications Engineer, Swiss Telecom 1995-1996.

Developed a GSM tuning package (Tuny) for the display and navigation of measured radio signals and simulation of GSM handover decisions based upon them. Extensive work with GSM radio resource management and Visual Basic. This project was highly successful, and provided the basis for winning further contracts for the radio-tuning group at Swiss PTT Research (now Swisscom).

Departure: fixed term contract for a fixed delivery

On the Move

Test Engineer, Dytech Solutions Pty. Ltd. 2002

A two month contract with Dytech Solutions filling a necessary quality assurance role on two key products (LeX and Quest) in the company's history (both web based information services for the Australian government).

Departure: fixed term contract

Software Engineer, Larrisun Pty. Ltd. 2000-2002

Developed, under own initiative:

- a generic on-line database system intended for the public domain
  (a non-profit motivated venture used by the Tasmanian Greens)
  with Perl, HTML, and Apache on Linux and Windows 98.
- an enhanced web based email client
  (a personal contribution for use by my University Alumni)
  with PHP and Apache on Linux.

Departure: Larrisun was a shelf company I purchased to operate under as a matter of necessity (in delivering consultation services to BHP). These were side jobs I did on a volunteer basis while travelling and between jobs.

Contributing Editor, Suite101.com 1995-2003

Contributed a monthly article to the travel section of this magazine-style web directory. Appointed by invitation.

Departure: Had a child, settled, and ran out of time for writing monthly travel articles. Suite101 later folded, for lack of a viable monetisation model.

Independent Traveller, 1991-2001

Three roughly year-long trips and various shorter journeys through Europe, Asia, North America, Australia and New Zealand with a strong focus on peoples and cultures. A profound experience in personal development, notably communication skills, cultural awareness and languages.

Departure: Enough is enough ... settled, built a family.

The Steel Years

Technical Consultant, BHP Research 1997.
Company Director, Larrisun Pty. Ltd. 1997-2010

As the sole director of Larrisun Pty. Ltd, provided consulting services to BHP over two months, developing a strip flatness prediction model (used in the rolling of sheet steel), implementing a prototype and training production and research personnel with regards to rolling automation software and theories. Purchased a shelf company (Larrisun) for the delivery (ultimately folded in 2010 for lack of utility and maintenance overheads).

Departure: fixed term contract for a fixed delivery.

Research Engineer, BHP Sheet and Coil Products Division 1986-1993.

Research and development work in cold rolling technology, specifically applied to the five stand tandem cold mills at the Port Kembla and Western Port steelworks. Extensively involved in the commissioning of the Coupled Pickle Line-Cold Mill (CPCM) at the Port Kembla works, a unique project in its time.

Responsibilities included:

- mathematical modelling of cold rolling processes
- development of predictive software
  (for off-line analysis of mill behaviour and product quality)
- implementation and maintenance of automation software (for on-line prediction of mill set-up parameters and dynamic adaption of the supporting models)
- construction of a mill database and associated software (for the collection, retrieval and analysis of data)
- liaison with production personnel on behalf of the Research and Technology Centre
- management of the Internet and Usenet interfaces.

During the course of my work at BHP ***I developed one of the earliest event-driven languages*** in my experience, to facilitate the development of user interfaces on VAX machines. Similar and much more expansive systems have since appeared on the market, of which Microsoft's Visual Studio languages are a strong example.

I was appointed liaison officer between the Production crews and the Research and Technology Centre. The two cultures did not communicate well, factory floor culture vs. the math whiz culture, and I bridged them well.

Departure: resignation on account of a deep desire to travel and see the world.

Mechanical Engineering Trainee, BHP Coated Products Division 1983-1986.

Three months work experience (a summer at a time while studying at university) in each of the:
- engineering drawing office - technical drawing work;
- spares and maintenance office - contributed to the compilation of a spares registry;
- research and technology centre - mathematical modelling work.

The Beginnings...

Newspaper delivery boy, Northwest Star 1979-1980.

- A 10km after school ride on a daily afternoon newspaper deliver run to earn some money during high school.
- Inherited a much more lucrative spot selling newspaper at the mine exit, but didn't last long, resigning as it was so boring (just sitting there watching miners drop 20c into the tin)

Publications

A modest body of developer oriented essays at https://dev.to.

Moderately active on the Stack Overflow group of sites. As at 2024 I'm the 6th most active Tasmanian user in fact, which a Stack Exchange query can reveal.

A modest collection of Python packages published to PyPi.

Moderately active on GitHub.

Extensive publication of end user documentation including Echoview help, Eonfusion Help and AQ1 documentation.

An entire series of 82 research essays published at Suite 101 in the 1990s.

Many internal and confidential research reports have been published as well as design documentation, user guides, course material and travel articles (on-line and in zines) as well Wikipedia contributions (many more anonymously than credited).

The following co-authored papers:

> W.Y.D. Yuen, A. Duval and B. Wechner, *A New Formulation for the Analysis of Strip Flatness in Strip Rolling*, 7th International Conference on Steel Rolling, 1998.

> W.Y.D. Yuen and B. Wechner, *A Physical Model for On-Line Roll Bending Set Up in Cold Rolling*, 5th International Steel Rolling Conference, 1990.

Education

Master of Engineering (IT&T), Flinders University of South Australia 1995-96

Bachelor of Engineering (Mechanical), Honours class II, University of Wollongong 1983-86

Higher School Certificate, Physics prize, Engadine High School 1981-82

Junior School Certificate, German prize, Mount Isa State High School 1978-80

Selected Training Courses

Robotic Vision MOOC, Queensland University of Technology, 2015

No nonsense web intelligence, Online Impressions, 2010

People in Projects, The Training Consortium, 2008

High Performance Communication, High Performance, 2005

High Performance Sales, High Performance, 2005

Practical Project Estimation, SEA Education services, 2004

Project Management Advanced, SEA Education services, 2003

The Landmark Forum, Landmark Education, 2003 (corporate sponsored management program)

CMMI-SE/SW for Senior Managers, European Software Institute, 2003

Steel Group Management Course, BHP Steel (now Bluescope steel), 1992 (in-house program)

Priority Manager training, Priority Management, 1992 (personal time management skills)

Personal Details

Date of Birth: November 12, 1965

Place of Birth: Kempten, Bavaria, Germany.

Nationality: Australian, Swiss

Marital Status: Married (de facto) with three children (2003, 2013, 2017)

Other Interests

I am a keen creator on-line, working extensively with Python, JavaScript, PostgreSQL, Celery, run a home LAN with a good many servers (router, firewall, web, NAS, HTPC, Nextcloud and more, and a handful of registered domain names pointing to my basement IT sector).

I am also an environmentalist, a cyclist, a swimmer, an in-line skater, a gamer, and enjoy small team sports though lost all time to indulge in them since children arrived.

I've held a long lasting passion for travel, social and cultural exchanges, international contacts, language, and philosophy all on the back burner while raising children.

I founded the Hobart Games Society (HoGS) in 2004, which we incorporated in 2009 and I presided over for 2 years before focusing on special interest subgroup of Competitive Gamers (CoGs). I have been treasurer for the Hobart Bike Kitchen since 2017. Treasurer for HoGS between 2021 and 2023, and presently Public Officer.

Have participated in two Tasmanian Men's Gatherings (2006 and 2008) and participated in and hosted a men's group from 2009 to 2013 (that is a weekly gathering of men in a safe confidential context encouraging all to speak openly about their lives and learn sharing and listening skills). I have been sitting at a Men's Table since 2022.

Two years running, I organised and supervised children's teams (12/13 year olds) at TasJam weekends. A full weekend of competitive game development. My team worked with Scratch (a pedagogic visual programming language) to produce a small game by end of the event and present it to the crowd.

Inspired by street libraries during the COVID lock-downs, providing an excellent reason to take my children for walk through our neighbourhood to explore books on the few permitted exercise outings at the time, we built one. It's easily the largest street library in a large radius and is heavily visited. It's on Google Maps as The Montagu Street Library, on streetlibrary.org.au and has its own rudimentary website.

Referees

Provided on demand. Most former employers available for comment (the further back in time the harder that gets, but can be done as I've always held warm ongoing relations with my colleagues and employers and let's face it LinkedIn is pretty good even if I've never quite fully invested in it).

Context of This Document

This is a 7 sheet curriculum vitae, being a very complete document from which targeted 3-page resumés are extracted.

It is available for consultation if any of those pique deeper interest and is available in closely similar form at:

    https://bernd.wechner.info/Professional

The full body of professional experience is also up to date at:

    https://www.linkedin.com/in/bernd-wechner/

and:

    https://www.seek.com.au/profile/bernd-wechner-MSlcwNZM1M

respectively, the two most important professional employment related sites in use today in Australia.

Targeted resumés exist for the roles of:

- Full Stack Developer
- Automation Engineer
- Quality Assurance Manager
- Technical Writer
- Software Trainer
- Sales and Partnership Manager
- Software Project Manager
- Mathematical Modeler