

Phil McKerracher BE

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PERSONAL PROFILE

A results-oriented **senior embedded real-time software developer, manager and support professional** with 20+ years of expertise in the telecommunications, networking and financial industries, strong customer focus and having excellent communication and organizational skills, able to identify and deliver technical solutions to complex issues, with a proactive approach to resolving customer requirements and business needs, looking to develop these skills in a highly technical environment.

TECHNICAL EXPERTISE

- C++, C, embedded real-time software development, circuit and prototype design, cybersecurity
- Telecommunications, financial networking (VoIP, HTTP, SSL, ISDN, ATM, NMDS, CSTA, ASN.1)
- Compatibility and quality management, technical processes, standardization
- Front-line technical support, technical training, international customer liaison

PROFESSIONAL EXPERIENCE

SELF EMPLOYED (BEECHES IT)

October 2013 – Present

Freelance hardware and software developer specialising in VoIP and computer systems for small businesses, website development and hosting, energy saving devices and prototypes for inventors. Recently completed an Arduino-based prototype of an energy saving controller for vending machines, a VoIP telephony solution for a small company that saves them thousands of pounds, and some innovative eCommerce web sites, halving commission on ticket sales for one charity.

INFORMATICA (PREVIOUSLY 29WEST)

October 2010 – October 2013

Technical Support Engineer

Providing front-line technical support in the EMEA region for ultra low latency messaging software written in C, Java and C#, used by leading financial institutions in mission-critical applications running on Linux, Solaris and Windows. Created original knowledgebase articles and used low-level packet captures, core dumps and source code inspection to quickly find and reproduce the root cause of problems and bugs.

SELF EMPLOYED (CURRENTFLOW ENERGY SOLUTIONS)

May – October 2010

Managing all technical issues involved in the prospective UK distribution of hydroelectric generators manufactured by [New Energy Corporation](#), a Canadian manufacturer of innovative vertical-axis turbines.

NOKIA (previously SYMBIAN)

April 2004 – July 2009

Systems Engineer (2006 – 2009)

Managing binary compatibility and API usability in an agile environment, liaising with international customers to maintain ecosystem confidence in Symbian OS, training developers globally in compatibility principles and practice, resolving incidents in a timely manner and proactively monitoring unplanned compatibility breaks.

- Reduced unplanned compatibility breaks by more than 70% by designing and delivering a comprehensive training programme to more than 1,000 developers and managers across sites in the UK, India, China and Japan, holding root cause analysis meetings, developing improved metrics and implementing a successful break handling process involving all stakeholders.

Defect co-ordinator and subsystem release engineer (2004 – 2006)

Allocating defect fixing resources in the Security (Crypto Services) team to meet stringent quality and turnaround targets, controlling team submissions to the company codelines, line managing and mentoring junior developers, analysing and resolving regression failures from overnight testing in a timely manner and maintaining and developing the team's build and test systems.

- Designed and delivered specific training for developers in India and identified and resolved build system problems there, resulting in productivity more than doubling over this period.

- Devised new metrics to predict defect fixing resource shortfalls during a major product redesign, achieving ambitious quality targets and earning an “extra mile” award.

CONSULTING CONTRACT

2003 – 2004

Advising a German company on introducing telecommunications products to the UK market, writing specifications, analysing and resolving problems found during on-site hardware and software testing and providing essential diagnostic information to developers in Germany.

- Three device variants certified and all problems resolved within budget and time targets.

TISL

2002 - 2003

Developing voice monitoring applications for decoding proprietary PBX protocols and tracking call progress in real time for subsequent retrieval, in a Visual C++ environment.

- Gained a thorough understanding of CSTA and ROSE protocols and of ASN.1 notation, successfully implementing monitoring software for Siemens *Realitis DX* and *HiPath* switches, tracking call transfers and errors in all conditions, meeting all customer acceptance criteria on schedule.

DATAFLEX

1999 – 2002

Designing and developing least-cost call routers and access devices for VoIP and ISDN lines.

- Managed development of three successful ISDN least-cost call router development projects (basic rate and primary rate) and personally wrote DASS2, V.120 and DTMF call routing software for them.
- Combined SIP and ATM protocol stacks from RADvision, Globespan Virata and Netbricks, running on ATMOS and Nucleus operating systems to produce the first of a range of cheap access devices.

TELSPEC

1996 – 1999

Developing software for a range of ISDN network termination units of which millions were deployed, capable of interworking with all existing analogue phones and terminals while constrained by challenging cost targets.

- Worked closely with hardware designers, chip manufacturers and network operators to implement a complete NMDS (V5.1) protocol stack and hardware drivers for the BT Highway network termination unit, meeting a tight deadline. Published an online tutorial that was used by BT to train engineers.
- Developed novel techniques to produce a heavily cost-reduced production version with stringent reliability requirements, followed by a full-featured configurable international version.

RACAL-DATACOM

1988 – 1996

Designing circuits and software for industry-leading modems and ISDN terminals, gaining type approval for their connection to public networks worldwide and actively participating in standardization committees.

- Developed many innovative hardware and software solutions to the conflicting requirements of different networks worldwide, shortening time to market by about 18 months. Developed a complete standards-compliant ISDN protocol stack that was successfully ported to 8051, 80386, 68000, ARM, pSOS and Windows NT environments and used in all company products.
- Heavily involved in ISDN standardization activity through ETSI, eventually achieving a pan-European standard and becoming a UK representative on the ISDN Type Approval Advisory Board.

QUALIFICATIONS and TRAINING

Bachelor of Engineering (Electrical) from Monash University, Melbourne

Intermediate Diploma in German from the Institute of Linguists

Agile team member training, cultural awareness courses and Symbian OS training at Symbian

OTHER INTERESTS

Playing violin (semi-professionally and in Bromley Symphony Orchestra), building innovative and useful community websites (e.g. www.bromleysymphony.org, www.skeptic.org.uk), theatre lighting and sound (e.g. for www.barntheatreoxted.co.uk), learning French and German, travel.