

Phil McKerracher BE

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PERSONAL PROFILE

A results-oriented **senior embedded real-time software developer** with 10+ years of expertise in the telecommunications industry, 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, circuit design
- Telecommunications protocols and standardization (ISDN, VoIP, ATM, NMDS, CSTA)
- Binary Compatibility and interface management
- Designing and implementing technical processes
- Designing and delivering technical training internationally

PROFESSIONAL EXPERIENCE

NOKIA (previously Symbian) Systems Engineer (2006 – 2009)

April 2004 – July 2009

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

- 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 and agreeing targets with managers, developing improved metrics and implementing a break handling process using a compatibility board, building ecosystem confidence and enabling timely shipment of new phones.
- Proactively established strong working relationships with key stakeholders as the first point of contact for all compatibility issues, identifying previously unrecognized problems and developing new tracking systems in response to specific concerns, restoring customer confidence and overcoming resistance to adoption of new product versions, reducing code fragmentation and improving accuracy and efficiency of resolutions to product shipment-affecting problems.
- Assumed ownership of the company-wide “Break Request” and “API Validation” processes, converting them to “lightweight” formats that much more clearly identified stakeholders and necessary artifacts and metrics, and trained and mentored two new systems engineers to administer them.

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 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.
- Maintained build system operation over two location moves and doubled build capacity by proactively commissioning unused machines and optimizing build schedules.

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 Microsoft 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, following call transfers and tracking 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, 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 produce a complete NMDS (V5.1) protocol stack and hardware drivers for prototypes of the BT Highway network termination unit, meeting a tight deadline for trials.
- Developed novel techniques to reduce the entire stack to fit into 32k of ROM and 1k of RAM for a heavily cost-reduced production version with stringent quality requirements, of which millions were produced, 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 solutions to the conflicting hardware and software requirements of different networks and achieved generic designs that could be approved worldwide, opening new markets for the company and shortening time to market by up to 18 months, through extensive consultations with regulatory authorities, including reading specifications in French and German.
- 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.
- 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.

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 (in the Bromley Symphony Orchestra and others), building accessible and mobile community websites (www.eastcokerpoetry.org.uk, www.bromleysymphony.org, www.skeptic.org.uk), theatre lighting and sound (e.g. for www.barntheatreoxted.co.uk), learning languages, travel and volunteering as a business advisor for Young Enterprise and as an IT home visitor for the RNIB.