Barry Robinson
Sernior Software Engineer
Genesis Technical Systems, Coventry
Telecommunications

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I have worked on large, highly scalable software projects written from the ground up in C/C++ as well as working on higher-level business systems in Java EJB.
I have managed and mentored teams of six or more developers and worked as a senior consultant for large multinational companies, as well as delivering training and mentoring in EJB. I learn new technologies quickly and I'm always looking for new challenges.

WORK EXPERIENCE

Senior Software Engineer / Product Lead
Genesis Technical Systems
July 2018 – present

Job description:

Product lead, reporting directly to the CEO, responsible for project planning and delivery and architecture, working in an Agile environment to deliver products in a mixed hardware/software environment for the Access Service Manager (ASM).

Design and development of the Access Serviec Manager (ASM), a telecoms TR101 accesses node for a product range that aggregates and extends reach in xDSL networks.

Support and extend functionality in existing prototypes built in DPDK 18.05 and on the Netronome Agilio CX in MicroC and P4 for deployment in technical trials.

Work with FPGA and hardware design engineers to develop bespoke system boards and software for FPG engine on the Xilinx ZCU106 running on a Zynq Ultrascale+ Quad-core ARM A53 processor.

Design, implement and modify components such as Command Line Interface (CLI) and Operations Administration and maintenance (OAM) systems build using Yang models to define MIBs and management capabilities accessed through Netconf and SNMP.

Develop an architecture to provide a fully realisable CORD node deployable in AT&T's Airship environment.

Achievements:

- Implemented imbedded Layer 2 packet generation and processing components on the Netronome Agilio CX in MicroC, a C99/80 target specific real time subset of the C language compiler for the Netronome Agilio CX SmartNIC hardware platform.
- Developed a QoS for a DPDK 18.05 based product used as a TR101 node and improved overall packet processing efficiency in Poll Mode Driver (PDM).
- Planned, managed, and contributed to the development of an FPGA based imbedded system for a TR101 access node, ASM-1/10.
- Researched and developed a strategy for integration into CORD and AT&T Airship, for Genesis products, including configuration and failover.
- Moved the development effort away from a stand-alone DPDK / P4 based sollution, to a unified FPGA based hardware / software approach in line with other company offerings leveraging of a shared code bases and system libraries.
- Design, implimention, and extention of the network device driver for asm including netlink, inband packet processing of DHCP, IGMP, ARP, and internal protocols.

Skills: C/C++, Java 8, Maven / eclipse, P4, Netronome MicroC / SoC System Architecture, DPDK 18.05, Layer 2/3 packet processing (UDP/IGMP/ARP/PPPoE/DHCP), xDSL, u-boot, Xilinx

board bring up, Xilinx ZCU106 development board, JTAG, kernel modules / device drivers, network devices, JDSU network test equipment.

Freelance developer, consultant, mentor, and trainer
2001 to 2018

Worked as a freelance developer, trainer, and mentor working in Java, J2EE, C/C++, Assembler, as well as product integration and testing for a range of clients from blue chip corporate, to local small business providing both technical tuition, mentoring and consultancy as well as business research and development and business process re-engineering.

During this time, I undertook work for BEA (WebLogic/J2EE training as an external consultant), BAA, DEL, and OtherMedia (business consultancy / BPR).
I also ran a successful photography business in my spare time.

Senior Consultant
Valtech UK Ltd
January 2000 to December 2001 approximately.

Job Description:
Development of internal and external B2B e commerce solutions, systems and full development life cycle training, mentoring, including sales support through presales consultancy and development of whiteboard architectures.

Main Accomplishments:
- Trained newly hired employees using a "boot camp" originally developed for the initial intake at Riversoft. I repurposed the concept to reduce expenditure by Valtech on newly hired consultants, sourcing intelligent graduate candidates, and training them to the high
- technical standards required by the company to deliver the best possible solutions to clients.
- This strategy allowed us reduce overall hire spend for the year through reduced
- wages demanded by seasoned professionals with the experience to command high salaries.
- Mentored internal and external employees in the development large multi user system with a combination of Rapid Iterative Prototyping and Object Oriented Designed Methodologies
- [UML] to deliver scalable, multiuser, multi-threaded systems deployed with J2EE and other distributed component technologies.
- Developed Java/J2EE B2B solutions for both internal and external client and stakeholders.
- Led a team to examine and propose solutions for ongoing attacks to the company's internal network, and external servers. At the time Valtech held sensitive information for multiple banking and financial institutions worldwide, as well as proprietary internal data. The team produced a report that formed part of that year's business strategy and was subsequently published as part of the general business plan for Valtech UK.
- Provided presales consultant in order to evaluate customer system requirements, and formulate whiteboard architectures for potentially viable systems solutions in order to
- secure high value contracts.
- Developed architectures for a number of systems that were later implemented for blue chip clients.

- Delivered training and mentoring in the use of development methodologies and programming languages and technologies including Rapid Iterative Prototyping using
- Object Oriented Design & Development, Unified Modelling Language, J2EE, both in house and on customer sites.
- Was instrumental in identifying and exiting from a non-profitable contract that would have locked the company into a long term, and potentially damaging contract, to provide backup consultancy services to a second party consultancy group.
- Developed the information systems architectures for blue chip clients.

Research Engineer
RiverSoft Plc
June 1996 to December 2000

Job Description:
To prototype front and back end components of the Riversoft Open River network management system, evaluating and hiring new staff, implementing and managing the company network, implementing source code and quality control mechanisms, as well as finding innovative ways to do everything in the most cost-effective manner possible.

Main Accomplishments:
- Implemented the initial GUI prototype in order to demonstrate the effectiveness of the
- Open River network management server to potential investors, thereby securing funding to facilitate grow of the company.
- Implemented, configured, and managed a simple but high capacity network based around a Linux server, and multi-platform machines to fulfil the development and administration requirements of a growing organisation. This task was later handed over in full to a more qualified and experienced Sys-Admin.
- Developed and documented coding standards and practices, including code documentation standards, monthly and weekly reviews and walk-through and assessments, along with source code control and revision systems based around RCS to ensure code transparency and quality.
- Developed a multi-threaded, cross platform architecture to deliver a scalable GUI message-based infrastructure to allow end users the opportunity to develop custom "Widgets" through a C++ API framework.
- Developed a boot camp program to hire graduates and doctorate researchers in mathematics and computer science, then train and mentor them in structured development
- techniques in order to deliver the highest quality product on time and within budget.
- Managed and lead a team of six programmers responsible for development and design of the Human User Interface to the existing network management server, including Window,
- Java, and web based front ends.
- Put in place on going procedures to continually evaluate skills gaps, identify training requirements and opportunities in order to focus resources on the right people at the right time to maintain parity with best practice in the industry.

Software Engineer
Micromuse Plc
1995 to 1996

Job Description:

To develop, maintain, support, and debug components for the Netcool Omnibus network management system built around the Sybase API, on windows, Sun OS, HP UX, and Linux using a variety of tools and techniques and programming languages and APIs.

Main Accomplishments:
- Started as a junior developer, and rapidly graduated to a senior development role.
- Developed probe and gateway service and demons for Netcool Omnibus to capture, export, and import data to and from external systems and devices such hardware network components, databases, helpdesk ticketing systems such as Remedy.
- Developed GUIs and GUI components on Windows 95, NT, HP UX, and Solaris using a range of technologies and tools including Visual C++, MFC, GCC, G++, as well as flex and bison for configuration data.
- Developed and debugged server-side systems in C and C++ using ADB, GCC, VI along with Sybase and Oracle API's, TCP/IP socket layer and UDP protocols.
- Created the architecture for, and implemented, the first fully functional security protocols for the Netcool Omnibus server
- 1st line emergency technical support to remote and local clients.
- Introduced and implemented OODD practices, Source code control, and revision control systems using RCS to ensure dependable code quality, and non-destructive editing.
- Helped to develop what is now a key component of the IBM Tivoli management Framework

PERSONAL

At RiverSoft (and more recently in Genesis) I was the first employee through the door in the morning, and the last one to leave at night. My faith and hard work in the company was rewarded with 175,000 shares which were given to me personally by two of its senior board members, and personal friends [Sir Campbell Frasier - Chairman of Dunlop 1971, Head of the CBI 1981, and Sir Trevor Robinson CBE - Trevor Robinson & Co.

EDUCATION

B.s.c - Information Systems Analysis and Design
Kingston University - 1991 to 1995

SKILLS

Java 8, C/C++, Lex/Yacc, compilers, real time systems, packet processing at layer 2/3/4, HTML, .NET, WebLogic application server, J2EE, TDD, Mokito, JRunner, Protect mode development on Windows, Kernel development Linux, NT services, FPGA integration, Netronome MicroC on the Agilio CX, DPDK18.05 multi core development / architecture. Exposure to docker.