

Dougal Seeley

Experience

July 2006 – Present

Broadcom Corporation, Bracknell, United Kingdom
Senior Staff Engineer

Real-time embedded software engineering for UMTS Releases 6 and 7.

Responsibilities

- Designed, implemented and tested MAC-layer HSUPA, most notably the E-TFCI selection subsystem and algorithms.
 - Implemented in SDL and C.
 - Employed traditional software design methodology (V-model) as well as elements from the agile principles.
 - Developed robust documentation to support the complexity of the specification.
 - Created algorithm simulation software – adopted by development and verification teams across the organisation.
 - Wrote test harnesses in TTCN and C, for early verification of algorithms.
 - Employed the Lauterbach ETM, (along with various network test equipment), in debugging and profiling the high-speed uplink software.
- Drove a stack-on-FPGA activity in order to gain early exposure to a new chip revision.
- Created various tools for automation and efficiency, in a variety of languages (including C/C++, Java, Perl and VBA).
- Interviewed and recruited several engineers for the team.

Jan 2006 – June 2006

Comneon GmbH, Munich, Germany
Contract Software Engineer

Analysis, test and verification of UMTS layer-3 protocol software.

Responsibilities

- Developed proposals for performance improvements through study of the existing source code (written in SDL and C).
- Sought oversights in specification-correctness.
- Provided analysis of bug reports from in-field testing – initially to determine the validity of the report. Implemented fixes where necessary and developed TTCN test scripts for their verification.

May 2001 – Jan 2006

Samsung Plc., Staines, United Kingdom
Senior Software Engineer

Real-time embedded software engineering for Samsung UMTS handsets.

Responsibilities

- Managed the full software development lifecycle, from requirements definition, through detailed design (using UML) and implementation (in object-oriented C) to interoperability testing at international sites.
- Designed, implemented and tested the RRC measurements subsystem – at ~40,000 lines of pure source code, one of the biggest single modules in the stack.
- Developed a bespoke finite state machine framework. Allowed asynchronous messaging within RRC and incorporated interfaces into the Nucleus operating system.
- Designed and supervised the implementation of the resource management subsystem.
- Created time-plans for, monitored the progress of and mentored more junior engineers.
- Awarded 'Employee of the quarter' – Q1 2003. Given in recognition of time spent assisting new engineers as they joined the team.
- Interviewed and recruited graduate engineers.

Aug 1999 – April 2001

Motorola Ltd, Basingstoke, United Kingdom
Software Engineer

Real-time embedded software engineering for Motorola's implementation of Tetra base stations.

Responsibilities

- Embedded 'C' programming for deployment on a pSOS™ target, on the HP-UX platform. Gained familiarity with the SNMP and TCP protocols through new development and bug fixes. Designed and implemented a task to throttle rapidly repeating SNMP TRAPs.
- Designed and implemented a new Tetra Call Processing feature (Dynamic Group Number Assignment) for the pending software release. SDL software engineering for the Call Processing application and associated test suites.
- Designed and developed of a web-based software reuse library, which allowed users to upload new tools, and browse and download existing tools.

Summers of 1997 and 1998

Nortel Plc, Harlow, United Kingdom
Assistant Radio Engineer

Responsibilities

- Studied new product development for deployment within Europe. Assisted in the evaluation of frequency synthesisers for a new product design.
- Designed a Microsoft Access database for the easy retrieval of in-house documentation.
- Developed Visual Basic programs to aid configuration/ documentation management.

Key skills

Programming languages:

- C/C++, Java, PERL, SDL/SDT, HTML, PHP, JavaScript, VB
- Object-Oriented design and implementation.

Applications:

- ClearCase (Windows and Unix), including some administration experience; ClearQuest; Perforce; MagicDraw UML, including site administration; MS Office (also capable VBA developer); pROBE+™ (pSOS debugger); Lauterbach Trace32 (ARM debugger); Domino™ network monitor; Various IDEs (including NetBeans, MS Visual Studio, Source Insight, SNIFF+)

Operating Systems:

- Highly skilled in installation and use of MS Windows® and MSDOS®.
- Linux installation / administration – I maintain a Linux server at my home, which provides the DNS, HTML, database (MySQL) and email services for www.dougalseeley.com; it also hosts several other domains. Initial design and technical maintenance of www.rafspa.com (skydiving website).
- Competent user of UNIX (HP-UX, Sun Solaris) workstations.

Education

University of Bradford 2:1 MEng Electronic and Electrical Engineering
Yorkshire, UK
1995 – 1999

Hills Road (Sixth Form college) Mathematics, Physics, Chemistry
Cambridge, UK
1993 – 1993

Sawston Village College 9 GCSEs (including French and German)
Cambridge, UK
1988 – 1993

Interests

Skydiving – competitor in the British National 4-way competitions 2004-2009; Bronze medallist in 2007.
Applications development (in C, C++, and Java) – all freely available on my website. Squash and badminton.
Radio controlled model aeroplane & helicopter flying. Politics and finance.