

Business Experience

Martin Beeby has over seventeen years' experience in safety and mission critical software and systems development. A key skill that is frequently sought after is his ability to see the 'big picture' and step back from the detail of a problem to work out the most effective approach for the business. This, coupled with a broad experience and a deep technical knowledge, enables him to tackle the real problem to an appropriate level of detail.

With many years of Executive and Senior Manager experience, Martin has demonstrated both strategic and tactical abilities. Working in companies varying sizes from very small to multinational, Martin has the knowhow for what financial and organizational challenges need to be addressed as part of any system or software development. Martin is an outstanding communicator, capable of identifying and delivering the key information whether it part of Sales activities, Customer meetings, Delivery of technical papers, or Training delivery.

Strategically, Martin has a skilful ability to define business goals, product strategy, develop marketing and key partnership relationships to exploit synergies and increase sales opportunities. Tactically, Martin is a veteran in standards based embedded safety and mission critical System and Software Development, Quality Assurance, Programme Management and Supplier Management. With experience in designing and developing embedded software systems in C, C++, and Ada, Martin is a capable Auditor for standards including DO-178B, DO-254 (for COTS parts) IEC61508 (and derivatives) and AS9100. Martin also has a detailed knowledge of graphics systems based around GPUs using OpenGL and OpenGL SC.

Martin is an accomplished people manager, who enjoys developing the skills of individuals within a team and working through others to achieve results whether the team consists of other consultants or client employees. Throughout his career Martin has also maintained a high profile in the Avionics and Safety Critical standardization community both across Europe and North America including SC205 (DO-178C Formal Methods subgroup) and MISRA C++ review.

His Specialities include:

- Certification of graphics drivers
- DO-178b/IEC61508 software development and verification process definition
- DO-178b/IEC61508 development management
- DO-178b/IEC61508 software process audits and gap analysis
- DO-178b/IEC61508 software development training
- European Business Development for certifiable products and services
- Technical support to Sales teams
- DO-254 COTS part data collection
- Certification Liaison
- Software Quality Assurance
- Process Improvement (CMMI)
- Supplier Management
- Programme Management

Professional Experience

As part of the acquisition of Seaweed Systems by Presagis, Martin joined as Director and Subject Matter Expert for the embedded Graphics Business Unit. His key roles within the organization were; Business Development into markets requiring certification/qualification to standards/guidelines, project Certification support (DO-178b, DO-254, OOTiA, IEC 61508 and derivatives) to all areas of the organization including liaison with customers and authorities, and Sales Support for graphics driver sales within Europe and global certification opportunities for all products.

As employee number 2 at Seaweed Systems, Martin was VP Safety who was solely responsible for introducing DO-178b and defining all development, verification, and quality assurance processes for the first DO-178B level A certifiable OpenGL library for avionics and safety-critical applications. He was intimately involved in managing the growth of the company, up to 35 people, by defining strategies to increase product offerings and profitability, while maintaining product quality. In addition to his executive role in the company, Martin was also accountable for all aspects for safety and quality for Seaweed Systems which has involved working with customers, certification authorities, industry standards groups for both software and hardware (for example, DO-178, DO-254, IEC61508, ISO26262). Specifically, Martin has been instrumental in defining and managing the DO-178B level A compliant development, using C, the verification processes and the primary certification liaison for major customers such as Rockwell Collins, EADS, Lockheed Martin, BAe, Selex-Galileo and Thales Avionics. In addition to the process oversight responsibilities, he has been extensively involved with Sales and Marketing activities of the certifiable product while also being involved in industry standardization activities such as the RTCA SC 205 (DO-178C, Formal Methods sub-group), Khronos OpenGL SC definition, ARINC 653, MILS policy definition, and liaison with the FAA in the production of CAST papers. Martin was also a regular contributor and presenter at many avionics related conferences while at Seaweed.

As Senior Program Manager, in the Embedded Software Division of Mentor Graphics, Martin played a key role in marketing, selling, and managing, consulting and engineering projects. He was responsible for defining and executing strategies to increase service offerings, while also improving short and long-term revenue, and leading groups of engineers and external contractors in safety critical certification programs to DO-178B of the VRTX real-time operating system.

As a Principal Software Engineer at Allied Signal, Martin was responsible for all aspects of software development and certification, to DO178B level A, for the new AS900 turbofan engine control system (FADEC). AS900 was a flagship project for improving product quality; customer satisfaction and demonstrating CMM level 3 capabilities and introducing C++ for FADEC Level A software.

At Matra Marconi Space Martin initially took over the technical management of several existing Ada development projects, and a new C++ development project. Martin also introduced a software process improvement programme (SEI CMMI). Selected to be one of twenty in the UK for a fast track management programme scheme, Martin moved out of the software department into the group Programme Management Function to manage the ASAR Tile Interface and Control Unit (TCIU), hardware, software development activities and satellite component manufacturing.

At Rolls Royce Aero engines, Martin joined the Control Systems group to set-up the first DO-178B level A FADEC engine control project to be coded in Ada. Initially responsible for defining object based software development and verification processes for use with Ada (SPARK subset) and system engineering requirement's standards for this project. Once the project was established Martin took on the position of

Technical Authority and design lead for the DO-178B level A FADEC software, managing the design team activities across two sites, and acting as internal program manager for the FADEC engine control software.

As part of the Rolls-Royce High Integrity Systems and Software Centre (HISSC) Martin's work was split equally between Research and Project Support:

Research - into Integrated Project Support Environments (IPSE) technology and the development processes used in the Rolls-Royce group. Specifically, building environments using PCTE, for Ada and C based safety critical systems development.

Project support - Providing consultancy across the Rolls-Royce group of companies in the use of high level languages in safety critical system, Object Oriented and Object Based design methods and associated development and verification processes, for use in embedded safety/mission critical software projects.

AT Rolls-Royce Control Systems department Martin worked as a process support engineer responsible for Support Software; writing and procuring. Including real-time Aero Engine simulations, FORTRAN and Oracle support tools, interfacing with suppliers (£3.5m System Test Facility project), VAX and Unix System manager.

Qualifications.

1988 B.Sc. (Hons) Engineering Science (Mechanical), Warwick University, UK.

1984-1989 Sponsorship (1-3-1) with Rolls-Royce Aero Engines, UK.

Languages.

C

C++ (including MISRA and JSF subsets)

Ada