

Stephen L. Fagg

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Skills Summary

Information systems engineer with twenty two years' experience in software and systems design and development. Strong technical skills with a proven ability to become expert in new areas rapidly. Highly customer-oriented, analytical, methodical and well-focussed. Excellent at written and oral communication. Experienced in all phases of product life-cycle from requirements capture through to post-delivery support, maintenance and evolution.

Tools & Technologies Expertise

- SNMP, TNM, ISO9001, DEF STAN 2167A
- VoIP, VToA, ISDN, GSM, X.25, V5.2, SS7, AIN
- CoCoMo, UML, Shlaer-Mellor OOA, 'Z', MASCOT
- (X)HTML, Dreamweaver MX
- Assembler, C, C++, Coral-66, PL/M-86, Algol, Ada
- RTM, SES/Workbench, COMNET, Microplanner
- PPC & Intel μ PU's, VxWorks, iRMX, MIRTOS
- Windows 3.1/95/NT4/2000, MacOS 4 through 10.2
- MS Office, Access, Project (to "XP"/"vX" level)

Professional Expertise

- Voice and data telecommunication networks: POTS, SDH, Sonet, ATM, Ethernet, IP, optical, wireless
- N/W operations, admin., maintenance, provisioning
- Requirements gathering, analysis and management
- Product, systems and software functional and performance specification
- Use cases and object-oriented analysis
- Embedded, real-time software design & development
- Hardware-software interfacing and integration
- System integration & test; support to customer trials
- Software maintenance and evolution
- Computer system and network management
- Technical and customer documentation production and control
- Web-site management, design, development and maintenance
- Presentations to all levels of audience
- Project planning, monitoring and reporting
- Software development processes
- Project quality management

Experience

University of Cambridge

Computer Officer, Faculty of Oriental Studies (2002 to date)

Responsible for all aspects of computer provision and use with the Faculty. Also Faculty Webmaster responsible for design and implementation of public and internal Faculty web pages.

- Consultation on IT policy and implementation options; advice on relevant technology choices
- Support of a mixed network (IP over Ethernet) of over 100 Windows and Macintosh computers
- Configuration of non-roman languages on both Macintosh and Windows
- Network configuration, including DNS and IP address administration
- Application software support, including Office, Web, Email, Voyager, anti-virus and backups
- Inkjet and Laser printer configuration and maintenance
- Use of laptops and data projectors for presentations and teaching
- Network, hardware and software specification, purchase, installation and upgrade
- Maintaining hardware and software asset allocation register; advice on purchase and disposal
- Web site design and management (DreamWeaver MX)
- Web page design and implementation in XHTML, XML to XHTML conversion (SAXON)
- Image capture, manipulation (Adobe Photoshop) and use (web, publication and PowerPoint)

Nortel Networks

Software Systems Engineer, Broadband Access (2000-2001)

Systems support to a Fibre to the User product development offering integrated voice, video, and data over IP with particular responsibility for customer-premises optical network unit (ONU) providing a gigabit Ethernet interface to a passive optical network.

- Negotiated and analysed customer OAM&P requirements.
- Analysed functional and performance requirements for telephony services.
- Produced detailed specifications for the ONU's OAM&P interface and element management and GUI software (for UML/SNMP/Java/CORBA/Unix implementation).
- Coordinated activities of UK and USA development teams.
- Defined and led requirements management and change control process.
- Created and maintained (MS Access) database and web pages for requirements analysis and management.

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Software Systems Team Leader, Next Generation Networks (1995-2000)

Systems support to a Network Manager product development supporting voice trunking over ATM (VToA) and POTS-ATM access gateways.

Real-time embedded software design and development for narrowband over ATM products.

- Served as France Telecom customer liaison for Network Manager software development.
- Provided system support, inter-team coordination and progress monitoring for development, European adaptation, customer trials and evolution of Network Manager.
- Acted as first-line customer interface to Network Manager development team during FT trials.
- Defined API for network management of performance monitoring data.
- Supplied technical leadership to team developing POTS-ATM access gateway element management software (UML/SNMP/Java/CORBA/Unix).
- Led five-person team producing embedded, real-time software (C++/VxWorks) for AAL-2 interface of ATM-TDM trunk gateway.
- Participated in creation and definition of connection broker concept for heterogeneous distributed switching networks. Named as co-inventor on three patents.
- Defined and maintained software development process and web-based support system.
- Modelled product performance and protocol behaviour using SES/Workbench and C code.
- Performed software development, integration and delivery project planning (MS Project).

BNR Europe

Software Systems Architect, European Transmission/Network Systems & Applications (1991-1995)

Software design and development of transmission and directory services products including embedded real-time software, database access software and network interface definitions.

- Participated in analysis and evaluation studies of mainframe Phone Book Database for BT.
- Assessed and reported on suitability of extant software for incorporation into new products.
- Managed requirements (RTM/Oracle) and performed Shlaer-Mellor object oriented analysis.
- Established software development process and documentation standards to ISO 9001.
- Performed software development project planning (MicroPlanner).
- Evaluated and tested numerous software development support applications to report on their suitability for introduction to the department's development environment.
- Produced embedded software product specifications for Coax Node and Euro-PON.
- Modelled low-level passive optical network protocol performance using C++.
- Designed embedded software (C/VxWorks) for products providing digital broadband over CATV networks (Coax Node) and European adaptation of passive optical network for broadband local distribution (Euro-PON).
- Acted as Design Authority for software (C/Unix) and interfaces of an Interactive Directory Services product for Belgian PTT and GSM Base Station embedded OAM&P software

STC Technology

Principal Research Engineer, Tactical Communications Systems (1983-1991)

Development, studies and proposals for new battlefield communication systems.

- Provided system management of department's computer network of VAX's, Macs and PCs.
- Spent four years developing embedded software (MASCOT/Coral/assembler and Ada) and performing hardware-software integration of PTARMIGAN equipment for British Army.
- Conducted classified studies and bids for MoD relating to battlefield communication.
- Led four-person team in 15-month study modelling network capacity and evaluating alternative architectures. Presented study results at the School of Signals.
- Supported UK delegation at NATO technical committee meetings

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ITT Standard Telecommunications Laboratories

Senior Research Engineer, Microprocessor Technology (1979-1983)

Real-time operating system design & development and microprocessor application consultancy.

- Managed department's network of microprocessor development systems.
- Carried out beta-tests of development support tools; reporting internally and to suppliers.
- Provided microprocessor application consultancy throughout ITT Europe.
- Implemented microprocessor software development support tools.
- Played leading role in design and implementation (PL/M-86) of an object-based real-time operating system (partly specified in 'Z') for embedded microprocessor applications.
- Defined system architecture and designed user interface of windowed terminal.

Education

- 10-month Open University courses:
 - Matter in the Universe (2nd level, distinction) – 1988
 - Elements of Music (2nd level) – 1987
 - Telecommunication Systems (3rd level, distinction) - 1985
- B.Sc. (II.ii) in Computer Studies, Loughborough University of Technology - 1979
- 'A'-levels in Engineering Science (A), Pure Mathematics and Applied Mathematics (B), Sir Joseph Williamson's Mathematical School, Rochester (MSR) – 1976
- 'O'-levels in English Language, English Literature, Mathematics, Chemistry, Physics (A), French, History (C), Latin and Additional Mathematics (E), MSR - 1974

Professional Qualifications

- Chartered Engineer – 1990
- Member of British Computer Society – 1985

Personal

- Born: 13 May 1958
- British Citizen
- Married, no children
- Leisure interests include: recreational cycling, camping, hiking, performing arts, cooking, personal web-site development & maintenance