Curriculum Vitae

Paul Saint
Senior Software Engineer

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Education

Marple Hall Grammar School, Cheshire

O-Levels: Mathematics, Physics, Economics/Commerce, Woodwork, Technical Drawing, English, French, English Literature, Geography, Religious Education
A-Levels: Maths(A), Physics(B), Further Maths(E) & General Studies(D)
Degree: Nottingham University BSc Joint Hons Maths & Physics (2.2)

Skills Summary

Operating Systems: Win32, Mac OSX, Linux, Unix, Android
Development Environments: Visual Studio, Eclipse, Qt Creator, kDevelop
Languages: C, C++ 11, C#, PHP, Python, SQL, ASN.1, Fortran, Coral 66, ADA, Assembler
Frameworks: Qt 5.x, QML, Win32 API, XML, JSON, Akka.net, STL, Boost
Tools: kernelshark, VisualVM, valgrind, gdb/gdbserver, cvs, svn, git, GitLab, clearcase, Jira, Confluence
Experience: Multi-threading, IPC, sockets, cross-platform, embedded, async programming in C#

Roles

November 2018 (initially part-time) to present:
SentryBay, London
Development of anti-screencapture and anti-keylogging software for malware protection on Linux.

September 2018 to December 2018:
SRT Marine, Midsomer Norton
Development of Win32/Mac OSX applications written in Qt/C++ for configuring Marine devices via USB/Serial port.

February 2018 to September 2018:
Bladon Jets, Coventry
Enhancements and support of a system for high throughput streaming of CANBus telemetry data, displayed in real-time via a web-portal and written to a MySQL database for archiving and reporting purposes. Implemented cron scripts for daily pruning and archiving of the database.
Embedded Linux, C, Java, Apache Tomcat, MySQL, Javascript, VisualVM, GitLab.

April 2017 to February 2018:
Support, enhancements and bug-fixing of Rail Journey Planning software written in C & C#.
Reworked testing framework (written in C#/ASP.NET) using C# async programming to improve system performance and message throughput/concurrency.

August 2016 to March 2017:
Accenture, Newcastle
Development of Client-Server Software written predominantly in Java and C++ in an agile environment.

June 2014 to June 2016:
Cubic Transportation, Salfords, Surrey
Enhancements and product improvements for smart card systems in the Sydney Transportation network. Provided on-site software support in Sydney following the subsequent roll-out of the software update for Sydney Buses.
Embedded Linux, C++, Clearcase, git, Eclipse, Visual Studio, Qt Creator, valgrind, libcurl.

Used ftrace/kernelshark to identify and resolve thread switching/performance issues.

June 2006 to June 2014:
NetSupport Software, Market Deeping (permanent)
Classroom Management, Remote Control

Linux and Mac OSX Port – Ported NetSupport's range of Win32-based Classroom Management and Remote Control software products to Linux/Mac OSX by emulating the Win32 API using C++ and Qt 4.8.x. The emulation included GDI+, threading/wait conditions, window management, winsock, internationalization, file system support etc. Produced coding guidelines and held/took part in code reviews. All source code annotated in Doxygen format. Developed and maintained the build system scripts written predominantly in bash and awk, modifying to support OEM builds and language support. Used kdevelop 3.5 initially but then moved over to using Qt Creator. Used valgrind to check for memory leaks and buffer overruns as part of the handover to System Test. Produced project progress reports for management. Produced design documents and tech notes. Used cvs and svn for code versioning, branching and merging.

Mobile (iOS/Android) Port - Joined the mobile team working on the common core C++ code for NetSupport's iOS and Android based applications. Used Java Native Interface (JNI) and JavaScript Object Notation (JSON) to support calls between the C++ and java layers. Produced a screen capture plugin for Android. Built Android OS images from source on Mac OSX for deployment onto target devices. Implemented changes and fixes to the language translation scripts written in perl and python. Used eclipse and ndk-gdb for debugging on android and Xcode 5 for development/debugging on OSX.

February 2006 to June 2006:
Cametrics, Cambridge (contract)
Metro Arrivals/Departures Signs - Control Software
Developed embedded control software for the Metro System arrivals/departures signs using C++ and ELINOS (Embedded Linux).

August 2005 to February 2006:
Ultra Electronics Airport Systems, Manchester (contract)
Heathrow Terminal 5 - Scada Control Systems
Specification and software development of Scada-based airport systems control software written in C++.

April 2004 to August 2005:
TSYS, York (UK) and Columbus (Georgia, USA) (contract)
Credit Card Account Management (Sky Credit Card)
Acted as a consultant to TSYS on the SSSL certification of applications on the Sky Platform.

December 2003 to April 2004:
BT, Adastral Park, Ipswich (contract)
SDH Network Management Software
Production of technical specifications for off-shore software development.

September 2001 to June 2003:
First Data Europe, Basildon (contract)
Enterprise Letter System (automated letters)
Enterprise Letters System - a Windows DNA based project (Visual Basic, C++, COM, XML and SQL) used by corporate subscribers for producing automated letter print runs. Organized design reviews, defined software life-cycle procedures, produced documentation and conducted code reviews.

June 2001 to September 2001:
ANT, Cambridge (contract)
'Fresco' Embedded Internet Browser
Developed enhancements to an embedded internet browser in c++ for internet-enabled devices such as Digital TV Decoders (STBs), Video Streaming devices and kiosks.

May 2000 to May 2001:
Open Interactive, London (contract)
'Open...' interactive shopping service on Sky
Developed Open Author plug-in components, written in C, using the OpenTV API for the 'Open...' interactive shopping channels on Sky Digital. Produced requirements documents, test scripts and conducted code reviews.

September 1994 to April 2000:
Nokia Telecommunications, Cambridge (contract)
Telecomms SDH/PDH Node and Network Management software
Developed network management software and embedded software for SDH & V5.x (Nokia Eksos) equipment using C++. Used ASN.1 conformant tool-chains for converting telecomms objects to stream data for transmission. Produced interface documents, test plans and OO design documents in UML. Liaised with external consultancies and other Nokia development sites in Dusseldorf, Helsinki & Melbourne and provided technical lead in areas of the Q3 stack, CMISE and general SDH & V5.x functionality.

August 1993 to September 1994:
Syntegra, Fleet (contract)
'Tradewise' Insurance Data Analysis Tool
Developed software in C++ and the XVT cross platform library to produce graphical illustrations of insurance data based upon input search criteria. Used by insurance underwriters to analyse trends in insurance claims and make informed assessments of for example premium levels and policy excess amounts.

April 1993 to August 1993:
BT, Lion House, Ipswich (contract)
Work Management System
Enhancements to the Work Management System used by BT to automate the distribution of jobs to BT field engineers. Developed in C++ on Solaris.

January 1993 to April 1993:
BT Research Labs, Martlesham (contract)
Automated Voice Output Systems
Enhancements to the Speech Output Control component of an R&D project investigating the feasibility of speech recognition for automated directory enquiries. Developed in C++ on Hewlett Packard Unix Workstations.

August 1992 to January 1993:
GPT Video Systems, Maidenhead (permanent)
Video Conferencing Systems
Designed embedded control software in C++ for a H.261 compliant Video Codec using formal design methods in Ward-Mellor notation.

June 1991 to May 1992:
Sonda Aviation, Worthing (permanent)
Aircraft Simulation - Instructor's Console GUI
Designed and implemented a GUI Runtime System based on Texas Instruments graphics cards. Implemented the sockets-based communications interface between the Instructor's Console and the simulator host computer. Performed the on-site integration and commissioning of the client system at Frasca HQ in Champaign, Illinois.

July 1990 to April 1991:
Link Miles, Lancing (contract)
Aircraft Simulation - Process Scheduler
Developed an interrupt driven process scheduler and real-time debugger in assembler for an Encore 32/67 mini computer system having 16 CPUs & 16 IPUs connected via reflective memory busses.

July 1989 to July 1990:
Aviation Resources, Tulsa, Oklahoma (permanent)
Aircraft Simulation
Developed simulation models of aircraft systems & real-time display of Navigation Maps & Data. Designed embedded motion control software and pre-programmed flight motion profiles for a Cabin Trainer with exit doors for Boeing 747 and Airbus 310 & 320 aircraft types - used for training cabin staff in emergency evacuation procedures.

August 1979 to June 1989:
Singer Link Miles, Lancing (permanent)
Aircraft Simulation
Developed simulation models of aircraft systems and GUI software for the Instructor's Console in Fortran, Coral66 and Assembler for civil and military flight simulation projects. Produced formal design documentation and test plans.