

Curriculum Vitae

Personal Information

Name	Steve Tickle	Address	1a Beachampstead Road, Great Staughton, St. Neots, Cambridgeshire. PE19 5DX
Date Of Birth:	19 th May '74		
Security Clearance	SC	Nationality	British
		Available from	April '09

Skills

Skill	Experience (Years)
C / C++	14
UML (OOD)	10
Real Time/Embedded systems	10
VxWorks/Tornado	7
Unix, Solaris, Linux	7
I2C, Microwire, SPI, & RS232	8
x86 & PowerPC assembler	3
Signal Processing	3
Matlab, Simulink & Octave	3
Microcontrollers (8051, MSP430 & Fujitsu 90570)	5
Visual C++ (v1.0 thru MSDev Studio 2008), MFC, Win32 & DOS	13
TCP/IP & UDP/IP	10
Java & Eclipse	1
VME & PCI busses	4
XView, Motif & XWindows	3
SCCS, PVCS, CS-RCS, SourceSafe & Subversion	10
MySQL	2
HTML & PHP	3
GNU tools	11
Unix and Win32 Administration	3
Awk, Perl & Python	2
AJAX	1/2
Rational Rose, Telelogic Rhapsody & Artisan Studio	2
C# & .NET	1

Strengths

I consider my main strengths to be:

- Designing and implementing multitasking / multithreaded / multiprocessor embedded applications.
- Working with other engineers and teams in order to solve technical problems.
- Acting as a 'Technical leader' on the software and interfacing with hardware engineers.
- Optimising the performance of software systems.
- Adapting quickly to new platforms and projects.
- Creating portable designs that communicate using a variety of protocols.
- Using combinations of software types in order to quickly provide a functioning system.

Employment History

PA Consulting

Contract Software Architect, July '08 to current.

At PA Consulting, I have been designing, implementing and testing a portable RF system for the military according to very tight deadlines. The system consists of a proprietary RF system controlled and monitored by a very low power microcontroller which also provides the user interface via a graphic display. The system is networked via a COTS board running linux and the main application and the front end processing is performed by a set of FPGAs. The microcontroller interfaces to various devices attached via a combination of I2C, SPI, UARTs and GPIOs.

I designed and implemented the software for both the microcontroller (MSP430) and COTS host board (Intel Atom). UML was used to create and document the designs and the implementation was done in C for both the microcontroller and host boards. A diagnostics GUI was also created in C#/.NET to aid in development of the system.

Since timescales were a major issue, I designed the software in a portable manner to allow us to get up to speed as quickly as possible with ordinary PCs and development environments (VS2008). This allowed progress to be made prior to the arrival of the target hardware.

Selex Galileo

Contract Software Engineer, Febuary '08 to July '08.

Selex have contracted me to design and develop emulator software for a defence application. The software consists of GUI's interfacing with various items of bespoke hardware via digital acquisition cards and the 1553 bus. The GUIs are created using C++/MFC and C#/.NET and interface with other embedded systems using UDP/IP. The software designs are created using Rhapsody and Rose using the UML methodology.

Nemerix

Contract Software Engineer, July '06 to January '08 (4 months initially, extended to 17 months).

Nemerix contracted me to help develop an Assisted-GPS (AGPS) system. The work consisted of both client and server side software using a variety of languages and platforms.

The core code was being developed by the research team using Matlab. My work involved converting the matlab code into a server product and also integrating the algorithms into portable C for use on both embedded targets and Windows XP.

The server side code used PHP, HTML, and MySQL to wrap up the MATLAB server and produce a manageable, reliable product capable of being used in a production environment.

On the client side, the algorithms were ported and optimised to the target platforms needs and an associated GUI was produced in order to be able to demo the system to potential customers.

I also wrote the design and test specification for the entire system and produced additional software to enable scripted testing to take place.

The server involved the core software in MATLAB with management pages developed using PHP and Apache and data supplied using a MySQL database. I also created a Matlab extension (MEX) to interface form an interface between the software.

The client software used an HTTP link (over TCP/IP) to transfer the data from server to client where the optimised algorithms produced assistance data for the GPS core.

The end result was a project that I have taken from a primitive algorithmic model through development and testing to deliver a set of servers for the delivery of NeX data and the corresponding client-side embedded & optimised code.

I also helped develop a separate (but similar) server while at Nemerix in order to produce a development platform for the SUPL protocol.

QinetiQ

Software Engineer, March '05 to July '06

At QinetiQ, I developed a terrain following system for use in military rotorcraft. This was an embedded system using VxWorks on an embedded PowerPC controller with a PC based OpenGL display, networked together into a simulation environment using TCP and UDP. This project brings together algorithms developed in Matlab and Simulink together with C code and PC based tools written in Java. The whole system was then integrated, tested and demonstrated in the simulation environment with periodic flight testing.

I also investigated the integration of autonomous aircraft with Air Traffic Control systems with a view to bidding for work in this area for the company. This work also involved investigating the use of the cognitive modelling language "SOAR" with a view to its use in a simulation environment.

Thales Communications Ltd

Principal Software Engineer, May '99 to March '05

My projects at TCL involved developing embedded software for a portable RF device in use by the military. The platform for the software was a Fujitsu microcontroller with the development being performed on a PC under Windows NT. I was solely responsible for the design of the software (using UML in the form of Artisan Real Time Studio). The principle issues in the design were the low power requirements and the control of many devices simultaneously while working within the restrictions of a microcontroller.

I was also involved in producing a mine detection technology demonstration system for the Defense Research Agency (DERA). The system used a Ground Probing Radar (GPR) sensor to produce data that is processed using Signal Processing techniques.

I was responsible for designing and developing all aspects of the system including signal processing, the user interface (GUI) and control software that runs on Motorola PowerPC and Mercury DSP boards in a VME rack. In the process of doing this, I wrote drivers for the custom hardware and the communications system between the various boards. The software was written in C and C++ and hosted on VxWorks, MercuryOS, Solaris and Windows NT/95/98 while the development platform and GUI is hosted on Solaris. I also used Matlab in developing the signal processing algorithm and data display techniques.

The design work for this project was undertaken using Artisan Real-Time-Studio and utilised UML in order to produce an object oriented design (OOD).

Racal Radar Defence Systems Ltd

Software Engineer, September '96 to May '98

At Racal I worked as part of a team of both hardware and software engineers to develop an embedded data/signal processor for a naval Electronic Warfare system.

The system consisted of multiple PowerPC processors running the VxWorks/Tornado operating system. The application software was written in C++ and C and developed in a Sparc/Solaris (UNIX) environment.

I developed extensive technical skills and knowledge of both the hardware and the software in the system whilst producing software ranging from device driver level code to application software and tools.

My main tasks were:

- Developing the main application software and being responsible for producing a robust communications protocol.

- Optimising the application to meet performance requirements.

- Integrating the Board Support Package (VxWorks) with the application.

- Solely responsible for designing and implementing 'in house' development tools and also smaller applications for the customer.

- Testing and debugging the application in the field.

- Restructuring the code to provide for more reusability in future projects.

John Fairhurst & Co.

Programmer, June '94 till Sept '94

The company I was involved with is a small firm of chartered accountants. They had a need to automate part of their tax office and I was to help in this by designing an effective but simple program to allow entry of customer's details into a database and produce various reports involving this data. The key to this program was the user interface which, although it was running on old machines had to be simple enough so that the accountants would want to use it. This was achieved through extensive testing with the users and resulted in a system they were very happy with.

Academic Qualifications

BSc(Hons) 2.ii Computer Science from The University of Manchester 4x 'A' Levels Computer Science, Physics, Maths, General Studies. 9x GCSE's 2x 'A' 5x 'B' 2x 'D'