

## CURRICULUM VITAE SIMON KINGSTON

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		<b>Nationality:</b>	British

### EDUCATION

**1995 - 1999**     **Imperial College, London**  
MSci (Hons) degree in Physics, 2.1 obtained  
Attended lecture courses in topics including accounting, advanced maths, computational physics, electronics, instrumentation, general relativity and quantum physics.

**1988 - 1994**     **George Abbot School, Guildford**  
1994     A-levels in Maths (A), Further Maths (B), Physics (A), Chemistry (B), General Studies (B)  
1993     AS-level in Electronics (A)  
1992     GCSE's in Maths (A), Maths Extension (Pass), Physics (A), Chemistry (A), Biology (A), Graphics (A), Geography (A) English Language (B2), English Literature (C), German (C)  
1990/91     GCSE in Electronics (A), Self-study GCSE in Computer Studies (A)

### COMPUTER SKILLS

**Programming**     Java; C, C++, Basic, Fortran and Assembler on embedded PIC, ARM, Z80, 6502, 68000 and x86; Windows C/C++ (inc. GUI design); PHP; HTML; SQL

**Experience of**     Various operating systems including Linux installation and configuration, source control (CVS), databases (inc. SQL), web design, project management, software testing, recruitment

### WORK EXPERIENCE

**Feb. 01 - Oct. 03**     **activeRF Ltd, Swaffham Bulbeck, Cambridge**  
I became the software team leader at this radio tagging / security startup and was responsible for up to four other software engineers. My main responsibilities in this position were:

- Team and project leadership, planning and developing new products
- Overseeing the testing and release of software products
- Designing new systems such as intranet-based document control and bug tracking systems
- Evaluating and adopting 3<sup>rd</sup> party software tools and development systems
- Personnel recruitment, appraisals, etc

**Nov. 99 - Dec. 00**     **Multipoint Communications Ltd, Witham, Essex**  
Software Engineer at this Satellite Communications System Provider

- Remote Control and Monitoring software: I was part of a team who completely rewrote the company's Windows-based RM&C software. This involves writing high quality C++ code, clear GUI design and understanding 3<sup>rd</sup> party remote control protocols.
- Low bit-rate satellite broadcast system: I co-developed a system to enable journalists to send multiple TV reports over a shared satellite link, with more urgent reports getting more bandwidth. This involved writing a database application, TCP/IP networking and serial RM&C.
- PIC-based asynchronous to synchronous serial adapter, for use with pairs of satellite modems.
- rack wiring design and fault-finding
- working with customers to maintain and enhance their existing systems

### IT PROJECTS

- General programming experience: I have been interested in programming since I was 8 and have written a number of programs for my own benefit. These have included games, operating system extensions, applications and simple databases and have been written in Basic, C, C++ and assembler for BBC and Acorn computers.
- activeRF: I wrote or co-wrote the software for several systems including an ARM-based networked RF receiver /

LF field generator, a Java server to collate the data from up to 253 of the receiver / generators, a PIC based RF tag and a Windows GUI application that acted as a demonstrator for the other systems.

- MSci project: two fellow students and I wrote a neural network-based package in C++ to produce next-day forecasts of the level of air pollution in London. While this was mainly developed under Windows, the final version ran on UNIX and was automated so that daily forecasts were produced and posted onto an internet page without any external assistance. We were also responsible for planning and managing the project ourselves.
- Computational Physics: I wrote several pieces of software during this 4th year university course. These included using iterative numerical methods to model the behaviour of an electron in a varying magnetic field and to model the interactions of solitons. In another part of this course, a variational quantum Monte Carlo method was used to calculate the ground state energy of a helium atom. These were all done using Visual C++.
- SBC-based signal generator: in this 3rd year university project, a small board computer (SBC) was used to construct a multi-function signal generator. Based on a 68000 processor running the Minos operating system, it was programmed via a VAX terminal and was written in assembler using a top-down modular design.
- Z80-based frequency counter: this was also done as a 3rd year university project and involved designing, constructing and programming a frequency counter based on a Z80 processor. The software was written in assembler, converted into machine code by hand and then programmed into EPROM in hex form byte by byte.
- Calculation of the electric field produced by a charge distribution: 2nd year university project, using Visual C++.
- Model of a double pendulum: as a first year university project, I wrote a software-based model of a freely-jointed pendulum. This took into account the momentum of the two halves and various other physical effects.
- Driver software for my AS level Electronics course (see Electronics projects for more details): this was written in a mix of C and ARM assembler and then stored in an EPROM on the expansion card.
- Software testing: as part of my school work experience, I spent a week testing new software for bugs and design faults with a commercial software company.

## **ELECTRONICS PROJECTS**

- I have been interested in electronics for some years and have successfully designed several projects.
- activeRF: I was involved with the hardware design of an ARM-based networked RF receiver / LF field generator.
- Z80-based frequency counter: this project basically involved designing a small computer based on the Z80 processor; this was done entirely from the processor's specification sheet. The final device featured on-board EPROM, which could be programmed in-situ, RAM and an LCD screen.
- Analogue computer: for a first year university project, I designed and built an op-amp based analogue computer to levitate a permanent magnet using electromagnets.
- AS Level Electronics: for this, I designed and constructed a CD quality sound sampler for the Archimedes computer. This featured a pair of 16 bit stereo digital to analogue (DA) and analogue to digital (AD) converters, analogue circuitry to control the volume, tone and balance and on-board EPROM containing the driver software.
- Computer construction: as part of my school work experience, I spent a week assembling computers and installing software for a local computer supplier.
- Computer controlled robot: when I was 11, I built a robot which was controlled by a BBC computer, via the User (parallel) port. The control software was written in a combination of Basic and assembler.

## **TRAVEL EXPERIENCE**

Having lived in Africa as a child, I have always been very keen on travelling. When I was 16, I planned and carried out a 6 week solo trip across part of America. I then spent my gap year teaching and travelling in Africa. This was largely funded by donations resulting from a newspaper article and a mail shot, with enough money left over to build the school a new science lab. After graduating, I spent a month travelling around eastern Europe. I also have some work-related travel experience, having been involved with Multipoint's stand at IBC 2000 in Amsterdam.

## **OTHER SKILLS AND EXPERIENCE**

- My current hobbies include learning Swahili, kickboxing and other sports (such as tennis, squash and cycling).
- I am also interested in the arts, literature, business, politics and current affairs.
- Was editor for my hall's newspaper at university and tutored GCSE chemistry while doing my A-levels.
- I was part of a winning team in a 2 day 'Insight Into Management' Course.
- While at school, I spent a week living and working with physically handicapped teenagers.
- Also while at school, I did well in a MetalBox business game and in a 'Technically Speaking' workshop.
- I won a National Mathematics Olympiad bronze medal and several school prizes.
- I hold a full driver's license and a British passport.