

Andrew Steven Winter

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Key Skills

- ◆ More than a decade programming as a professional or keen hobbyist.
 - ◆ Able to convey ideas effectively through writing and formal presentations.
 - ◆ Problem solving and logical thinking; highly numerate.
 - ◆ Organised and able to meet deadlines.
 - ◆ Project management and team leadership.
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Education

Oct 99 – Jun 02 **Ph.D. Computer Science** *University of Wales, Swansea*
Viva: Dec 02

Invented the concept of *field-based modelling and rendering* as a new and advanced way to represent and display objects in data visualisation and volume graphics. Introduced the world's first volume graphics API and produced a complete C++ implementation which was later released as open source. Key skills used and developed include 3D graphics, parallel computing, algorithm design, signal processing, mathematics (in particular geometry), software engineering, technical writing and presentation. More information is available at www.cs.swan.ac.uk/~csandrew/.

- Awarded an EPSRC research studentship.
- Published several journal papers and book chapters.

Oct 96 – Jun 99 **B.Sc. (Hons) Computer Science (First Class)** *University of Wales, Swansea*

Course modules included (among others):

Graphics (x2)	Scientific Modelling	Functional Programming
Compilers	Database Systems	Operating Systems
AI (x2)	Computability Theory	Computer Networks
Mathematics (x4)	Algorithms (x3)	Software Development (x2)

Awarded the Addison-Wesley Prize for outstanding achievement.

Sep 93 – Jun 96 **A-Level Computing (A)** *Gorseinon College, Swansea*
And
BTEC National Diploma in Computer Science (Distinction)

Awarded a prize for excellence at the prize-giving ceremony.

Jun 93 **GCSE (8 passes, grades A-C)** *Amman Valley Comprehensive School*

Employment Full-Time

Jan 03 – Now *3Dlabs, Egham* DirectX Driver Developer

Currently developing a Direct3D (graphics) driver for the company's new P20 graphics chip as part of an international team. The role includes developing and debugging the driver in C, writing an HLSL compiler and driver testing tools in C++, issuing spec-change requests upon identifying hardware deficiencies, code reviews and peer support. Also created the team's intranet site during out-of-office hours. Daily exposure to Visual C++, WinDbg, version control software, assembler and kernel mode development in Windows XP. All code is peer-reviewed, documented and thoroughly tested against a chip simulator.

Jun 02 – Dec 02 *QinetiQ plc, Farnborough* Programme Developer

Implemented a helicopter flight simulator for the Ministry of Defence (MoD) as part of a small team. The simulator enabled new technologies to be prototyped and evaluated by MoD pilots before possibly being built and installed in experimental aircraft. Responsibilities included hands-on development of the simulator and methodology design for flight trials. Although interesting, the job did not require the skills developed at university and was not as described at interview.

Part-Time

Oct 99 – Jun 02 *University of Wales, Swansea* Student Demonstrator

Duties included assessing coursework, invigilating (proctoring) exams, supervising undergraduate programming sessions and conducting problem classes. Personal tuition in a range of computer science disciplines was given to B.Sc. and M.Sc. students on a one-to-one basis.

Feb 96 – Oct 96 *ITS (Wales), Llandarcy* Programmer

Developed software for the Welsh Health Authority using Delphi and SQL. Working as a two-man team (then later as an individual), the job included software development, database design and implementation, collaboration with the customer, on-site support, system installation and training. This work period began as a three-week college placement and continued at the company's request.

Dec 94 – Feb 96 *Pilkington UK, Swansea* Office Cleaner (evenings)

Dec 91 – Apr 93 *Keaney's Newsagents, Llanelli* Shop Assisant (weekends)

Software

O/S: Linux (several distributions), Windows (3.1, 9x, 2K, XP)

Languages: C, C++, Pascal, Delphi, COBOL, Assembler, BASIC, PHP, HTML, Prolog, SQL, Mathematica, shell script, Java.

APIs: Windows, Direct3D, *vlib* (created), OpenGL.

Applications: MS Office (advanced user), Internet, LaTeX, Visual Source Safe, debuggers, graphics packages plus many others.

New environments, APIs, packages, debugging techniques, programming languages and coding styles can be learned quickly and applied effectively in solving real-world problems.

Personal

Date of Birth 10 May 1977.
Marital Status Single.
Nationality British.
Other Non-smoker. Full UK driving license. Car owner. Homeowner.

Interests

- ◆ Computer programming.
 - ◆ Travel (especially UK and America).
 - ◆ Crosswords, logic puzzles and pub quizzes.
 - ◆ Sports including squash, swimming and snooker.
 - ◆ Cinema, TV and video.
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References available on request.