



Thunder Works LCC.  
Hercilio de Aquino Street, number 247  
Florianópolis – Brazil  
ZIP Code 88085-470

## Consultant Profile

### Steve Allan Gordon Dobbs

#### Technical Skills:

- Programming Skills C++ (advanced)
- Lua (scripting language) skills (advanced)
- Java (moderate)
- HTML (moderate)
- Physics (advanced)
- 3D OpenGL programming (advanced)
- AI (Artificial Intelligence) programming (advanced)
- Network Programming TCP/IP, UDP protocols (advanced).
- Operating System installation and network Setup

#### Education:

**Sept 2001-Sept 2002** MSc Computing at Manchester Met. University.

Distinction marks in coursework for Networks (Design for large ethernet cable and wireless approaches) and Advanced Object-Oriented programming.

*Areas Studied:* Databases (SQL), object oriented programming (Java), Multimedia (Director, Toolbook), Networks, Neural Networks.

*Final Project:* Dealing with Network Latency in a *Multiuser Racing Car Simulation*. Here Mr. Allan investigated the issues of developing an internet multiplayer simulation, specifically a racing simulation. As part of the project Mr. Allan coded a simple racing simulation to test a server-client design which attempted to reduce lag by reducing bandwidth through priority filtering. Mr. Allan's system used probability based scheduling and achieved a 70% reduction in server upload.

**1996-1999:** BSc Physics with Computational Physics at Sussex University.

*Areas studied:* Linear Algebra, Classical Mechanics, Electromagnetism, Oscillations and Waves, Optics, Special Relativity, Quantum Mechanics, Remote Sensing, Numerical Modelling, Solid State Physics, Nuclear Physics,

*Programming languages* (C, Fortran 90, Matlab, Maple)

*Final Year Project:* *Simulating the Universe*. Essay on the different ways of solving the N-body problem for gravitational forces. Mr. Allan investigated the strengths and weaknesses for the *Particle-Particle*, *Particle Mesh* and the *Particle-Particle-Particle Mesh*. Mr. Allan also investigated the feasibility of an optimisation for the *Particle-Particle Particle Mesh* method and wrote a numerical test in C to see whether the optimisation idea was worth implementing.

**1994-1996:** A-Level Physics (A), A-Level Maths (B)  
GCSE English (C), GCSE Astronomy (as an optional extra).

**1989-1994:** 4 GCSE's including Maths(A), Geography (B), Science (double Award A A)

**Personal Achievements:**

Jet Thunder - **advanced combat flight simulation project** in development with several publishing proposals and is mentioned as one of the most expected simulations in the genre by large and popular magazines and websites focused in this software category.

MSc final project – a networked racing simulation using C++, tcp/ip filtered and multithreaded server-client and OpenGL.

Completing several personal programming projects including, a 3D Mathematics and Graphics engine, a 3D Object/tech Editor for simulations.

Experiments with Artificial Life using neural networks and genetic algorithms.

Design and building of a radio controlled glider.

**Referees:**

Prof. Geoff Brindle (Project Supervisor)

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