

## Contact

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## Top Skills

Systems Programming  
System Architecture  
Game Development

## Publications

Guild Wars Microservices and 24/7 Uptime  
Guild Wars 2 - Scaling from one to millions  
Applying Game Design To Virtual Environments  
Nano-Plasm

# Stephen Clarke-Willson

Programmer, Producer, Executive  
Sammamish

## Summary

Software technology development leadership and management.

Specialties: Technical / Product team building and management; experience as first, second and third level manager in fast growing companies; systems programming, systems architecture, technology development.

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## Experience

### NCSOFT

VP of Technology

March 2019 - Present (1 year 7 months)

Bellevue, WA

### ArenaNet LLC

13 years 6 months

Programmer in the role of Studio Technical Director

May 2013 - March 2019 (5 years 11 months)

Bellevue, WA

Lead engineering staff (about 100 members) for "gaming as a service" with continuous high volume content creation and delivery at MMO scale. Translate business objectives into innovative yet achievable technical challenges. Created technical unit with flat reporting structure and peer input reviews.

Programmer in the roles of Server Programmer / Server Team Lead

October 2005 - April 2013 (7 years 7 months)

Developing multi-threaded, restartable, dynamically updatable, high performance, internet-resilient, bug free server code for the MMO Guild Wars (1 and 2).

Above the Garage Productions

Programmer / Owner

May 2004 - October 2005 (1 year 6 months)

Game Technology Developer, Above the Garage Productions

Developed downloadable music system "DirectSong.com" (from payment system [PayPal] to delivery system to embedded music player using Microsoft WMA technology).

Developed thread-safe profiling tool for Gas Powered Games.

### Amaze Entertainment

Vice President and Executive Studio Director

January 2000 - April 2004 (4 years 4 months)

Responsible for building the Adrenium (console) Studio from zero to 50 staff members. Also responsible for product development in the Black Ship Studio (20 more staff).

### Above the Garage Productions

Programmer / Owner

August 1994 - January 1999 (4 years 6 months)

Game Technology Developer

Developed new 32-bit game engine (SuperSet#) for Windows. Programmed all low-level game services using Microsoft Direct3D, DirectSound, DirectInput; complete collision and motion system; scripting language; integrated game layout editor. Developed multiple applications using the SuperSet engine for multiple clients.

In-house experience with all major 3D accelerators (some that never shipped) including 3Dfx Voodoo 1/2, Rendition V1000 and V2100, Oak Technology Warp 5, PowerVR 1&2; ATI Rage I/II/Pro; S3 Virge (VX/DX/GX/GX2), Nvidia Riva 128, TNT, TNT2, and others (basically everything through DX6).

Intervista Software - Direct3D and S3 graphics implementation (complete conversion from D3D Retained Mode / Immediate Mode in six months to S3 hardware) for VRML 2.0 Browser (millions of copies distributed by Microsoft with Internet Explorer 4.0). Other clients: Virgin Sound and Vision, DreamCatcher Interactive, Extreme Audio Reality, Cavedog Entertainment.

### Cavedog Entertainment

Senior Lead Client Programmer

1998 - 1999 (1 year)

Helped develop client-side, in-game interface to Boneyards match-making system for Total Annihilation and Total Annihilation:Kingdoms. Optimized TA:Kingdoms in an emergency project. Developed various 3D virtual world prototypes (ala "The Street") in VRML.

### Virgin Interactive

Vice President, Worldwide Product Development

October 1990 - April 1994 (3 years 7 months)

Expanded product development staff from four producers, three programmers, and one artist (total eight staff) to 180 staff worldwide in three locations (Irvine, Las Vegas, and London). Additionally supervised \$10M in external product development worldwide.  $\frac{3}{4}$  of the entire company reported to me. Gross (wholesale) sales increased from approx. \$30M to \$180M in 3 1/2 years. Key products produced by the internal studios included Disney's Aladdin for Sega Genesis (4.0M units), Disney's Jungle Book for SNES and Genesis, and Demolition Man for 3DO, a groundbreaking product incorporating specially shot, live footage of Sylvester Stallone and Wesley Snipes. The internal studios in Irvine, which I supervised, accounted for about half of all revenue generated worldwide. I was instrumental in the acquisition of Westwood Studios. Supervised budgets at Westwood Studios.

### PDA Engineering

Software Architect

January 1988 - November 1989 (1 year 11 months)

Software architect for "next gen" system of Patran Mechanical/Computer Aided Engineering software, as the company transitioned from Vax minicomputers to workstations. Responsible for "core" system which included 3D graphics across several workstation vendors (DEC, Apollo, Sun, SGI), high performance database; UI interface and scripting system; and internal event system.

### Northrop Corporation Research and Technology Center

Member, Research Technical Staff

June 1986 - September 1988 (2 years 4 months)

Explored advanced technologies for Northrop Products: laser imaging; image processing; 3D visualization for the Stealth Bomber; 3D image storage; signal processing; software analysis. Reported to the President of the Northrop Corporation on a special "tiger team" for analyzing software readiness and process within all of the Northrop divisions.

### DayFlo

## Programmer

1984 - 1985 (1 year)

Adapted college text editor project into hypertext/database front-end.

## University of California, Irvine

Programmer and Lab Manager

June 1977 - June 1981 (4 years 1 month)

Managed Distributed Computing System (DCS) Lab for Information and Computer Science Department (part time). Worked on many fun projects.

## Varian Data Machines

Programming Intern

June 1978 - September 1978 (4 months)

Debugged system crashes; reworked compiler definitions for OS port to new hardware. Hung out with really smart people.

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## Education

### University of California, Irvine

Ph.D., Software Engineering and Computer Science · (September 1981 - July 1986)

### Corona del Mar High School

High School Diploma · (September 1973 - July 1977)