

## Gregg Seelhoff

Technical Director / Principal Software Engineer

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- Award-winning game developer · 30-year industry veteran · more than 30 products published
- Platforms: Windows, macOS/Mac OS X, Apple iOS, Android, Linux, Ouya, Xbox 360, web/online
- Genres: role-playing (RPG), action, adventure, puzzle, board/card games, AR/MR, VR drivers, multimedia
- Languages: C++, C, Objective-C, Java, C#, PHP, JavaScript, Assembly (80x86, 6502, Z80), and more
- Development: Visual Studio, Xcode, Android Studio, Unity, Eclipse, Director, XNA Game Studio, Flash
- Technologies: Windows SDK, Cocoa, Carbon, DirectX, OpenGL, SQL, HTML, CSS, .NET, ARToolKit
- Skills: mobile development, game networking, artificial intelligence, interface design, quality assurance
- Business: proposals, design documents, localization, publishing, marketing, server administration
- Abilities: solve problems, handle multiple tasks, coordinate teams, deliver milestones on deadline

### PROFESSIONAL EXPERIENCE

**President / Technical Director**, SophSoft, Incorporated, East Lansing, MI - May, 1990 to present  
SophSoft is a game development company that provides contractual development services.

- Founded Sophisticated Software Systems in 1982, incorporated as SophSoft in 1996
- Independent game development company operating full-time since late 1994
- Responsible for all technical decisions and product development functions
- Maintain ultimate responsibility for all aspects of business development and operation
- Created *Digital Gamecraft* division to produce, publish, and market in-house titles
- Developed *Digital Gamecraft Sample CD* to showcase company achievements
- Understand requirements of running a company, including budgets and legal concerns
- Managed small teams to bring dozens of products to completion and to market
- Work natively on multiple platforms and with a wide range of gaming hardware

#### *Demolish! Pairs* [Apple iOS], Digital Gamecraft

- Produced, designed, and programmed this mobile arcade/puzzle game
- Finished development alone after death of artist and business partner
- Wrote game descriptions and provided other marketing materials
- Handle all setup and interactions with App Store and iTunes Connect
- Created and published free-to-play version, *Demolish! Pairs FTP*
- Developed natively (for iOS) in Xcode using Objective-C++
- Title prototyped in Windows, being actively developed for Android

Client: Goodsol Development, Inc., Springfield, IL

- *Pretty Good MahJongg*, Windows and Mac OS X
- *Pretty Good Solitaire*, Mac OS X and iPad
- *Most Popular Solitaire*, Windows, Mac OS X, and iPad
- *Goodsol Solitaire 101*, Windows, Mac OS X, and iPad
- *FreeCell Plus*, Windows, Mac OS X, and iPad
- *Action Solitaire*, Windows
- *A Little Solitaire*, iPad
- Created *Goodlib playing card library* for *Pretty Good Solitaire* on Windows
- Programmed several in-house utilities to support game development
- Designed and programmed *Goodsol Solitaire Engine* for all three platforms
- Wrote numerous design specifications for potential game products
- Modified online high score server code in PHP and maintain game lists
- Designed complete XML specification for describing Solitaire games
- Spearheaded the Goodsol expansion into the Mac OS X market
- Created discrete full, trial, and Mac App Store SKUs for all Mac products
- Developed natively for Windows in Visual Studio using C++ and 80x86 assembly
- Developed natively for Mac OS X and iOS (both 32/64-bit) in Xcode using Objective-C++
- Implemented Mac code using Carbon libraries and later ported to Cocoa frameworks
- Still maintain productive client relationship after more than 15 years

Client: MVP Software, Grand Rapids, MI

- [MVP Backgammon Professional](#), Windows
- Implemented full screen graphics, dynamic game evaluators, complete multiplayer support
- Created and trained custom-designed expert and advanced neural network evaluators
- Programmed DirectDraw, DirectPlay, DirectShow, and DirectSound support routines
- [Vegas Fever: High Rollers Edition](#), Windows, published by Encore
- Designed and programmed all networking capabilities, including peer-to-peer DirectPlay support
- Implemented multiplayer server support for Microsoft Gaming Zone using Zone SDK
- [Card Crazy 2](#), Windows, published by Encore
- Created static multiplayer library with features similar to *Vegas Fever*
- Developed all titles for Windows and DirectX in Visual Studio using C++
- Wrote complete design document for *Backstreet Craps*, including milestones, for Encore
- Wrote design document for *Arcade Classics*, with custom treatments of 5 different games
- Provided technical consultation on various development issues for other programmers
- Evaluated software projects, source code quality, and potential MVP programming hires

Client: Microsoft, Redmond, WA

- [Microsoft Plus! Game Pack: Cards & Puzzles, Bicycle Card Collection](#), Windows
- Designed and programmed *WEpNet* dynamic multiplayer library
- Implemented peer-to-peer networking and player chat via DirectPlay
- Implemented DirectLobby support for Microsoft Gaming Zone
- Worked directly with Microsoft QA via VPN, accessing Raid bug tracking system
- Only two bug reports filed by Microsoft QA, bugs proven to be with Windows 2000 and DirectX

Client: Zombie, Seattle, WA

- [Locus](#), MS-DOS and Windows, published by GT Interactive
- Provided general development and production assistance for this initial Zombie title
- Programmed scripted enemy artificial intelligence via weighted values
- [ZPC: No Flesh Shall Be Spared](#), Windows, published by GT Interactive
- Responsible for Windows 95 game code using Bungie's *Marathon 2* engine
- Participated in game design meetings to help direct production
- [Spec Ops: Rangers Lead the Way](#), Windows, published by Ripcord
- Implemented interlaced AVI video playback on 3Dfx Voodoo hardware
- Performed first linting of the Viper 3D graphics engine source code
- Developed for all titles both remotely and onsite using C++ and 80x86 assembly

Client: Legend Entertainment, Chantilly, VA

- [Mission Critical](#), MS-DOS, published by RandomSoft
- Programmed *Coolant System* and *Faster-Than-Light Communications* game puzzles
- Designed and programmed *Alien Gateway* puzzle (ultimately unused in game)
- Implemented scientifically accurate 3D representation of near-Earth star system
- Product was named "Game of the Year" for 1995 by *Byte Magazine*

Client: Virtual Personalities, Beverly Hills, CA

- [Sylvie](#), a "verbot" (verbal robot), Windows
- Designed and programmed this first "verbot" based on text-only chatterbot
- Implemented voice synthesis and phoneme accurate lip synching
- Worked with natural language processing and computer understanding
- Featured in *Time Magazine* [December 8, 1997] and *Digital Magic* [August 1988]
- Software was interviewed on the television program, *Good Stuff* [December 1997]

Client: Z'art, Marina Del Rey, CA

- [Z'art Photo Paint-by-Number](#), Windows
- Programmed image processing software for creating paint-by-numbers from photographs
- Implemented color reduction and large format printing using Bezier curves for regions
- Worked extensively with TWAIN libraries for scanning provided customer images
- Created related Photoshop plug-ins for performing image processing of scanned images
- Service featured on *Inside Edition* television program and on QVC shopping channel thrice

**PACMANIA 1.1** [MS-DOS], Sophisticated Software Systems

- Solely produced, designed, programmed, and published this classic arcade game in 1990
- Developed natively using 8086 assembly language (primarily) and Turbo C
- Featured in *Fatal Distractions*, Waite Group Press, 1994, as one of the best in its category
- Featured in "Shareware Showcase" column in *Computer Gaming World* [May 1995]

Other titles/products:

- [SnagIt 2.1](#) [Windows], TechSmith Corporation
- [Arguile](#) [Windows - unpublished], CyberDice/Hasbro Interactive
- [X-Files](#), [PSX - uncredited], Hyperbole Studios, published by Fox Interactive
- [The Roswell Omen](#) [Windows - demo], Marlin Studios
- [Wheels](#) [Mac/Windows], R.J. Cooper and Associates
- Virtual i-O virtual reality headset drivers for *Doom/Doom II* and *Dark Forces*, Virtual i-O
- CyberMaxx virtual reality headset drivers, VictorMaxx Technologies
- PC PowerGlove device drivers for Windows and DirectInput, AGE Entertainment

**Principal Software Engineer, Advanced Concepts Group**, Daqri, LLC, Los Angeles, CA - July, 2015 to June, 2018  
Daqri was an industry leader in augmented reality (AR) hardware, software, and development tools.

- Managed team of seven software engineers producing development tools and AR software
- Responsible for execution of multiple products in the [Worksense](#) suite for enterprise
- Led development of special project to build existing applications to run on Windows
- Coordinated with design/creative leads to help determine department direction
- Worked with Daqri Smart Glasses, Daqri Smart Helmet, and Intel RealSense hardware
- Contributed to ARToolKit, an open source augmented reality SDK owned by Daqri

**Custom Application Lead, Inspiration / Creative Play**

- Led development of [Alterra](#), a groundbreaking AR project featured at AWE conference
- Coordinated team of eight engineers, seven artists, and three designers
- Managed design and development of various prototype R&D projects
- Contributed to programming of [Easy Animation Studio](#) [iOS/Android] for Crayola
- Developed multiple native Unity plugins for Apple iOS and Android platforms
- Designed and implemented system for downloading and caching dynamic content

**Senior Software Engineer**, Spectrum HoloByte, Inc., Alameda, CA - February, 1993 to December, 1994  
Spectrum HoloByte was a game developer and publisher, known for ST:TNG, Falcon, and Tetris games.

**Lead Programmer:** [Star Trek: The Next Generation, "A Final Unity"](#), MS-DOS (extended)

- Led technical design and implementation, directing a team of eight other programmers
- Specified pioneering conversion to 32-bit protected mode, VESA graphics, and CD-ROM
- Implemented first PC Group version control system and code management policy
- Programmed library routines and tools for DOS/4GW (DPML) and X-32 support
- Worked with speaker-independent voice recognition system from IBM [omitted from game]
- Developed using C/C++ and extensive 80386 assembly language
- Individually developed a scripted multimedia player sold as the "CD-ROM Preview"
- Product was featured on the cover of the April 1994 issue of *Computer Gaming World*

**Vice President of Programming**, Datalus, Incorporated, Okemos, MI - April, 1991 to November, 1992  
Datalus was a software company specializing in multimedia training software.

- Created training applications and tools, supervising two other programmers
- Performed programming for clients including Consumers Energy and Kmart
- Worked with analog and digital video technology, laser discs, and touch screens
- Extensive use of ActionMedia II Digital Video Interactive (DVI) board from Intel and IBM

**Programmer:** [MultiMedia DeskTop](#) (MMDT), Windows and IBM OS/2

- Designed and programmed this CASE (Computer-Aided Software Engineering) presentation tool for rapid prototyping of interactive educational and training lessons using video
- Developed using Asymetrix Toolbook and OpenScript, generating new Toolbook projects
- First third-party software product ever remarketed by IBM (in 1992)

**Computer Programmer**, Quest Software, Inc., Lansing, MI - August, 1988 to May, 1990  
Quest Software was a game development company known for classic RPG video games.

**Programmer:** *Legacy of the Ancients*, IBM PC, published by Electronic Arts

- Programmed *Stadium Defender* and *BlackJack* mini-games
- Created complete sound library via direct manipulation of sound chip
- Designed and programmed diskette management system
- Programmed main menu and configuration systems
- Developed using Turbo C, Microsoft BASIC, and extensive 8086 assembly
- Performed final game build and packaging, as delivered directly to EA

**Lead Programmer:** *Legend of Blacksilver*, Apple II, published by Epyx

- Ported entire game from published Commodore 64 title
- Programmed internal tools and complete game function library
- Developed using 6502 assembly language and Applesoft BASIC
- Created custom launch bootstrap code using PC cross-assembler

**Computer Consultant**, Innovision Consulting, Owosso, MI - October, 1987 to August, 1988  
Innovision Consulting was a computer consulting firm and VAR with an early mobile product.

- Founded company and served as primary consultant and programmer
- Developed *Auto Dealer System* (ADS) to complete forms for automobile sales
- Programmed and marketed mobile computer system for calculating auto loan payments
- Developed products using Turbo C, BASIC, and dBase III compiled with Clipper
- Research and development with hardware voice recognition devices for providing assistance to individuals with degenerative muscular diseases and improving their quality of life

**Service and Support Coordinator**, Midwestern Technical Products - May, 1985 to October, 1987  
Midwestern Technical Products was an independent computer retailer and consultant.

- Performed all programming for internal systems and clients such as Electronic Data Systems
- Managed entire computer service department, supervising four service technicians
- Handled customer support, including service intakes, offsite maintenance, and parts orders
- Network administration of LAN (Corvus), including software and hardware installations
- Developed numerous full database applications, using dBase III and Clipper

## NOTABLE ACHIEVEMENTS

- Elected twice as Chairman of the Board for the Association of Shareware Professionals, an international industry trade organization. Led continuous policy discussions, board and membership voting, and member communications, helping to increase membership numbers to maximum historical level.
- Presented talk at SIC (Shareware Industry Conference) 2006 in Denver, CO – *Practical Interface Guidelines: Things they did not teach us in programming class.*
- Won 2007 Shareware Industry Award, *Best Non-Action Game*, for *Pretty Good MahJongg*, accepting the SIA as the primary designer and sole programmer for the product.
- Presented talk at ISVCon (Independent Software Vendors Conference) 2012 in Reno, NV – *Quality Assurance for Small Software Publishers.*
- Featured in the December 1997 issue of *AV Video Multimedia Producer* as part of an article on working successfully with remote talent.
- Served as captain of the four-man programming team that won the ComCon '84 International Programming Competition sponsored by Touche Ross and Company.
- Placed fifth in North America in the American Computer Science League's 1984 All-Star Contest.