

# alexander geis, multimedia engineer

## PERSONAL INFORMATION

**name** Alexander Edward Geis  
**born** September 16, 1981, New York  
**purpose** The creation of specialized hybrid systems through the combined use of electromechanical engineering, advanced digital multimedia, computer science and higher level mathematics.

## CONTACT INFORMATION

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**personal** www.ageis.com  
**work** www.21productions.com

## EDUCATION

**the green vale school** Graduated, June 1997  
**the hotchkiss school** Graduated, June 2000  
**new york university** Select Classes, June 2000  
**carnegie mellon university** Bachelor of Science in Mechanical Engineering, May 2004  
Minor in Film and Digital Imaging, May 2004  
Select Classes in Music Technology, 2009-2010

## PERFORMANCE

**carnegie mellon university** 3.21 QPA  
**gre general mathematics** 780  
**gre general writing** 5  
**ap calculus bc** 4  
**ap physics mechanics** 4  
**ap physics electromagnetism** 4  
**sat2 math iic** 790  
**sat2 physics** 720  
**sat2 chemistry** 730

## EMPLOYMENT

### **21 productions, inc.**

january 2002 – present

Founder and President  
Chief Technology Officer

### **carnegie mellon university**

september 2005 - present

College of Fine Arts Systems Administrator, Webmaster  
Miller Gallery Systems Administrator  
School of Drama Webmaster  
School of Music Systems Administrator, Webmaster

### **speak with me, inc.**

january 2005 - present

First Employee  
Head Graphic and Interaction Designer  
Systems Administrator

### **tru optik data corp**

january 2012 – present

Co-Founder  
Chief Technology Officer

## AWARDS AND RECOGNITION [EDUCATION]

### **the hotchkiss school**

Digital Photography Award, 1999/2000

### **the green vale school**

The Derby Medal, 1997

### **math counts**

Regional/Individual, 2nd place, 1996  
Team, 1st place, 1996  
State, honorable mention, 1996

## AWARDS AND RECOGNITION [FILM]

### **johnny montana**

post production supervisor

Best Narrative Feature, Moondance Film Festival 2006  
Soundtrack Grant Award, Moondance Film Festival 2006  
Silver Spotlight Award, Australian Film Festival 2006  
Honorable Mention, Bahamas Film Festival 2006

## AWARDS AND RECOGNITION [MEDIA]

### **the paper**

founder, producer, editor

Silver Medalist, Columbia Scholastic Press Association 2004

### **max's big adventure**

producer, editor, animator

Best in State, Connecticut Scholastic Art Awards 2000

### **mannequin's mirror**

designer

Best in State, Honorable National Mention  
Connecticut Scholastic Art Awards 1998

## COMPANY CLIENTS

**aspen music festival**  
**cabaret & pict pittsburgh**  
**carnegie mellon university**  
**eastman music company**  
**marvin hamlisch**  
**vincent laforet**

Live Performance Webcasting and Web Design  
Live Theatre Performance Webcasting  
School of Mechanical Engineering, Diagram Design  
Web Design  
Video Production  
Storage and Systems Administration Consulting

## SOFTWARE BACKGROUND

### **languages**

- Core Awk, C, Java, Lua, Perl, Python, R
- OS Applescript, Quicktime API, Unix Shell
- Web AJAX, CSS3, HTML5, Javascript, jQuery, NodeJS, PHP

### **operating systems**

- \*nix CentOS, Debian, IRIX, RedHat, Solaris, SUSE, Ubuntu
- Mac Mac OS 7-9, Mac OS X, Mac OS X Server
- Windows XP, Vista, Windows 7/8

### **software**

- Adobe Master Collection
- Apple Aperture, Final Cut Studio, Qmaster, QTSS, Shake, Xsan
- Avid Media Composer, ProTools HD
- Data Hadoop, MongoDB, MySQL, Redis, Sphnix
- Web Apache, Nginx

## HARDWARE BACKGROUND

### **multimedia**

- Extensive knowledge in video SD and HD standards, I/O and codecs
- Optimized compression of video and audio for local and remote playback
- Advanced color-space, frame rate and standards conversion
- Audio recording, mixing and mastering knowledge for specialized media
- Video edit, composition, special effects and color grading
- Live and archived web media delivery for desktop and mobile

### **networks**

- Advanced layer 2-7 networking with ipfw firewall and ifconfig
- Thorough knowledge of SonicWall hardware
- Bandwidth optimization for high load data networks involving RAID and SAN
- Low latency optimization and load balancing for multi-datacenter clusters
- Public and private cloud network planning

### **systems**

- Server and workstation maintenance for Macintosh and Linux
- Shared Area Network (SAN) and iSCSI
- Network services including AFP, DHCP, DNS, FTP, NAT, NFS, VPN and WINS
- VMWare ESXi and virtual machine configuration
- Datacenter virtual machine and cloud OS deployment, including Amazon
- Big data management for 1PB+ datasets, including scalable RDBMS support

## OTHER ACCOMPLISHMENTS

### **21systems**

creator and developer

Specialized Unix/Web Media Package

### **the paper**

co-creator, head of layout and design

A Hotchkiss School Award Winning Publication

## COURSEWORK

### **carnegie mellon university**

pittsburgh, pennsylvania

09101	Intro to Experimental Chemistry	24384	Entertainment Engineering
09105	Intro to Modern Chemistry	24401	Engineering Analysis
15100	Intro to Java Programming	24441	Engineering Design
15123	Effective Programming in C/Unix	27100	Materials Engineering
18290	Signals and Systems	33106	Physics 1
21131	Analysis 1	33107	Physics 2
21132	Analysis 2	39245	Rapid Prototyping Design
21259	Calculus in 3-D	48413	Building Acoustics
21260	Differential Equations	54433	Producing for TV and Film
24101	Fundamentals of MechE	57337	Sound Recording
24201	Engineering Graphics	57338	Sound Editing and Production
24221	Thermodynamics 1	57438	Multitrack Recording
24231	Fluid Mechanics	57617	Independent Sound Production
24261	Statics	57847	Electronic and Computer Music
24262	Stress Analysis	70414	Tech-Based Entrepreneurship
24302	Seminar 1	73100	Principles of Economics
24303	Seminar 2	76101	Interpretation and Argument
24311	Numerical Methods	76239	Intro to Film Studies
24321	Thermal Fluids	76339	Advanced Studies in Chinese Cinema
24322	Heat Transfer	79104	Intro to World History
24351	Dynamics	99103	Mac CSW
24352	Dynamic Systems and Control	FM164	Filmmaking 1
24371	Electromechanical Systems	FM215	Video Production 1

### **new york university**

new york, new york

3D Computer Animation and VFX Using Maya