

# OTTO SCHNURR

## iOS Software Engineer

<http://OttoSchnurr.com>

[otto.schnurr@siggraph.org](mailto:otto.schnurr@siggraph.org)

---

### SUMMARY

---

- Solid career creating durable solutions for mobile and creative professionals.
- Concise, flexible, performance-sensitive software.
- Commitment to software as a master craft.

---

### SKILLS

---

**Languages:** swift, objective-c, c++, c, python, lua  
**Compilers:** Xcode, gcc, CodeWarrior, Visual Studio  
**Technologies:** core animation, core data, AV foundation, STL  
**Tools:** git, jenkins, svn, lint, doxygen, make, agile

---

### MOBILE EXPERIENCE

---

1995 - 2001, 2009 - present

#### **Consumer Video Analysis**

Okemos, Michigan

*TechSmith Corporation*

*Swift, Objective-C for iOS, Mac OSX*

2010 - present

#### **Technical lead for iOS team that collaborates with web and Android developers.**

Personally implemented video scrubbing, telestration and side-by-side analysis for iOS.

See CoachsEye.com for more details. Mac developer for Jing.

Lansing, Michigan

#### **Short List**

*Objective-C for iOS*

2009 - 2013

#### **Independently designed, scheduled, implemented and released an iPhone application.**

Regression testing for the project currently passes over two-hundred and eighty test cases.

See ShortListApp.com for more details.

#### **Voice Chat System**

Itasca, Illinois

*Auvo Technologies*

*C++, Java for Unix, Windows*

2000 - 2001

#### **Leader of team that delivered voice and text chat in start-up company's first prototype.**

Designed and implemented a multi-threaded real-time transport protocol engine for the platform.

#### **Machine Learning Research**

Schaumburg, Illinois

*Motorola Labs*

*C++, C, Java, JNI for Unix, Windows*

1995 - 2000

#### **Collaborated with linguists and engineers to create a high quality text-to-speech system**

using multiple neural networks. Developed a compiler for translating simulation results into optimized C++. The largest network contained over 200,000 trainable parameters and executed 100 times per second to synthesize speech in real time.

#### **Represented Motorola as a member of the MPEG International Standards Organization.**

Attended ANSI and ISO meetings in Japan, Finland, Dallas and Chicago. Researched, implemented, patented and contributed audio compression technology to the MPEG-4 reference software suite.

---

## ANIMATION EXPERIENCE

2001 - 2008

### **Reflex Animation Tool**

(telecommute)

San Francisco, California

Digital Fish

C++, Objective-C for Mac OSX

2007 - 2008

#### **Improved pose-to-pose workflow by adding a pose mode to Digital Fish's animation tool.**

Implemented a range of animation functionality to develop, edit, blend, time and preserve poses. Enhanced rig development by adding proxy geometry and diagnostics to the Reflex Markup Language. Collaborated with a globally distributed team on a full-time basis by attending daily scrum meetings.

### **Advanced Studies in Character Animation**

(telecommute)

Berkeley, California

Animation Mentor

Maya for Mac OSX

2005 - 2006

#### **Learned animation principles and workflows directly from feature film professionals.**

Submitted shots and addressed subsequent feedback on a weekly basis for 18 months.

### **Animation Engine**

Midway Games, Advanced Technology Group

Chicago, Illinois

C++ for PlayStation 2, Xbox, Game Cube, Windows

2001 - 2005

#### **Contributed to the shipment of interactive entertainment products**

by refactoring and extending one of Midway's proprietary animation engines. Each title deployed over one thousand sequences of animation across crowds of real-time characters.

#### **Designed and implemented a new cross-platform, blend-based animation engine.**

Maintained backwards compatibility with legacy animation scripts by building a script compiler and interpreter for the new animation engine. Each game title used over one hundred thousand lines of script content.

---

## GAME CREDITS

**NFL Blitz Pro** (2003), **NBA Ballers** (2004), **PsiOps** (2004), **Mortal Kombat** (2004), **Blitz** (2005)

---

## EDUCATION

**M.S. Electrical Engineering**

Digital Signal Processing

**University of Michigan**

**B.S. Electrical Engineering**

Magna Cum Laude

**Michigan Tech University**

---

## PATENTS

*Method and Apparatus for Animating Virtual Actors From Linguistic Representations of Speech by Using a Neural Network*

Patent Application  
Filed 1997

*System and Method of Encoding and Decoding a Layered [Audio] Bitstream by Re-Applying Psychoacoustic Analysis in the Decoder*

Patent Number 6,092,041  
Issued 2000