Résumé of Philip Chu

Objective Seeking challenging projects utilizing innovative software to create enriched consumer experiences, with a particular interest in open-source programming and the convergence of internet, multimedia, and wireless technologies.

Career Two decades of software development experience in a variety of roles, with projects spanning interactive entertainment, wireless internet, computer graphics, semiconductors and defense.

Education Bachelors degree in computer science and engineering from the Massachusetts Institute of Technology and a masters degree in computer science from Johns Hopkins University.

_____**Professional**

Interactive Entertainment

Technicat
President
April 2002-Present

<u>Consulting</u>   Huntington Beach, CA

Providing software development, project management, production planning, game design and writing services. Contributed to products such as the video game Darkwatch and the 3D graphics package Nendo. Internal activities include open-source contributions and Java game development as Fugu Games. White paper published by the Nintendo Software Development Support Group.

Hyper Entertainment
Senior Game Programmer
January 2001-June 2001

<u>Location-based entertainment spin-off from Sony.</u>   Burbank, CA

HyperBowl Lead programmer for attraction game installed in locations such as GameWorks, Jillians and the Sony Metreon. Optimized renderer, provided Mirai/GameExchange support, DirectSound fixes, Direct3D compatibility with latest nVidia graphics cards. Released arcade and French versions in May 2001.

Wireless Internet

Univessence Digital Productions
Consultant
October 2000-January 2001

<u>Multimedia technology and production studio</u>   Culver City, CA

Chief architect for a wireless information network. **CAMPA** Prototyped web collaboration tools using Java Swing and Mozilla .

Neomar
Technical Lead
December 1999-July 2000

<u>Wireless internet startup</u>   San Francisco, CA

Co-lead for development, from design to deployment in five months, of a WAP gateway supporting handheld devices such as RIM, Palm. Responsible for HTTP, transcoder, security and management implementation. Integrated Certicom SSL, JavaMail, JMX, JSSE, JTAPI. Performed web testing using Squid. Launched in May 2000 for the Motient wireless service.

Computer Graphics

Digital Chameleon
Vice President of Technology
January 1998-September 1998

<u>Computer graphics startup</u>   Los Angeles, CA

Character Animation System Led development of a Java-based behavioral animation application on SGI Irix and Windows NT.

Consultant
September 1997-December 1997

Operating officer in a startup developing 3D graphics and animation products targeting film visual effects and game development.

Nichimen Graphics
Consultant
August 1997-November 1998

<u>Computer graphics startup</u>   Los Angeles, CA

Mirai Implemented tessellator, debugged Win32 issues and multithreading bugs with nVidia graphics drivers.

Manager of Core Software
June 1996-July 1997

NWorld 3.2/FastTrack Responsible for core technology components and multi-platform support. Led a group of five programmers developing the company's first PC product, demonstrated at I/ITSEC and Siggraph, and completed within fifteen months. Liaison with graphics hardware ISV's and middleware vendors, including Intergraph, 3Dlabs, and Sun Microsystems. **NWorld 3.1** Maintenance release, supporting SGI Octane and O2 platforms. Group manager responsible for all core libraries, including 3D rendering, image processing, licensing, installer, user interface and file system.

Member of Technical Staff December 1995-May 1996	**NWorld 3.0** Replaced the IrisGL-based rendering and user-interface libraries with an OpenGL implementation, supporting SGI Impact and Indigo platforms. **NWorld 2.1** Systems programmer for a 3D modelling and animation package targeted at game development and visual effects for film. Fixed IrisGL compatibility problems with newly-introduced SGI Impact systems running IGLOO, the IrisGL emulator implemented in OpenGL.

Government/Defense

BBN   <u>Research and development</u>   Cambridge, MA

Software Engineer February 1994-November 1995	**ARGUS 2.0-3.0** Development of a target signature database for the National Target/Threat Signatures Data System.

Science Applications International   <u>Government/military contractor</u>   Columbia, MD

Software Engineer January 1993-January 1994	**Warbreaker** Migrated DIS platform to a C++-based networking library, VR-link in time for an exercise within two months. **Maritime Synthetic Theater of War** Developed and integrated Distributed Interactive Simulation (DIS) components for wide-area networked military simulations at the Johns Hopkins University Applied Physics Laboratory, deployed within five months.

AURA   <u>University astronomy consortium</u>   Baltimore, MD

Software Engineer October 1990-May 1992	**Proposal Entry Processor** Developed proposal processing software for astronomers working with the Hubble Space Telescope at the Space Telescope Science Institute.

Semiconductors/Manufacturing

Interval Logic   <u>Supply-chain management startup</u>   Menlo Park, CA

Senior Principal Software Engineer April 1998-December 1999	**Leverage for Scheduling 3.2** Technical lead for group of five programmers developing all desktop and web interfaces, installation and licensing components. **Leverage for Scheduling 3.1** Technical lead for group of three programmers developing web, ActiveX and installer and licensing components of an automation system for semiconductor manufacturing. **Leverage for Scheduling 3.0** Packaged a distributed manufacturing scheduling system for semiconductor fabs with Installshield and ObjectStore.
Senior Software Engineer December 1998-April 1999	**Leverage for Planning 4.2** Optimized semiconductor fabrication planning system using TclPro and TclJava.

MIT   Cambridge, MA

Research Specialist September 1989-September 1990	**Database Accelerator** Developed simulators and sample applications for a content-addressable memory (CAM) at the Microsystems Technology Laboratory. **Content-Addressable Parallel Processor** Developed simulator and cross-compiler for a SIMD parallel processor based on CAM units with conditional writes. Implemented image-processing algorithms.

Texas Instruments   <u>Fortune 500 company</u>   Dallas, TX

Member of Technical Staff May 1988-August 1989	**DROID** Development of a VLSI CAD system applied to products such as TI DRAM's. Responsible for technology library, routing and layout modules.

Academic

Graduate

Johns Hopkins University   Baltimore, MD

Ph.D. Candidate September 1993-January 1994	**Courses** Automata and functional programming. **Tutor** Volunteer computer instruction for disabled children at Learning Independence through Computers.
M.S. Computer Science September 1992-January 1993	**Courses** Algorithms, string-matching, computer graphics, machine vision and language theory. **Research Assistant** User interfaces for artificial intelligence planning systems at the NASA Ames Research Center. **Teaching Assistant** Teaching assistant for Computer Literacy undergraduate course. **Tutor** Volunteer

instructor for children in the Johns Hopkins University Tutorial Project.

Southern Methodist University   Dallas, TX

Graduate Studies
June 1988-August 1988

Courses Graph theory and software engineering.

Undergraduate

Massachusetts Institute of Technology   Cambridge, MA

Graduate Studies
February 1990-May 1991

Courses Computer architecture.

S.B. Computer Science and
Engineering
September 1984-May 1988

Thesis: *Exploiting Parallelism in Game-Playing Programs.* Explored parallel game search algorithms on a 33-processor Lisp machine. **Research Assistant** User interface for START natural language system and implementation of PLOT3D machine vision tool on Symbolics Lisp machines at the MIT AI Laboratory. **System Administrator** Installed and maintained hardware and software systems at the MIT Advanced Study Program **Technical Sales Consultant** Technical sales and service at MIT Microcomputer Center. **Technical Writer** Authored technical press releases for Hennessie Public Relations.

Iowa State University   Ames, IA

Intern
June 1983-August 1983

Chemical engineering laboratory internship in the Iowa State Summer Science Program for undergraduate credit.

West High School   Iowa City, IA

High School Graduate
March 1982-May 1984

Laborary Assistant Assisted in study at University of Iowa Cancer Research Lab. **Soccer team** Varsity letter fullback. **Chess club** Captain, first and second board. **School newspaper** Associate Editorial Editor. **Othello** Freeware game running on Apple II. **Honors** National Honor Society. National Merit Semifinalist. Iowa State science award. Winner of soil conservation essay contest. **Programmer** Educational software development at CONDUIT (University of Iowa)