

# TERRENCE Y. CHAY

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*INTERNET ARCHITECT  
INSTRUCTOR/TEAM LEADER  
PROBLEM SOLVER*

## EMPLOYMENT

2007- **Tagged**, San Francisco  
**Software Architect**

Responsible for all site stability, scalability, speed, and security issues. System is built on OPAL (Oracle PHP Apache Linux). When OPAL is found lacking, responsible for decision to move parts to Java layer.

Solved site **stability** and **scalability** issues allowing for virality curve to grow site from 18 million registered users (January 2007) to well over 90 million registered users (March 2008).

Rearchitected site **performance** allowing a growth from 830 million monthly page views (February 2008) to 5.5 billion monthly pageviews (February 2009) while reducing the web server count in half.

Architecture made to **securely** transparently and dynamically recover from various security vulnerabilities (XSS, session fixation, cookie vulnerabilities), of which there have been many attacks on the site. Previously a database transaction that took weeks to complete had to be executed to deal with cleaning up after attacks.

Finished **database partitioning** (February 2007) to allow for site scalability.

Designed **API** to integrate with third parties (March 2007). Transformed it to both an internal API and an Ajax/JSON one (February 2008) that is configurable, multiplexed, cacheable, and secure (XSRF, etc.). It is now used in every web page of the site as the DHTML library along with Yahoo User Interface (YUI) (supervised migration from various other frameworks starting in February 2007).

Built the most popular dating application on the web in order to increase site **engagement** (May 2008). The application generates over 87 million page views, 17 million yes clicks, and 2.2 million matches every day (January 2009).

Built and deployed static content compiler (CSS, JS) to also be **dynamically edge-cacheable** (November 2008) while limiting both bytes and transaction numbers. Built and begun deployment on memcache-based dynamic cache for API and pages (the latter edge cacheable) that is generating an average of 3% extra server capacity a day (March 2009).

Help transition development from a waterfall release system (6 releases in 2006), to an agile one (27 releases in 2007), to a **web-agile process** (daily releases). Engineering codebase, team structure, work environment, and development process to **reduce engineering churn** from 100% a year when joining the company to <10%, while engineering team size has more than doubled in size.

This lead company to 10 months straight of **profitability** in the middle of economic downturn (since April 2008), **top 80 website worldwide** (Alexa, since November 2008, up from #320 in December 2007), **#3 social network** in advertising market share (HitWise, November 2008) **#3 largest overall social network** in the United States (Nielsen NetRatings, December 2008), **#3 and fastest growing social network** in the United States in total daily users behind MySpace and Facebook, (comScore Media Metrix, February 2009), and **#3 and fastest growing social network** in the United States in time spent on site per user behind MySpace and Bebo (comScore Media Metrix, February 2009).

2004-2007 **Plaxo**, Mountian View  
**Web Applications Engineer, Scientist**

Created Plaxo eCards website as a **revenue product** in the fall of 2006. This sent over one million eCards and generated a quarter of million dollars in sales in the first month of operation and helped close Plaxo's second and final round of funding (before being sold to Comcast in 2008 for \$175M). This is an Ajax site written in PHP that seamlessly integrates into a heterogeneous non-PHP back end.

Implemented Plaxo web client, including architecture of web-based Calendar, Tasks and Notes (Ajax, Remote Scripting) and **introduced Ajax** to Plaxo (2004). Originally attached to product design, **helped create web engineering team** from one person (me) to seven people (2007).

Implementing next corporate website including **g11n** support and content management.

Designed and implemented survey and reporting engine (2005)

2002-2004 **MyCasa Network**, Palo Alto  
**Senior Internet Engineer**

Developed Server3 Platform core technology and **web-based services** (SOAP, WSDL, XMLRPC) for remote home control and personal security monitoring.

Designed presentation layers (HTML control panel, WAP, VoiceXML, PocketPC, Palm) **replaced outsourced third party product and consulting team**.

Security code review; Created billing system.

Gave **business presentations** and wrote engineering white papers for partners and potential investors including Logitech, Telecom Italia Mobile, and Nokia.

2000-2001 **QIXO**, San Jose  
**Director of Engineering**

Developed core technologies for the **first internet travel comparison search engine** (XML, REST, C++, PHP) recognized in major media outlets including the Wall Street Journal, Time, ABC News, Fodor's, and USA Today.

Implemented wireless presentation (AvantGo, PQA, WAP, VoiceXML, XSL-T).

Wrote a live **real-time web front end** to the search results using Remote Scripting (PHP, Ajax, Javascript).

Monitoring, load balancing, and web statistics for virtual network WAN (Apache, PHP, shell, C, Summary).

System (FreeBSD, Linux) and Database (MySQL, PostgreSQL, Oracle) administration.

**Supervised** six programmers.

1999-2000 **ZipAsia**, San Jose  
**Engineering Manager**

Responsible for U.S. portal of Asian content provider.

Built **multi-lingual**, mutli-ui extensible website (ASP, IIS, XML, XSL-T).

Database administration (MS SQL Server).

**Managed** ten person team of programmers, writers, and designers.

## EDUCATION

1999 **University of Illinois at Urbana-Champaign (UIUC)**, M.S. Physics

1994 **California Institute of Technology (Caltech)**, B.S. Physics

## PRESENTATIONS & PUBLICATIONS

### *Conference Presentations*

"Chinese Proverbs: High concept, high touch... and high tech."

**phpltek, Chicago**, May 2009, keynote speech

"PHP without PHP"

**International PHP Conference, Berlin**, May 2009

"Making Frameworks Suck Less"

**International PHP Conference, Berlin**, May 2009

**PHP Meetup, San Francisco**, November 2008, Sun Microsystems-sponsored

**ZendCon, San Jose**, September 2008, Unconference

"The Internet is an Ogre: Finding Art in the Web Architecture"

**OSCON, Portland**, July 2008

**Dutch PHP Conference, Amsterdam**, June 2008, closing keynote

**phpltek, Chicago**, May 2008, closing keynote

**ZendCon, San Francisco**, October 2007

"PHP Scalability, Performance, and the Future"

**geekSessions, San Francisco**, January 2008, session organizer & moderator

"The Underpants Gnomes Strategy Guide: An eCards Case Study"

**PHP Works, Atlanta**, November 2007

**ZendCon, San Jose**, November 2006

**OSCON, Portland**, July 2006

"0 to 60 in 45 Minutes: A down and Dirty Ajax Design Patterns Firedrill"

**OSCON, Portland**, July 2006

"Building Liquid Web Applications with Remote Scripting"

**OSCON, Portland**, August 2005

"Patterns by Example in PHP Web Applications"

**PHP West, Vancouver**, January 2005

**OSCON, Portland**, July 2004

"The Fear and Loathing Guide to PHP and Basic Object-Oriented Design Principles"

**PHP Meetup, San Francisco**, February 2008

**International PHP Conference, Amsterdam**, May 2004

**PHPVancouver, Vancouver**, February 2004

**PHPCon, San Jose**, October 2003

"The Wireless Home Attendant"

**DEMOMobile, San Diego**, September 2003

"XML in Web Application Development"

**SINA.com, Sunnyvale**, November 2000

### *Teaching*

1995-1997 **University of Illinois at Urbana-Champaign**

Engineering Physics

Awards:

Alpha Lambda Delta Award for Outstanding Teacher of Freshmen  
Scott Anderson Research Award (Spring '96, Fall '97)  
Highest-rated teacher in department (Fall '95, Spring '96)

#### *Publications & Research*

Ceperley D., N. Goldenfeld, T. Chay, G. Bauer, E. Drager. "**Prediction of Macroscopic Properties of Liquid Helium from Computer Simulation.**" 1999.

Krieger D., R. Simon, T. Chay, and R.J. Sciabassi. "**A WAN surgical monitoring application built on PVM.**" *PVM Conf. Workshop*. Pittsburgh, PA. 3/1996

Chay, T. R., T. Y. Chay. "**Effects of Channel Blockers on Reentrant Arrhythmias: Model Study**". *IEEE Proc. Comp. Cardiology*. Bethesda, MD. 10/1994. pp. 245-248.

Krieger D., R. Simon, T. Chay, and R.J. Sciabassi. "**A WAN Surgical Monitoring Application.**" *Int. Conf. Biomagnetism*. Vienna, Austria. 9/1993.

## **SKILLS**

### *Web Applications and Languages*

Ajax, Apache, CSS, HTML, HTTP, Javascript, JSON, PHP4, PHP5, REST

### *XML*

DOM, SAX, SimpleXML, Schema, SOAP/WSDL, XHTML, XMLRPC, XSL-T, WML/WAP, VoiceXML

### *Software Languages*

C, C++, FORTRAN77, Fortran90, Perl, Python, shell, TCP/IP

### *Software Applications*

CVS, MySQL, memcache, Oracle, PostgreSQL, rpm, SQLite, Subversion, VMWare

### *Systems*

Linux system server setup and administration  
FreeBSD and Mac OS X server administration  
Desktops: Mac OS X, Windows 2000/XP, Linux

## **KEYWORDS**

Ajax/Javascript, architecture 4S (stability, scalability, speed, security), caching, creative, database, instruction, internet, PHP, problem solver, program manager, quick learner, web application programming, web UI, XML/JSON

*References upon request.*