Resume of: **Gary Swift**

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Career Summary

Software and Web Systems Designer, Developer and Manager

A successful record in software and web development, engineering, processes and management. A deep understanding of both user design issues and the underlying core technology. Expert with analytic and creative problem solving methods and tools. A passion for solving complex systems design problems with innovative elegant solutions, including the front and back-end code. Very experienced UNIX, Linux and LAMP veteran.

Expertise

Design: Software/web design and engineering, systems design, strategic design, design methods and problem solving tools, industrial and product design, graphic and information design, user interface (UI) and user experience (UX) design, design pattern languages. Five years teaching at Cal Arts, School of Design.

Technology: Internet and web technologies (HTML, DHTML, XML, CSS, CGI, CMS, AJAX, LAMP, Apache, etc.), UNIX (Solaris, Linux, OSX, etc.), systems integration, configuration management, version control (CVS, Git, etc.), build and release, Xcode and TestFlight, visualization tools (PhotoShop, GIMP, Visio, etc.), image processing, Interactive Data Language (IDL), Perl, PHP, JavaScript, shell scripts, and some C and Java.

Management: Fifteen years of team leadership and program management in the UNIX software industry spanning the entire software development life cycle (SDLC), with focus on corporate-wide engineering policies, procedures and tools. Project management skills including Structured Planning, PERT/CPM, Redmine, etc.

Experience

Partner, Designer and Engineer, The Plan9 Group, Santa Monica, CA (2010-present)

- Developed **software tools** for the **Plango mobile language learning app**, an iOS (iPhone, iPad) product of The Plan9 Group. These tools included processing and conversion among PDF, PostScript, ASCII, XML, graphical (PNG, etc.), and sound file (MP3, etc.) formats, synchronizing the display of text and speech, and automating the production of content. Technologies included various PDF tools, GhostScript, ImageMagick, Sound eXchange (SoX), and Perl. Used **Xcode** to manage and build product archives. Implemented iOS 7 changes with Interface Builder and **Objective C** code.Also developed the product's web site, **plangoplango.com**.

Principal Software and Web Designer, Design MatriX, Topanga, CA (1994-present)

- Served as technical consultant and engineer for the **Einstein Papers Project at CalTech** to convert book production to **Structured FrameMaker** and to produce web based **E-books**. This entailed developing Structured Frame templates, Conversion Tables, Element Definition Documents, Structured Applications for **XML** authoring, and ExtendScript (JavaScript) for batch conversion of books..

- Designed and developed **wynnlandscapein.com** for Wynn Landscape Architects, Inc., based on **WordPress** with custom JavaScript/jQuery for project slide shows, and utilizing a minimalist Responsive Web Design.

- Designed and developed **terry-oshea.com**, a website for the estate of artist Terry O'Shea. Employed Responsive Web Design (RWD) techniques to scale pages and images to fit browsers on both desktop and hand-held devices. Site extensively uses an in-house slideshow system implemented with unobtrusive JavaScript, and **WordPress** for editorial content.

- Developing in-house a **Wiki web site for eco-design and green design**. This is like Wikipedia except that the articles are linked design patterns for solving critical environmental design problems, such as energy conservation and use, water resources and waste management. The system is based on **MediaWiki**, powered by PHP and mySQL on Linux, with extensive front end modifications (CSS, etc.).

- Developed a web publishing solution for **XIMIX.biz** based on **WordPress**, including custom front end UI theme design and development with PHP, CSS and JavaScript. Innovated two major features in PHP for the site: 1) New article collections are automatically added to the menu bar when published, and 2) When any article in a collection is added, removed, relocated or renamed, the table of contents is automatically updated.

- Performed early stage consulting for a **web site to find and purchase clip art** licenses. Project scope included UI/UX design, SEO/SEM issues unique to finding visual images, interactive tools to modify images with AJAX (using JavaScript and PHP), cross-browser support including mobile devices, development environment and tools, version control and testing, PPI and PPC ad programs, internationalization, media license income models, shopping carts and payment gateways, and managing intellectual property.

- Developed a prototype **community web site for artists** to display their works and sell them on an eBay store. Configured templates and plug-ins and developed themes (CSS, JavaScript, Smarty, etc.) for user and group memberships, artist profiles, portfolio management, etc. Work involved PHP code modifications to the **Xoops CMS** and the **Coppermine** image gallery system, as well as some mySQL database changes.

- Designed and implemented the user interface and other functionality with IDL for the **USAF's Improved Solar Observing Optical Network (ISOON)**, under contract to the Association of Universities for Research in Astronomy, Inc. (AURA) for the USAF 50th Weather Squadron and Space Environment Center. An independent reviewer reported, "The system is very easy to use, and the learning curve is short. ... Many NOAA/SEC, Air Force and other visitors witnessed the operation in my presence, and commented on the friendly system. ... The Graphical User Interfaces are well laid out, and the menus are logical and straightforward."

- Redesigned the web site portfolio for **Gkkworks**, an architectural, engineering and construction firm. User interaction with project slide show images, fetched with PHP and mySQL, caused disconcerting and unnecessary page loads. Developed a JavaScript solution to asynchronously preload images and navigate them by manipulating the Document Object Model (DOM). Eliminating page reloads and a separate download for each image file resulted in fast performance and a greatly improved user experience.

- Conducted a seminar for a consortium of **Kansas City Public Libraries**, which was having problems configuring **Sirsi iBistro**, a highly complex online and web system for libraries. Explained the technologies used to configure and power the system, including UNIX basics, shell and Perl scripts, Makefiles, Apache, interaction with Oracle RDBMS, and what iBistro configuration scripts actually do. The seminar was highly praised for vastly improving their technical understanding and abilities to configure and manage the system.

- Responded to an urgent request from the **Einstein Archives Online** project, a web site hosted at Cal Tech, to solve problems with missing information in their web traffic reports. Analyzed the problems and recommended solutions for 1) reconfiguring the Apache web server to produce better logs and web traffic reports in the future; and 2) data mining the existing logs for meaningful information.

- Developed a genealogical research web site for the **USGenWeb Project**. Wrote shell scripts to convert data for federal land patents into web pages sorted by dates, legal land descriptions and surnames. Created KML and KMZ files to plot cemetery locations on Google Earth and Google Maps.

- Developed a **web site for home owners to find mortgage lenders**. Lenders would sign up with a short profile and their contact information. Consumers could search for lenders in their area, select several, and fill out an application which was sent to their selected lenders either as an email or a FAX. This was done with forms and back end CGI using Perl.

- Designed and developed a number of in-house **application products**, including: 1) **image processing tools** written in IDL; 2) **cluster analysis tools** written in IDL; 3) an **interactive image editing web application** using AJAX with PHP on the back end; 4) a **JavaScript slide show**, fast and easy to configure; and 5) a **JavaScript navigation widget** that generates tables of contents from HTML heading tags on the fly.

Program Manager, Sun Microsystems, Inc., Los Angeles, CA (1991-94)

- Developed strategies and tactics to ship Solaris/x86 release 2.1 on the schedule for release 2.0, and to skip releases 2.2 and 2.3 so that Solaris 2.4 on SPARC and x86 were released together. This radically accelerated release schedule exceeded upper management's wildest expectations, and helped position Solaris/x86 as a major player in the UNIX marketplace.

- Provided leadership and expertise for engineering strategies and processes, systems integration, source code configuration management, release engineering, and software development tools.

- Supported the x86 group to port the initial release using our own proven light-weight engineering processes, while taking the lead to understand and introduce Sun's official Software Development Framework procedures. This removed a potential encumbrance which would have delayed the project, while enabling the eventual integration of methodologies.

- Formed and led a "tiger team" of senior engineers to develop Common Source Code policies and procedures for Solaris on both x86 and SPARC architectures. This enabled developers to merge and synchronize the source code base for both platforms, laying the foundation for simultaneous version releases.

- Served on various business, program and software engineering teams for Solaris 2.1 and 2.4, primarily to represent and explain our x86 group's engineering strategies, tactics and methods.

- Contributed to Sun's Software Development Architecture Team to evolve Sun's Software Development Framework (engineering standards and procedures) as the x86 group's representative.

Senior Member of the Technical Staff, Interactive Systems Corporation, Santa Monica, CA (1980-91) (The first commercial UNIX company, acquired by **Kodak**, 1987, acquired by **Sun Microsystems**, 1991.)

- Senior engineer responsible for maintaining and evolving corporate wide engineering processes. Developed ISC's Technical Policies and Procedures Handbook, promoting engineering standards, policies, procedures and tools, covering the entire Software Development Life Cycle (SDLC).

- Managed ISC's first Systems Integration Team, responsible for the Source Code Control System (SCCS, the grandfather of RCS, CVS, SVN, etc.), the source code tree, configuration management, build systems (Makefiles, etc.), and release engineering (RE). Also developed automated test suites for bug fix verification, leading to the establishment of ISC's first Quality Assurance (QA) team.

- Designed procedures and tools for an SCCS Network. This involved a front end interface to SCCS commands which propagated changes to source code control trees that were replicated at various sites in a TCP/IP network. This enabled engineers at different offices to automatically synchronize the official product source code as changes were made.

- Led Kodak's Quality Leadership Process training which included creative problem solving methods and analytic tools such as brainstorming, Pareto and run charts, competitive benchmarking, etc.

Instructor, School of Design, California Institute of the Arts, Valencia, CA (1972-76)

- Taught courses related to analyzing and solving complex design problems in a systems context. These courses included Design Theory and Methodology, Bionics, Pattern Languages, Futures Forecasting, General System Theory and a project oriented Systems Design Studio.

Education   **MFA:** California Institute of the Arts, School of Design, Valencia, CA (1972)
BFA: Kansas City Art Institute, Industrial Design Dept., Kansas City, MO (1970)