

Résumé of: **Gary Swift**

**address:** P. O. Box 1203, Topanga, CA 90290  
**telephone:** 310 - 455 - 3107  
**email:** [gswift@ix.netcom.com](mailto:gswift@ix.netcom.com) (personal)  
[gary@DesignMatriX.com](mailto:gary@DesignMatriX.com) (business)  
**WWW:** <http://www.DesignMatriX.com>

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**Career Summary** **Systems Designer / Architect specializing in web and software systems and products.**

Pioneer in applying systems theory, design methodology and computing technology to industrial, environmental, architectural and information design. Expert with analytic and creative problem solving methods and tools. 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. A passion for solving complex systems design problems with innovative elegant solutions, including the code.

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

**Technology:** Internet and web technology (HTML, CSS, CGI, CMS, AJAX, LAMP, Apache, etc.), UNIX (Solaris, Linux, etc.), system integration, build and release (Makefiles, etc.), computer assisted design, 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 and PERT/CPM.

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**Experience** **Principal, Design MatriX, Topanga, CA (1994-present)**

- 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.
- Researched and wrote a series of **web development articles** for a client planning to license images online. Subjects included: web hosting platforms and plans, development environment and tools, version control and testing, cross-browser support, search engine optimization, PPI and PPC ad programs, internationalization, media license income models, shopping carts and payment gateways, and managing intellectual property.
- 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.
- Designed and developed a number of in-house **application products**, including: 1) image processing and cluster analysis tools written in IDL; 2) a Wiki for environmental design pattern languages; 3) interactive image editing, a full AJAX application using PHP on the back end; 4) JavaScript slide show, fast and easy to configure; and 5) JavaScript navigation widget to generate tables of contents and menus on the fly.
- Developed a prototype **community web site for artists** to display their works and sell them on an eBay store. This involved configuring templates, plug-ins and themes, and making PHP code modifications to the Xoops CMS and the Coppermine image gallery system, as well as some MySQL database changes.

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**Program Manager, SunSoft** (software division of **Sun Microsystems, Inc.**), Los Angeles, CA (1991-94)

- Senior engineer responsible for corporate technical policies and procedures in the Product Division of Interactive Systems, which Sun acquired to port their Solaris OS to the x86 (Intel) architecture.
- 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.
- 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.
- 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.

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**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.)

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

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**Systems Designer, Schick Sunn Classic Pictures, Inc.**, Marketing Research Dept., Los Angeles, CA (1978-80)

- Designed methods, data bases and software using statistical regression analysis of historical data, Delphi studies and trend analysis for market forecasting, and decision trees and production rules (modeled after RAND's RITA artificial intelligence agent) for marketing strategies.

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**Systems Designer, Social Engineering Technology (SET)**, Los Angeles, CA (1976-78)

- Participated in the design of an environmental education system for the **Office of Environmental Education, US Dept. of Health, Education and Welfare (HEW)**, including computer assisted components for environmental modeling, simulation and forecasting, networking and teleconferencing, and problem solving.

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**Instructor, California Institute of the Arts, School of Design**, 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 Language, Futures Forecasting, General System Theory and a project oriented Systems Design Studio.

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**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)