

Faiz Kazi

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Experience

- **UI/Systems Engineer, Technology Evangelist** November 2004 – Present
Currently employed by **DreamArts Corporation, Japan** (<http://www.dreamarts.co.jp>), maker of one of Japan's most successful locally developed Group-ware applications (*INSUITE Enterprise*).
 - **Responsible for the Design and Implementation of the product's email application** {2007 Feb – 2007 Aug}:
Currently deployed for over 6000 users by our first customer, *Kokuyo Co., Ltd.*: (branded "*INSUITE AjaxMailer*") implemented entirely in Javascript on the client, featuring a *load-on-scroll virtual paging Inbox*, 3-pane view, auto-completion, drag-and-drop and rich-text: http://www.dreamarts.co.jp/company/press_release/070615.html
 - **Conducting Training In Programming and Software Development, R&D Exercises** {2008 January – Present}:
Planning and carrying out a weekly series of lectures and training exercises in software development and advanced programming techniques using several 'agile' languages. R&D on emerging technologies and initiating evaluation and interest in new systems and demoing prototypes, including one Tech-Talk session every week.
 - **Ongoing Web-based Product Development and Prototyping** {2007 June – Present}:
 1. Replacing the product's legacy parts with clean server-side components which talk in JSON-RPC to Javascript widgets written in a proper modular style using a combination of OO and Functional programming. Written both as extensions of YUI widgets and also entirely from original code, the widget/RPC combination has been helpful in doing away with vast amounts of cumbersome code.
 2. Portlet-based online RSS Reader/ Aggregator, written as a Javascript widget. Implemented a centralized caching server, which actually polls all unique URLs registered, keeping them up-to-date, and also responding to RPC requests from front-end servers. Implemented a streaming, "always connected" RPC protocol between *mod_perl* and the caching server, which has so far yielded very good performance. Currently working on an *Erlang* version of the server, to replace the proof-of-concept *Perl/POE* implementation.
 3. Perl hacking: Wrote JSON-RPC handlers for *Mod_perl 1.0* & *Fast-CGI (modules on CPAN)* • An extension to the *Devel::ebug* module to enable interactive debugging for multi-process, terminal-less environments such as *mod_perl*. The '*debuggee*' attaches to a debug session-multiplexer, thus enabling any *ebug* compatible debugger to step into *mod_perl* code executing in normal mode (obviates the need to debug Apache in single-user mode)
 - **The 'Hibiki' Framework**: {2004 Nov – 2007 Feb}:
 1. Wrote many core modules for the framework of the company's Java-based products: *SmartDB* (<http://www.dreamarts.co.jp/hibiki/smartdb/merit.html>) borrows ideas from Lotus Notes (the Form designer) and has parts that resemble *Google Base*. Akin to an object database which appears to the user as a hierarchical repository of documents and fields, and views/filters that can be "WYSIWYG" edited.
 2. Evangelized tools like GWT, DWR, and as early as 2004, XHR itself. Wrote many simple utilities as proof-of-concept demos, starting with a *kanji-to-furigana* converter in Ajax, to CRUD widgets and 'inline'-search UI's.
 3. Brought in many significant features by integrating open-source libraries – Lucene, Rhino (customers could customize small parts of the system in Ecmascript), Betwixt and FOP – achieved some very flexible, robust and generic PDF printing capabilities using a slightly lisp-y 2-stage XSLT transformation. Evangelized Generics.
- **System Architect/Engineer** February 2004 – October 2004
Team mentor of *Network Appliance Solutions at Laser5 Co., Ltd, Tokyo, Japan*, an embedded hardware (single-board computer) design firm, *Linux* solution provider and OS Distribution maker.
 - **System for sniffing and TCP session re-construction/archival**: {2002 July – 2004 June}: **Primary author and designer** of the highly successful flagship *Network Forensic* product, *True-Witness*. Involved the design of a network capturing appliance and a set of daemons and programs that coordinate the processing of raw Ethernet packet dumps (*libpcap format*) into a search-enabled repository accessed by a web interface, with analysis, report and re-construction capabilities for supported Layer7 protocols. A variant of this product was licensed to *Mitsubishi Space Software*: <http://www.mss.co.jp/businesfield/security/msieser>
 - **Server OS image generator for automated network infrastructure build/setup**: {2004 Feb – 2004 June}:
Wrote a *build system* employing *User-mode-Linux* that builds a collection of Linux based server and firewall distribution images from a network schema specified by a system administrator. The result is a set of CDROM installers, for ready installation and deployment to setup a simple corporate network.
- **Software Developer** August 2003 - February 2004
Firmware/Build Engineer at Global Security One Ltd., Manchester, U.K (<http://www.gsec1.com/>), maker of *Internet Security and Network Management* products, which feature integrated firewalls, proxies and VPN.
 - **Firmware Installer and manufacturing automation**: {2003 July – 2004 Jan}: Built using the Qt toolkit a GUI utility for in-house use, dubbed '*PetherManf*', employed in the manufacturing process of embedded appliances, such as single-board computers that require unusual procedures for OS installation. Among other functions, the tool was used at *GSEC1* (<http://www.gsec1.com/products.shtml>) to 'flash' the platform's EEPROM with the OS/Firmware, while providing tight integration with non-technical aspects such as inventory and license management. It was the first piece of software in the project to reach production quality, and has performed robustly till date with virtually no bugs, despite the complexity of 8 languages (*Besides C++ code, there was MIPS-ASM, C, pgPL/SQL, Perl, Awk, Bash, Postscript, Expect*) its components were written in.

- **Build Engineer, Perl Specialist**

June 2002 - July 2003

NatureSoft Pvt. Ltd., Chennai, India: Worked on product development outsourced from Japanese client companies which included *NEC* and *Mitsubishi*. **Duties also included** conducting Perl training, GNU/Linux-based OS distribution building, scripting and development automation support for a team of device driver developers.

- **Linux-based OS distribution for network appliances:** {2002 July – 2003 Dec}: Worked on the base-system, build process and installation procedures for many single-board computer systems running Linux. Wrote several iterations of tiny distributions for use on single-board, embedded platforms usually based on MIPSEL, ARM4.

- **System Administrator, Web Application Developer**

April 2000 - February 2002

Began work with *Midas Internet Services Pvt Ltd. Chennai India*, a start-up providing fast and expedient solutions/product prototypes in areas like Internet portals, search, Web-based automation and utilities, before it was partly bought by *Satyam Infoway* (<http://sifycorp.com>), India's first private ISP, where I worked as technical consultant {November 2001 - February 2002}:

Performed various duties like UNIX administration, programming, web-mastering, and software prototyping.

- **www.khoj.com: India-Centric Web Directory** {2000 June – 2000 Dec}: Built the back-end for (what was at that time) the most popular India-Centric *Yahoo!* clone, which included a basic yet well-known search engine. Written only in ANSI C and Perl, and employing MySQL it included a simple indexing daemon and a repository that could scale to a full-text search of a little under a million URLs.
- **HTTP Log analyzer with Geographical Analysis:** {2001 Dec – 2002 Feb}: Built a log analysis system in Perl, generating statistic reports for HTTP traffic based on non-trivial rules of geographical distribution, unique visitors, sessions and other factors. Scaled to very huge sizes of log files from disparate server types.
- **Open Directory Project RDF parser and Web directory generator:** {2000 Dec – 2001 June}: Using only a set of simple Bash and Perl scripts, built a parallel batch-parser for the RDF files published by the Open Directory Project, generating the directory as HTML with a large search enabled keyword index running into many gigabytes. An instance of the program's output should still be available at <http://search.sify.com>.
- **Jabber IM Client:** {2000 Dec – 2001 Feb}: Built a proof-of-concept IM system based on Jabber, for which the client (which ran on Windows and Linux) was implemented in Perl/Tk (and later Perl/Gtk+)

Technical Skills

- **Languages:** Proficient in programing in Perl, C, Javascript and Java. • Some experience in C++, and a few flavors of Assembler (ARM, a little x86) • Experience working with large OO code-bases • Erlang and Concurrency-oriented programming • Understanding of Functional & Higher-Order programming techniques (A little Common-Lisp and some Scheme), and their benefits even with non-100% functional languages like Perl, Javascript • *Currently learning:* Python, Ruby, Prolog
- **Web:** Lots of recent experience with HTML, CSS, and browser-compatibility issues • Skilled in building non-trivial modular applications with Javascript (even without using any particular toolkit), and XHR • Experience working with a variety of libraries ranging from Prototype and Rico, to larger toolkits like YUI and Dojo.
- **Desktop UI / Toolkits:** Experience writing production code with Qt, Perl/Tk, GTK+.
- **Operating Systems:** Understanding of UNIX and programming/administration under it, in particular, highly proficient in writing UNIX shell scripts • Experience building GNU/Linux based distributions from scratch • Working with Virtualization tools like Xen, user-mode-linux • Practical exposure to other free Unices such as FreeBSD, OpenBSD • Palm OS • Generally OS-curious; used Plan9 for a while
- **Miscellaneous:** CVS/SVN/SVK; Eclipse IDE • Authoring with SGML, DSSSL; XSLT/XSL-FO • VIM power-user
- **Hardware:** Trouble-shooting server hardware, LTO tape drives and setting up Ethernets • Experience handling, hacking and servicing *single-board computers* and also PDAs (Compaq iPaq, Sharp Zaurus)

Educational Background

- **Bachelor's Degree in Electronic Science**
October 1996 - October 1999, from The University Of Madras
- **Post-Graduate Diploma in Computer Applications**
July 2001 - December 2002, from Pondicherry University {First Class}
- **Standardized Tests: GRE (Graduate Record Examination):** {June 2002}
Scored 2200 out of a possible total of 2400: {Quantitative: 800/800, Verbal: 750/800, Analytical: 670/800}

References

Available on request.