

Murray M. Stokely

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Summary

Mr. Stokely is a software release manager whose experience encompasses operating systems development, networking, software engineering, release engineering, database development, documentation architecture, formal software verification, distributed computation, data mining, and system administration. He is well versed in contemporary programming languages and software development tools and methodologies. His specific experience in software engineering includes over 5 years as a release engineer at embedded and Unix operating system companies. He also has extensive experience in designing technical documentation systems to reuse XML content between web, print, and back-end systems. His most recent work at Google involved writing and maintaining software for large scale distributed computing. His academic research focused on static analysis and formal software verification. Mr. Stokely has been a prolific open-source contributor to the FreeBSD, ISC, Darwin, and Linux communities since 1999.

Technical Skills Summary

- **Software Engineering Management** : CVS, Perforce revision control, Subversion, RequestTracker, GNATS, Microsoft Project
- **Software Development** : Unix C programming, sockets programming, FreeBSD / Linux / Solaris kernel development, PCI device driver development, Perl, Python, Java, C++, Tcl/Tk, Scheme, Lisp, OCaml, ML, Lex, YACC, MIPS / Sparc / Alpha assembly language, make
- **Formal Software Verification** : Theorem Provers, Model Checking Tools, Reachability Analysis, Static Analysis
- **System Administration** : FreeBSD, Linux, Solaris, MacOS X, Windows NT/XP
- **Network Administration** : TCP/IP, Apache/SSL, BIND, samba, ftpd, dhcpd, NFS, NIS, Postfix, IP firewalls
- **Database Programming** : MySQL, PostgreSQL, Oracle, Java/JDBC, Perl/DBI
- **Technical Writing** : SGML, XML, XSL, XSL-FO, DocBook, DSSSL, HTML, CSS, TeX, groff / mdoc

Career History

- **Google, Inc.** September 2005 - present

Software Engineer, Google.com

- **FreeBSD Mall, Inc.** February 2002 - present

VP Engineering / Senior Release Engineer

Responsible for the engineering aspects of the FreeBSD product line.

- Coordinated product development activities between engineering groups in California and China.
- Managed complete release process for all FreeBSD based products. This includes managing the submissions of internal developers as well as those from over 300 open source contributors.
- Met with influential individuals in the mainland Chinese software market to identify steps necessary to make our products politically acceptable in China.
- Gave presentations about our operating systems products and met with business partners in Europe, Asia, and North America to promote our company as well as to identify political or technical issues that were hampering the acceptance of our products in those markets.

- **Wind River Systems** May 2001 - February 2002

The FreeBSD Group inside Wind River was divested as a separate entity (FreeBSD Mall, Inc.) in February 2002.

Senior Software Engineer, May 2001 - February 2002

Responsible for developing software and FreeBSD-related products, and managing a small team of Associate Engineers.

- Managing the production process for FreeBSD-related products.

- Documenting the release engineering practices of our operating system products to ensure that our important internal processes are not overly disrupted by staff turnover.
- Writing technical documentation about our products and designing the documentation infrastructure necessary to manage the submissions of other documentation authors throughout the company.

- **Berkeley Software Design, Inc.** March 2000 - May 2001

The software assets of BSDi were acquired by Wind River Systems on May 4, 2001

Product Manager, January 2001 - May 2001

Responsible for managing the process of FreeBSD product development.

- Negotiating contracts with third-party vendors.
- Creating product roadmaps and ensuring production deadlines are met.
- Managing a team of three programmers to assist with the technical aspects of product development.

Systems Project Manager, July 2000 - January 2001

Responsible for the productivity of several small teams working on various concurrent projects :

- Development of new open-source internal business software to replace the proprietary system currently used for mail-order and inventory management.
 - Consolidating our e-commerce backend software with that of our merger partners.
 - Creating and improving upon automated tools to index the FreeBSD Handbook, and other technical documentation projects.
 - Content collection and product development for CDROM products to be placed in the retail channel.
 - Management of four programmers.
- **Walnut Creek CDROM** June 1997 - March 2000
Walnut Creek CDROM was acquired by BSDi in March 2000.

Software Developer, June 1999 - March 2000

Developed business software for order placement, inventory, purchase orders, and shipping logistics to replace our proprietary software system. This project involved writing a cross-platform Tcl/Tk GUI interface that communicated with the backend MySQL database.

Webmaster, June 1998 - March 2000

Responsible for development and administration of our online retail business. All of the content for our website was dynamically created with embedded Perl from a MySQL database. I was also the primary developer for a banner-ad system used to display and track banner ads, and to dynamically produce pie-charts and statistics showing click-through ratios.

Perl Programmer, June 1997 - June 1998

Job responsibilities included maintaining several large PC servers used in CDROM production, making purchasing decisions for hardware upgrades, providing technical support for FreeBSD, Linux, and GNU software, maintaining DNS servers and other TCP/IP administration tasks, writing reusable Perl modules to automate the task of CDROM production and content collection.

- **Infiniti Design** December 1995 - June 1997

Web developer

Job responsibilities included writing business proposals for potential customers and developing online commerce solutions in Perl/CGI to meet customer needs.

Education

- **Oxford University**
Candidate for Master of Science in Mathematics and the Foundations of Computer Science, September 2005
- **Independent University of Moscow / Moscow State University**
National Science Foundation, American Mathematical Society "Math in Moscow" Scholar (Spring 2004)
- **California State University**

Master of Science in Pure Mathematics, June 2004
Bachelor of Science in Computer Science, June 2003
Bachelor of Science in Pure Mathematics, June 2003
Outstanding Mathematics Senior of the Year, 2003
Sabharwal Mathematics Scholarship, 2003-2004

Publications

- **Efficient Predicate Abstraction Using Parallel Evaluation for Software Verification Systems**, M.Sc. Thesis, Oxford University
- **The Release Engineering of FreeBSD 4.4**, BSDCon Europe, 2001
- **Slackware Linux Essentials, 2nd Edition**, Editor, ISBN: 1-57176-338-4
- **The FreeBSD Handbook, 3rd Edition (Volume 2)**, Editor and contributing author, ISBN: 1-57176-328-7
- **The FreeBSD Handbook, 3rd Edition (Volume 1)**, Co-editor and contributing author, ISBN: 1-57176-327-9
- **The FreeBSD Handbook, 2nd Edition**, Co-editor and contributing author, ISBN: 1-57176-303-1
- **The FreeBSD Handbook, 1st Edition**, Contributing Author, ISBN: 1-57176-241-8

Presentations

- **Google's Distributed Computing Infrastructure**, NYCBSDCon New York, 29 October 2006
- **DocBook Slides, XSLT, and XSL-FO**, BSDCan Ottawa, 12 May 2005
- **FreeBSD in Enterprise Environments**, Open Source Forum Russia, 26 April 2005
- **FreeBSD Release Engineering**, GUFICCon Milan, 3 October 2004
- **FreeBSD vs Linux**, TechTV U.S. Cable Television, 2 September 2003
- **Introduction to FreeBSD**, TechTV U.S. Cable Television, 14 March 2003
- **FreeBSD in Enterprise Environments**, LinuxExpo Shanghai, 10 September 2004
- **FreeBSD Development**, IUM / Moscow State University, 27 April 2004
- **FreeBSD 5.0**, NordU / Usenix 2003, 14 February 2003
- **Release Engineering and Internationalization**, Japan Unix Society, Tokyo, 18 September 2002
- **FreeBSD Documentation Project BoF**, BSDCon 2002, 13 February 2002
- **FreeBSD Release Engineering**, BSDCon Europe, 11 November 2001
- **FreeBSD in the Enterprise**, Wells Fargo Linux Forum, 22 March 2001
- **Writing Secure Unix Applications**, BSDCon 2000, 18 October 2000

Professional Activities

- **FreeBSD Core Team Member and Release Engineer**
Active developer of the open source FreeBSD Unix operating system. Since 2001 I have been an elected member of the core team which manages the contributions of over 300 developers and thousands of contributors over the Internet. Formalized release engineering processes.
- **UseBSD Special Interest Group Chair, USENIX Annual Technical Conference Boston, June 2004.**
Reviewed all of the submitted papers and led the committee in putting together a schedule of talks for the event.
- **Current Association Membership:** American Mathematical Society (*AMS*), Institute of Electrical and Electronics Engineers (*IEEE*), Society for Industrial and Applied Mathematics (*SIAM*), Association of Computing Machinery (*ACM*), USENIX Advanced Computing Systems Association.
- **Past Membership:** Internet Software Consortium DHCP Committer, Apple Darwin Project Committer.

Referees

Available upon request.