



## **BRYAN COSTALES**

Email Expert — Author

Email: [bcx+job@bcx.com](mailto:bcx+job@bcx.com)

Cell: 415 728 6591

403 Main St. Apt 408, San Francisco, CA 94105 Land: 415 281 9140

<http://www.bcx.com/>

<http://www.bcx.org/>

## **Professional Highlights**

---

- Author of books on sendmail, anti-spam, C language and Unix.
- Experienced with OpenSSL, TLS, public/private keys, Certificates
- Expert with Unix (Solaris, Linux, FreeBSD, OS-X), DNS and routing.
- Master programmer (C, Pthreads), script writer (sh, bash), autoconf.
- Web designer/programmer (html, php, mysql, photos, css, rss, xml).
- Pathological debugger of code, protocols, and processes

## **Work History**

---

### **Agari, INC. (2011 - Present)**

### **Sr. Software Engineer**

Processed inbound reports on email behavior including DMARC reports. Researched different statistical approaches to detection of abnormal email events.

### **ECERT, INC. (2010-2011)**

### **Sr. Software Engineer**

Wrote a C-Language FDM (Arf) parsing Milter that inserted parsed ARF data into a mysql database. Wrote a multi-threaded C-Language program to automatically send test email and to record the results of those test-sends into a mysql database. Wrote a php web interface to collate sent and reported data. Worked closely with the VPE and VPP to develop and support back end processes in support of the front end. Devised and implemented custom tests to break the DKIM, SPF, and DMARC standards. Proactively discovered potential problems before they became critical, such as competitor use of DMARC. Contributed to (without credit) the AFRF and DMARC RFCs. Wrote three patents for company. Company lost funding.

### **BRANDMAIL SOLUTIONS, INC. (2007-2010)**

### **Director of Development**

Designed, specified, and coded a pthreaded client/daemon service pair for receiving, validating and re-signing DKIM and DK signed email to run under Microsoft Windows, Linux, and Solaris. Designed and coded a sendmail/milter Linux-based appliances to send DKIM signed email for customers that lacked that ability. Performed and debugged live on-sight installations in Ireland, Germany, and the UK. Supervised other programmers. Sped up validation and sending of logo images using C and pthreads, at a rate of 2.8 million/hour, or a 100 times faster solution than Java. Company could not get funding and folded.

### **GOODMAIL SYSTEMS, INC. (2003-2007)**

### **Senior Email Architect**

Designed, wrote specification, and coded a system for the authenticated transmission of email. Architected, specified, and wrote a matched pair of SDKs for mass email senders to request digitally signed headers using TCP/IP and OpenSSL and for receivers to validate those received messages. Architected, specified, and wrote a multi-threaded email-proxy operating at AOL, using pthreads and mysql.

## Work History (continued)

---

**CONSULTANT (2000-2010)****Sendmail Consultant**

Designed a high speed email system in which throughput increased by a factor of eight (Quris.com). Designed and implemented web sites using Apache, mysql and PHP. Designed and wrote custom open-source Milter software. Contracted as sendmail expert in a lawsuit. Wrote a sendmail syslog parser for an Oracle database. Revised the computer/email/NIS setup in Applied Mathematics at the University of Colorado. Email audit of mybuys.com. Occasional consulting continues.

**SL3D, INC. (1999 - 2003)****Chief Technology Officer**

Provided uniform technical direction to the company as a whole and served on the board of directors. Supervised the Research and Production departments. Oversaw writing and protection of patents. Presented papers at conferences on 3D optics and software and prepared all technical grant applications. Company shut down.

**INFOBEAT (1996 - 1999)****Director of Technology/acting CTO**

Designed and programmed a proprietary high-speed Internet mail delivery system. Scaled the company from 10,000 delivered envelopes per day in 1996 to 8,000,000 envelopes per day in Q1 1999. Ensured full envelope reliability, security, and tracking. Worked with other departments to translate business strategies into engineering strategies. Ensured a uniform technical vision across all departments. Represented Infobeat in such organizations as the IETF and USENIX. Resigned in protest when company was bought, reorganized, and started sending spam email.

**International Computer Science Institute (1990 - 1996)****System Administrator**

Designed and implemented an internal architecture conducive to four distinct research departments. Integrated disparate resources, from the PacBell gigabit-testbed, to ATM, to cross-platform desktop-support, all under one seamless research environment. Increased average server uptime from 4 crashes per day in 1990 to 0 for over a year in 1996. Responsible for an annual equipment budget of \$500,000 and a small staff. Represented the Institute at USENIX meetings. Acknowledged as a contributor to the UC Berkeley 4.4 BSD Unix release.

**Sam Technology(1985 - 1989)****System Administrator/Programmer**

Wrote Unix device drivers. Wrote EEG acquisition and analysis tools. Purchased and installed new hardware as needed. Handled outage caused by Loma Prieta earthquake. Wrote GBIP Unix device driver.

## Books Published

---

sendmail (2007)

O'Reilly &amp; Associates Publisher

Sendmail Milters (2005)

Addison Wesley

C from A to Z (1985)

Prentice Hall (Simon &amp; Schuster)

A full list of all publications is available at <http://www.bcx.com/publications>

## Patents

---

Participant in the two Infobeat Inc. patents, two eCert patents, and principal in all SLD3 patents including over 13 pending patents (domestic and international)

- US5937126 Method and apparatus for high volume email delivery
- US6044395 Method and apparatus for distributing personalized email
- US6683716 Stereoscopic video/film adapter
- US6546208 Stereoscopic telescope with camera
- US6275335 Single-lens 3D method, microscope, and video adapter
- US 2010/0299399 A1 System and Method for the Management of Message Policy

## Elsewhere On The Web

---

Other places that I can be found on the web will lead you to my further talents and accomplishments.

<http://www.bcx.com/software>

<http://www.scribd.com/bryancostales>

<http://www.bcx.org/blogs/munifest>

<http://www.linkedin.com/in/bcxorg>

Sample Software with Documentation

Featured short stories

Public Transportation Whitepapers

Highly recommended on this site

## References

---

References are available on request.