

The premier conference for the BSD community

BSDCON '03

SEPTEMBER 8-12, 2003
MARRIOTT HOTEL / SAN MATEO, CALIFORNIA

Sponsored by
USENIX

The Advanced Computing
Systems Association



The Berkeley Software Distributions (BSDs) represent one of the oldest and most vigorous streams of Open Source software. Together, OpenBSD, FreeBSD, NetBSD, Darwin, Mac OS X, and BSD/OS represent millions of servers and desktops. The BSD operating systems have long been part of the backbone of the Internet in everything from embedded applications to large server installations and are now widely deployed on consumer desktops.

If you want to develop cutting-edge network applications, learn how to use BSD as part of enterprise-grade solutions, or just meet the movers and shakers of the BSD community, then BSDCon '03 is the place to be! BSDCon's combination of technical tracks, invited talks, tutorials, Birds-of-a-Feather sessions, and Work-in-Progress reports provide an unparalleled opportunity for people of all experience levels to learn from BSD experts, professionals with real world experience, and industry leaders.

Please join us in San Mateo, California, on September 8-12, 2003.

Conference Organizers

Program Chair

Gregory Neil Shapiro, *Sendmail, Inc.*

Program Committee

Jason Evans, *Canonware*

Sam Leffler, *Errno Consulting*

Michael Lucas, *FreeBSD Documentation Project*

Kostas Magoutis, *Harvard University*

Todd C. Miller, *OpenBSD*

Donn M. Seeley, *Wind River Systems*

Bill Squier, *NetBSD*

Gregory Sutter, *Daemon News*

Robert Watson, *NAI Labs, FreeBSD Project*

Christos Zoulas, *NetBSD*

Register Online:

<http://www.usenix.org/bsdcon03>

Questions?

Telephone: + 1.510.528.8649

Fax: + 1.510.548.5738

Email: conference@usenix.org

Hotel Information — San Mateo Marriott

Hotel Reservation Discount Deadline: August 15, 2003

1770 S. Amphlett Blvd.

San Mateo, CA 94402

Phone: 650.653.6000 / Fax: 650.653.6084

www.marriottsanmateo.com

Room rate: \$139 single/double

All requests for reservations received after the deadline will be handled on a space-available basis.

Tutorial Registration Fees (September 8-9)

Select only one full-day tutorial per day.

Online Early Bird Rates with Multi-Day Discounts:

One day: \$595 / Two days: \$1120

Standard Early Bird Rates with Multi-Day Discounts:

One day: \$625 / Two days: \$1150

CEU credit (optional): \$15/day

After August 15, add \$150 to the tutorial fee.

Technical Sessions Fees (September 10-12)

Online Early Bird Rates:

Member:* \$715 / Nonmember:** \$825

Student member: \$310 / Student nonmember: \$350

After August 15, members and nonmembers (not students) must add \$150 to their technical sessions fee.

* For current members of USENIX, EurOpen.SE, and NUUG.

** The nonmember fee includes a free one-year USENIX membership.

Register by August 15, 2003, and SAVE!

<http://www.usenix.org/bsdcon03/>

See reverse for full program →

BSDCON '03 TECHNICAL SESSIONS

WEDNESDAY, SEPT. 10 – FRIDAY, SEPT. 12, 2003

WEDNESDAY, SEPTEMBER 10, 2003

9:00 a.m. – 10:30 a.m.

WELCOME BY GREGORY SHAPIRO, AWARDS, KEYNOTE

Keynote Address

Computing Fallacies (or, What Is the World Coming To?)

Michi Henning, *Chief Scientist, ZeroC, Inc.*

This talk presents a look at the software industry and the practices that are rampant therein, muses about the utility (or otherwise) of current-generation computer systems, and challenges some of the so-called “accepted wisdom.”

11:00 a.m. – 12:30 p.m.

STICKY PROBLEMS

Session Chair: Donn Seeley, *Wind River Systems*

Reasoning About SMP in FreeBSD

Jeffrey Hsu, *The FreeBSD Project*

devd — A Device Configuration Daemon

M. Warner Losh, *Timing Solutions, Inc.*

ULE: A Modern Scheduler for FreeBSD

Jeff Roberson, *The FreeBSD Project*

2:00 p.m. – 3:30 p.m.

RELEASE ENGINEERING

Session Chair: Gregory Sutter, *Daemon News*

An Automated Binary Security Update System for FreeBSD

Colin Percival, *Computing Lab, Oxford University*

Building a High-Performance Computing Cluster Using FreeBSD

Brooks Davis, Michael AuYeung, Gary Green, and Craig Lee, *The Aerospace Corporation*

build.sh: Cross-Building NetBSD

Luke Mewburn and Matthew Green, *The NetBSD Foundation*

4:00 p.m. – 5:30 p.m.

Invited Talk

Long Range 802.11 WANS

Tim Pozar and Matt Peterson, *Co-founders of BARWN*

The co-founders of the Bay Area Research Wireless Network will discuss aspects of designing and deploying a metropolitan-sized wireless network. The costs involved have fallen dramatically in recent years, due in part to the use of open source OSes such as FreeBSD.

6:00 p.m. – 7:30 p.m. Reception

8:00 p.m. – 11:00 p.m.

BSD STATUS REPORTS

Session Chair: Marshall Kirk McKusick, *Author and Consultant*

NetBSD: Luke Mewburn
OpenBSD: Todd C. Miller
FreeBSD: Robert Watson
Apple: Ernest Prabhakar
BSD/OS: TBA

THURSDAY, SEPTEMBER 11, 2003

9:00 a.m. – 10:30 a.m.

STORAGE / CRYPTO

Session Chair: Robert Watson, *NAI Labs, FreeBSD Project*

GBDE—GEOM Based Disk Encryption

Poul-Henning Kamp, *The FreeBSD Project*

Cryptographic Device Support for FreeBSD

Samuel J. Leffler, *Ermo Consulting*

Enhancements to the Fast Filesystem to Support Multi-Terabyte Storage Systems

Marshall Kirk McKusick, *Author and Consultant*

THURSDAY, SEPTEMBER 11 (continued)

11:00 a.m. – 12:30 p.m.

Invited Talk

Social and Technical Implications of Nonproprietary Software

Peter G. Neumann, *Principal Scientist, Computer Science Laboratory, SRI International*

Fulfilling the potential of “open-box” software will require a disciplined software engineering approach focusing on issues of security, reliability, and perspicuous interfaces for both users and administrators. This talk considers some risks of not meeting this need.

12:30 p.m. – 2:00 p.m. Lunch (provided)

2:00 p.m. – 3:30 p.m.

SYSTEM BUILDING

Session Chair: Michael Lucas, *FreeBSD Documentation Project*

Running BSD Kernels as User Processes by Partial Emulation and Rewriting of Machine Instructions

Hideki Eiraku and Yasushi Shinjo, *University of Tsukuba*

A Digital Preservation Network Appliance Based on OpenBSD

David S. H. Rosenthal, *Stanford University Libraries*

Using FreeBSD to Render Realtime Localized Audio and Video

John Baldwin, *The Weather Channel*

4:00 p.m. – 5:30 p.m.

WORK-IN-PROGRESS REPORTS (WIPs)

Session Chair: Michael Lucas, *FreeBSD Documentation Project*

WIPs should be 8-10 minutes in length, and of technical interest to the BSD Community. Please submit a title, a brief abstract, and a contact email address to bsdconwips@usenix.org.

8:00 p.m. – 11:00 p.m.

BIRDS-OF-A-FEATHER SESSIONS (BOFS)

BoFs are very interactive and informal gatherings for attendees interested in a particular topic. A BoF may be scheduled by sending email to conference@usenix.org.

FRIDAY, SEPTEMBER 12, 2003

9:00 a.m. – 10:30 a.m.

NETWORKING

Session Chair: Kostas Magoutis, *Harvard University*

Tagging Data in the Network Stack: mbuf_tags

Angelos D. Keromytis, *Columbia University*

Fast IPsec: A High-Performance IPsec Implementation

Samuel J. Leffler, *Ermo Consulting*

The WHBA Project: Experiences “Deeply Embedding” NetBSD

Jason R. Thorpe and Allen K. Briggs, *Wasabi Systems, Inc.*

11:00 a.m. – 12:30 p.m.

CLOSING SESSION

Invited Talk: Post-Digital Possibilities

Michael Hawley, *Director of Special Projects, Media Labs, MIT*

Most of the major expressive media — drawing, writing, music-making, cinema, and still photography — have been pretty thoroughly digitized. Recent themes, like embedding intelligence and communications in toys, appliances, clothes, and buildings, have gained practicality. Big areas, like biotech and ecology, are more in our future than our past. This session looks at some recent cool systems stuff and does a little crystal ball gazing.