⊼FAST 2003 — 2nd USENIX CONFERENCE ON FILE AND STORAGE TECHNOLOGIES

MAR. 31–APR. 2 / 2003 / CATHEDRAL HILL HOTEL / SAN FRANCISCO / CA / USA

REGISTER BY MARCH 7, 2003, AND SAVE!

Join leading researchers and technologists for three days of active discussion on operating systems, computer architecture, distributed systems, networking, mobile computing, and computational science. The FAST program features:

- 18 technical papers carefully selected from 67 submissions. Topics range from RAID design to secure wide-area file sharing.
- Keynote address by Dr. John Wilkes of HP Labs, HP Fellow and ACM Fellow with 15 years of research leadership in self-managing large-scale storage.
- Dave Belanger, Chief Scientist, AT&T Research; EMC's David Black, IETF chair for Internet Storage; CMU's Garth Gibson, founder and CTO of Panasas; Steve Kleiman, CTO of Network Appliance; Reagan Moore, associate director of Data-Intensive Computing at the San Diego Supercomputer Center; and Tom Ruwart, I/O Performance, Inc.

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In Cooperation with ACM SIGOPS and IEEE TCOS

Thanks for Support of Student Stipends: hp invent   SNIA

HOTEL & REGISTRATION

Hotel Information
Hotel Reservation Discount Deadline: March 7, 2003
Cathedral Hill Hotel
1101 Van Ness
San Francisco, CA 94109
Local Telephone: 415.776.8200
Toll-free: 1.800.622.0855
Rate: $129 single/double, plus tax
All requests for reservations received after the deadline
will be handled on a space-available basis.

Technical Session Registration Fees

Online Early Bird Rates (Register online by March 7, 2003)
Member: $695
Nonmember: $805
Student Member: $260
Student Nonmember: $300
The Nonmember rates include USENIX membership.
$50 will be added to the above rates if registering by
fax or mail.

Online Rates After March 7, 2003
Member: $845
Nonmember: $955
Student Member: $260
Student Nonmember: $300
The Nonmember rates include USENIX membership.
$50 will be added to the above rates if registering by
fax or mail.

Register Online:
http://www.usenix.org/fast03

Questions?
Telephone: + 1.510.528.8649
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Email: conference@usenix.org

FAST '03 TECHNICAL SESSIONS

MONDAY, MAR. 31 – WEDNESDAY, APR. 2, 2003

MONDAY, MARCH 31

9:00 a.m. – 10:30 a.m.

OPENING REMARKS, AWARDS

Keynote Address
John Wilkes, *Hewlett-Packard Labs*

10:30 a.m. – 11:00 a.m.   Break

11:00 a.m. – 12:30 p.m.

INTERNET-SCALE STORAGE

Pond: The OceanStore Prototype
Sean Rhea, Patrick Eaton, Dennis Geels, Hakim Weatherspoon, Ben Zhao, and John Kubiatowicz, *University of California, Berkeley*

Data Staging on Untrusted Surrogates
Jason Flinn, Shafeeq Sinnamohideen, Niraj Tolia, and M. Satyanaryanan, *Intel Research Pittsburgh*

Scalable Secure File Sharing on Untrusted Storage
Mahesh Kallahalla, *Hewlett-Packard Labs*; Erik Riedel, *Seagate*; Ram Swaminathan, *Hewlett-Packard Labs*; Qian Wang, *Penn State*; and Kevin Fu, *Massachusetts Institute of Technology*

12:30 p.m. – 2:00 p.m.   Lunch (on your own)

2:00 p.m. – 3:30 p.m.

FILE STORAGE

Metadata Efficiency in Versioning File Systems
Craig A. N. Soules, Garth R. Goodson, John D. Strunk, and Gregory R. Ganger, *Carnegie Mellon University*

yFS: A Journaling File System Design for Handling Large Data Sets with Reduced Seeking
Zhihui Zhang and Kanad Ghose, *State University of New York, Binghamton*

Semantically Smart Disk Systems
Muthian Sivathanu, Vijayan Prabhakaran, Florentina I. Popovici, Timothy E. Denehy, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau, *University of Wisconsin, Madison*

3:30 p.m. – 4:00 p.m.   Break

4:00 p.m. – 5:30 p.m.

PANEL : PETABYTES AND BEYOND
Reagan Moore, *San Diego Supercomputer Center*; Dave Belanger, *AT&T*; and Tom Ruwart, *I/O Performance Inc.*

TUESDAY, APRIL 1

9:00 a.m. – 10:30 a.m.

STORAGE SYSTEMS

Using MEMS-Based Storage in Disk Arrays
Mustafa Uysal and Arif Merchant, *Hewlett-Packard Labs*; Guillermo A. Alvarez, *IBM Research*

Architecting Storage Systems Using Probe-Based Storage
Ivan Dramaliev and Tara Madhyastha, *University of California, Santa Cruz*

ARC: A Self-Tuning, Low-Overhead Replacement Cache
Nimrod Megiddo and Dharmendra S. Modha, *IBM Almaden Research Center*

10:30 a.m. – 11:00 a.m.   Break

TUESDAY, APRIL 1 (continued)

11:00 a.m. – 12:30 p.m.

SHARING BLOCK STORAGE

Virtual Storage Devices with Performance Isolation
Christopher R. Lumb, *Carnegie Mellon University*; Arif A. Merchant, *Hewlett-Packard Labs*; and Guillermo A. Alvarez, *IBM Research*

Design, Analysis, and Implementation of Virtual IO
Zoran Dimitrijevic, Raju Rangaswami, and Edward Chang, *University of California, Santa Barbara*

Block-Level Security for Network-Attached Disks
Marcos K. Aguilera, Minwen Ji, Mark Lillibridge, John MacCormick, and Erwin Oertli, *Hewlett-Packard Labs*; Dave Andersen, *Massachusetts Institute of Technology*; Mike Burrows, *Microsoft*; Timothy Mann, *VMware*; and Chandramohan Thekkath, *Microsoft*

12:30 p.m. – 2:00 p.m.   Conference Luncheon

2:00 p.m. – 3:30 p.m.

NETWORK FILE SYSTEMS

The Direct Access File System
Matt DeBergalis, Peter Corbett, Steve Kleiman, Arthur Lent, Dave Noveck, Tom Talpey, and Mark Wittle, *Network Appliance*

Making the Most Out of Direct-Access Network Attached Storage
Kostas Magoutis, Salimah Addetia, Alexandra Fedorova, and Margo Seltzer, *Harvard University*

Passive NFS Tracing of an Email and a Research Workload
Daniel Ellard, Jonathan Ledlie, Pia Malkani, and Margo Seltzer, *Harvard University*

3:30 p.m. – 4:00 p.m.   Break

4:00 p.m. – 5:30 p.m.

WORK-IN-PROGRESS REPORTS
Session Chair: Remzi Arpaci-Dusseau, *University of Wisconsin, Madison*

Short, pithy, and fun, Work-in-Progress reports introduce interesting new or ongoing work. If you have work you would like to share or a cool idea that's not quite ready for publication, send a one- or two-paragraph summary to fast03wips@usenix.org by March 1, 2003. We are particularly interested in presenting students' work. A schedule of presentations will be posted at the conference, and the speakers will be notified in advance. Work-in-Progress reports are five-minute presentations; the time limit will be strictly enforced.

WEDNESDAY, APRIL 2

9:00 a.m. – 10:30 a.m.

PANEL : ENTERPRISE STORAGE: THE NEXT DECADE
Garth Gibson, Panasas; Steve Kleiman, Network Appliance; and David Black, *EMC, and IETF Chair for Internet Storage*

10:30 a.m. – 11:00 a.m.   Break

11:00 a.m. – 12:30 p.m.

MEASURING THE TECHNOLOGY

Modeling Hard-Disk Power Consumption
John Zedlewski, Sumeet Sobti, and Nitin Garg, *Princeton University*; Arvind Krishnamurthy, *Yale University*; and Randolph Wang, *Princeton University*

Storage over IP: Does Hardware Support Help?
Prasenjit Sarkar, Sandeep Uttamchandani, and Kaladhar Voruganti, *IBM*

More Than an Interface: SCSI vs. ATA
Dave Anderson, Jim Dykes, and Erik Riedel, *Seagate*