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# USENIX & SAGE

The Advanced Computing Systems Association &  
The System Administrators Guild

# USENIX news

## From the President

by Daniel Geer

President, USENIX  
Board of Directors



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This is turning out to be an interesting time to be president of USENIX and it does not (yet) feel like a curse.

- Finding a new structure for realizing all that SAGE can be is a triumph even if there are bumps down the road – organizational progress is way, way too easy to let slide for another day, another time, somebody else's watch. And the trade-offs almost always involve short-term pain for long-term gain.
- Society's interest in massive, secure, distributed, accountable computer systems has never been more intense – I, of course, mean e-voting in one form or another. It is inevitable. It is scary. If we are lucky, it is people like us who will design it and who will run it.
- The shortage of people like us is not doing any of us any harm, financially speaking, but USENIX needs to get on the ball and figure out how to increase the supply, sufficiently at least that we can continue covering enough fronts to remain the undisputed leader in technical deployment of systems that actually work. The surest way to become irrelevant is to be “right” but “too small to matter.”
- Everything we know about scale, and this is a USENIX specialty, is going to be put to the test as never before. When interconnectable devices are

cheap enough to be consumer disposables, our challenges will be to secure, to manage, even to understand clouds of devices that will never be visited by people like us after they roll off the assembly line, that will be managed in aggregate, not individually.

- If the much vaunted technical leapfrogging of the less developed world over the more really does become like a startup nimbly outmaneuvering some bureaucracy, USENIX itself will have the challenge we've always had, “moving information from where it is to where it isn't,” in spades. Where do we belong in distance learning? Speak up, I can't hear you.
- Read Christiansen's *The Innovators' Dilemma*, Gladwell's *The Tipping Point*, and Varian & Shapiro's *Information Rules* in one sitting. And tell me if you can stay sitting after that.
- Thought leaders, and that is what USENIX members so often are or are intent on becoming, anticipate. They learn more from mistakes than from successes. They don't take “no” or even “good enough” for an answer. USENIX has to mimic that, or should I say, tap that. This means growing USENIX activists at every opportunity.
- The hardest job in any organization is not knowing what it is the organization knows, it is knowing what it is the organization doesn't know. But will need to. Tomorrow.

Come on in, the water's fine.

## USENIX MEMBER BENEFITS

As a member of the USENIX Association, you receive the following benefits:

FREE SUBSCRIPTION TO *;login:*, the Association's magazine, published eight times a year, featuring technical articles, system administration articles, tips and techniques, practical columns on security, Tcl, Perl, Java, and operating systems, book and software reviews, summaries of sessions at USENIX conferences, and reports on various standards activities.

ACCESS TO *;login:* online from October 1997 to last month <[www.usenix.org/publications/login/login.html](http://www.usenix.org/publications/login/login.html)>.

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# In Memoriam: Mike Muuss

by Peter H. Salus

<peter@matrix.net>

Mike Muuss was killed in an automobile accident just before Thanksgiving.

Among other things, Mike was the author of “ping.”

An early user of both UNIX and TCP, Mike graduated from Johns Hopkins University in 1979 and went to work for the Ballistics Research Lab.

While at Johns Hopkins, Mike was one of the students to run DEC’s Resource Sharing Timesharing System under UNIX – in late 1975. In September 1979, Mike implemented the prototype BRLNET high-speed local network (he had designed it earlier that year under a U.S. Army contract). It was a 16Mbps LAN, but it required homogeneity. In early 1980, Mike extended the protocols to deal with heterogeneity and led a team to port the University of Illinois NCP capability to PDP-11 UNIX. (The team installed an 11/34.)

Mike also obtained a copy of SEARCH, a multi-user war game, and modified it for use on the PDP-11/70 at BRL.

In late 1981, Mike began implementing the experimental TCP/IP suite for JHU/BRL UNIX on the PDP-11, rather than extending BRLNET. Perhaps more important, Mike began an electronic [!] publication called *TCP/IP Digest*, with a circulation of over 700 subscribers on USENET and ARPANET. Most of this work was incorporated into MILNET standards 1777 and 1778.

Nearly every current TCP/IP implementation includes protocol software developed by Mike Muuss at BRL or directly derived from it.

Mike’s TCP/IP protocols went to both BBN and to Berkeley.

While I was working on *Quarter-Century of UNIX*, Mike was a continual source of anecdotes. On one occasion, he told me about and then took me to the BRL to see parts of ENIAC on display.

Mike was a fixture at USENIX meetings for two decades. I’ll miss him in Boston next June.

[The following is the newspaper account of the accident.]

**I-95 ACCIDENT CLAIMS LIFE**  
Churchville, Md – (AP)

A double accident Monday night on Interstate 95 in Harford County killed a Havre de Grace man. State police say 42-year-old Michael Muuss died when his car hit a vehicle left partially in the road after the first crash. Muuss’ car then spun into the path of a tractor-trailer, which pushed him into a vehicle stopped on the right shoulder to help victims of the earlier crash. The truck driver was taken to Harford Memorial Hospital. The accidents occurred about 9:30 pm on the northbound side of the highway in Churchville. The first involved two cars and a tractor-trailer. A driver in that crash was treated at Harford Memorial and released. Police say it’s not clear why either accident occurred. No one has been charged, but the investigation is continuing. Traffic was able to get by for most of the night, but it took until 2 am before all lanes were opened.

[Editorial note:

A memorial scholarship at Mike’s alma mater, Johns Hopkins University, for a student in the field of computer science has been proposed.

Some significant sums of money have come in, but the arrangements have not been finalized. The best contact for specific information is, in all probability, Joseph C. Pistrutto, at <jcp@jcphome.com>.]

## USENIX BOARD OF DIRECTORS

Communicate directly with the USENIX Board of Directors by writing to: <board@usenix.org>.

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## IOI 2000 Beijing, China

by **Don Piele**

USACO Director

<piele@cs.uwp.edu>

I remember as a young boy sitting in a sandbox being told, "If you dig long and deep enough you can dig a hole to China." I finally did make it to Beijing by plane on the occasion of the 12th International Olympiad in Informatics, the first IOI to be held on the continent of Asia. The week-long event, September 23–30, 2000, was packed with excursions, entertainment, competitions, friendship, awards, and, of course, abundant Chinese food.

Our delegation arrived in Beijing from all parts of the United States. Team leader Rob Kolstad from Colorado Springs, Hal Burch from Pittsburgh, Greg Galperin from Boston, and myself from Wisconsin. Team members Percy Liang and John Danaher interrupted their freshman year at MIT for the trip. Gregory Price from Thomas Jefferson HS of Science and Technology in Alexandria, Virginia, and Reid Barton from Arlington, Massachusetts, rounded out the USA team of four.

On the second evening, the delegation leaders met to choose the problems for the first competition day. The problems were presented by the Scientific Committee and accepted unanimously on the first vote. This happens so infrequently that the General Assembly gave the Scientific Committee a round of applause. It is not easy to get approval on the first try from all countries.

Early the next morning, the contestants began the first of two five-hour competitions. Using an automated system, the work of grading the contestants' programs was dramatically reduced. Differences in program performance were detected by running a series of test cases against each program and checking for speed and accuracy. After all the programs were tested, the results were made available to each contestant, along with the test cases. This gave the contestants the opportunity to double-check the grading process using their own computers. Our team was pleased with the first day's results.

The second competition day was pretty much a carbon copy of the first, with the exception that the problems presented were a bit harder. All in all it appeared that the creation of the International Scientific Committee had been a good idea, since their work was very helpful to the Chinese Scientific Committee in selecting

and testing out the competition problems.

The final distribution of scores in the competition also confirmed that the problems were at the proper level of difficulty for a good distribution of scores. Now the guessing game began by the delegations as they wondered if their scores were high enough to get bronze, silver, or gold medals.

Following the last day of competition, we headed out in buses to the Great Wall of China. After we had walked and climbed about as far as our tired legs could carry us, we returned to an outpost tower on the Wall for a fully catered banquet. Chairs and tables had been hand-carried onto the Wall along with all of the dishes, glasses, and food for this spectacular occasion. As we sat together eating our meal, watching the sun set in the west and the lights come on illuminating the Great Wall, it was hard to believe this was really happening.

The closing ceremony began with video highlights of the week's activities, featuring scenes projected on large overhead screens within the convention hall. Official dignitaries from China occupied a special position in the first row. After a series of elaborate stage performances and speeches, it was time for the medals to be awarded. As is customary, half of

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the participating students were awarded medals.

Sixty-nine bronze medals were handed out individually to the winners. Gregory Price from our team received one of the 69 bronze medals handed out. Forty-seven silver medals were awarded, and two of them went to team members Percy Liang and John Danaher. The coveted gold medal was reserved for the top twenty-three participants, and Reid Barton got one of them. This was the second gold medal this year for Reid at an International Olympiad. He was awarded a gold medal at the Mathematics Olympiad held in Korea earlier in July.

Special recognition went to Jing Xu of China for being the best female contestant at the Olympiad. Only six of the 276 participants were women. A perfect score was recorded by one contestant, Mikhail Baoutine, from the Russian Federation. All three of his teammates also won gold medals, making this the first time in IOI history that one country has won four gold medals.

## New Environments

Starting in 2001, the computing environment will include Linux with the GNU C/C++ and the Free Pascal compilers. This will allow for more interesting problems and really speed up the grading process. This was adopted by the General Assembly on the recommendation made by our head coach, Rob Kolstad, in a presentation to the group that culminated several years of lobbying and testing.

After such an elaborate IOI in China, our delegation agreed that we had underestimated the amount of work that it takes to put on an event of this magnitude. This is a concern, because we are hosting the IOI in 2003.

## Post Script

See a myriad of digital photographs at <http://www.zing.com>. When you reach

Zing.com, search under Albums for IOI 2000. Find a longer description of our trip, together with many photographs, at <http://www.uwp.edu/academic/mathematics/usaco/2000/ioi/report.htm>

USACO is supported by a grant from USENIX.

## Changing of the Guard

by Andrew Hume

Vice-President, USENIX Board of Directors  
<[andrew@usenix.org](mailto:andrew@usenix.org)>

On Tuesday, November 29, 150–200 people met at Bell Labs to wish Ken Thompson a fond farewell on his retirement from Bell Labs after 34 years of service. Ken and his wife Bonnie are moving to Campbell, California. Unofficially, the occasion also marked Brian Kernighan's retirement; although the transition will not be as sharp as Ken's: Brian will be teaching full-time at Princeton.

After much eating and drinking, the crowd settled down for the inevitable speeches. Rob Pike, assisted by Dave Presotto, led the proceedings. Reminiscences from various people, a few gag gifts (animal control apparatus and a fake rock!), and a very nice gift. Rob read letters from Al Aho, and Doug McIlroy (who had just broken his arm). Apart from a stream of stories about flying (for the record, whilst flying, Ken has killed none of his students and only one deer), most centered on



Berk Tague, Dennis Ritchie, and Brian Kernighan

Ken's technical excellence, his breadth of work, and his very important role as mentor to a generation of researchers, including Rob Pike, Dave Presotto, Howard Trickey, Sean Dorward, and myself. It would be hard to overstate how important Ken and Brian have been to me professionally, both in their knowledge (and communicating that knowledge), and in their quiet demonstration of how to be a researcher. They will be sorely missed.



Berk Tague, Dennis Ritchie, Rob Pike, Bruce Ellis, Ken Thompson, and Sape Mullender



Ken and Bonnie Thompson



## Years ago in UNIX

by Peter H. Salus

USENIX Historian  
<peter@Matrix.Net>

At the end of 2000, I felt quite old.

Readers of these pages may recall my remarks on the deaths of John Lions and Jon Postel. The last quarter of 2000 saw the deaths of Bill Munson and Mike Muuss. (My elegiac remarks on Mike are elsewhere in this issue.)

I'm older than any of them. A full 20 years older than Mike.

Without Bill Munson, we would most likely never have had DEC Unix. Bill was Armando Stettner's manager when Bill Joy took 4.1cBSD to New Hampshire.

Mike Muuss was the chief author of BRL Unix. He wrote one of the basic versions of TCP/IP. He wrote ping.

*Ave atque vale.*

The January 1981 USENIX meeting was held at the Jack Tar Hotel in San Francisco, chaired by Tom Ferrin.

4BSD had been released in October 1980, and was the prime topic of conversation in SF. 4BSD, among other things, contained a faster file system to use with virtual memory, job control, delivermail (hooray for Eric Allman!), and the Franz Lisp system.

There were about 1,200 attendees. That's right: 1,200.

### 15 YEARS AGO

In February 1986 I flew to Oakland, CA, to visit Lou Katz, old friend and founding president of USENIX. In retrospect, I should never forgive him.

He introduced me to Debbie Scherrer. She and Tom Ferrin took me to lunch. A month later (I was involved in a writing

gig in Santa Clara), I had a chat with Steve Johnson.

The net result was that I became Executive Director of the Association. And I'm still involved.

Lou, Tom, Debbie, and Steve have a lot to answer for.

## USENIX Needs You

by Rob Kolstad

Editor  
<kolstad@usenix.org>

People often ask how they can contribute to the USENIX organization. This new column lists needs that USENIX has in hopes of identifying volunteers (some contributions reap not only the rewards of fame and the good feeling of having helped but also a slight honorarium). Each issue we hope to have a list of openings and opportunities.

- USENIX needs a simple, restricted set of TeX macros to enable authors to contribute LISA papers that are easily translated into other text formatting languages (including HTML). Contact Rob Kolstad, <kolstad@usenix.org>.
- The ;login: staff seeks good writers (and readers!) who would like to write reviews of books on topics of interest to our membership. Write to <peter@matrix.net>.
- The ;login: editors seek interesting individuals for interviews. Please submit your ideas to <login@usenix.org>.
- ;login: is seeking attendees of non-USENIX conferences who can write lucid conference summaries. Contact Tina Darmohray, <tmd@usenix.org> for eligibility and remuneration info. Conferences of interest include (but are not limited

to): Interop, Internet World, Comdex, CES, SOSp, Linux World, O'Reilly Perl Conference, Blackhat (multiple venues), SANS, and IEEE networking conferences among others. Financial assistance to cover expenses may be available. Contact <login@usenix.org>.

- The ;login: staff seeks columnists for:
  - Large site issues (Giga-LISA),
  - Hardware technology (e.g., the future of rotating storage),
  - General technology (e.g., the new triple-wide plasma screens, quantum computing, printing, portable computing),
  - Paradigms that work for you (PDAs, RCS vs. CVS, using laptops during commutes, how you store voluminous mail, file organization, policies of all sorts),
  - Comics/cartoons (need to find them, not necessarily draw them).
 Contact <login@usenix.org>.
- The ;login: staff seeks an editor for the July 2001 "special topic" issue. Please contact Rob Kolstad, <kolstad@usenix.org>. This is a paid position.