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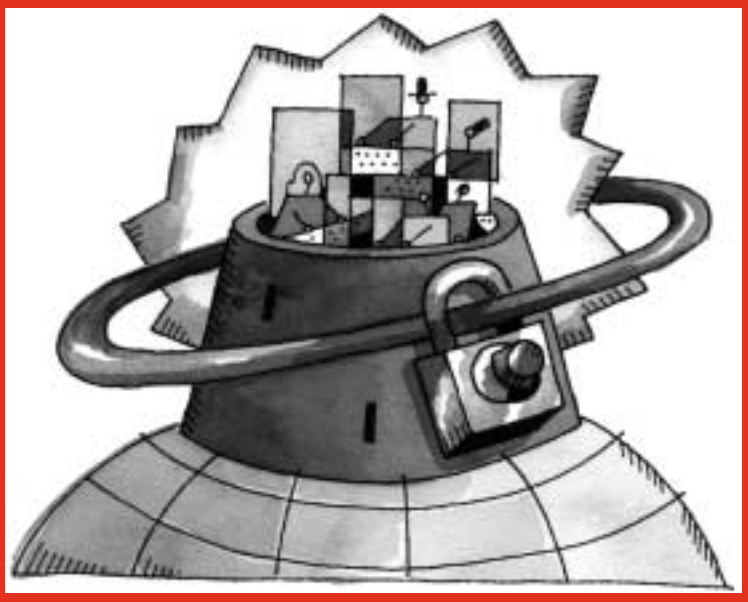
USENIX NEWS



USENIX & SAGE

The Advanced Computing Systems Association &
The System Administrators Guild

USENIX news

Nearly 20 Years Ago in USENIX

by Peter H. Salus

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The date on this issue of *;login:* is December 2002, but the next issue will be February 2003, and I want to write about January 1983, San Diego, CA. About 1850 eager UNIX users gathered for "UNICOM" – a combined meeting of STUG (Software Tools User Group), /usr/group (in later years UniForum), and USENIX.

This was the meeting where Bob Guffy announced that AT&T was about to introduce System V; where Bill Munson announced that "DEC supports UNIX"; and where Bob Fabry announced that 4.2BSD was "almost ready" (and that it was 46% larger than 4.1: 53,500 lines of code!). Hot stuff!

There were two divergent things I noted as I re-read the Proceedings: (1) how many of the topics (and companies) were passé and (2) how many of the people (and papers) were notable.

Passé as well as notable. It seems bizarre. But here's a paper on 4.2BSD on the Sun Workstation, by Tom Lyon and Bill Shannon. And one on porting 4.1 to the λ750 VLSI, by Paul Chen and Chet Britton. And, truly notable, John Chambers and John Quarterman's paper comparing System III and 4.1BSD.

But that's a mere beginning. There was Eric Allman on "Mail Systems and Addressing in 4.2BSD"; Mark Horton on "Usenet"; Mike Karels on *vfork*; Brian Harvey on "UNIX Logo"; Mike O'Dell on "Portability"; and Mike Tilson, Jean Wood, Joe Yao, John Mashey, Jim Isaak, Heinz Lycklama, and . . . , and . . .

But there was more to reflect upon.

First among these was a paper by Jim Lawson, "UNIX Research at Lucasfilm." We're talking about January 1983. At that time ILM had already won awards for *Star Wars* (1977), *The Empire Strikes Back* (1980), *Raiders of the Lost Ark* (1981), and *ET* (1982), and were soon to receive an Oscar for *Return of the Jedi*.

Lawson talked about running four VAX 11/750s, one 11/780, and a network of 6800s. He also remarked on the fact that Lucasfilm was awaiting 4.2BSD support. And he said that Lucasfilm has found UNIX to be the "ideal operating system."

Really impressive.

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On a similar topic, Jeff Loomis and Phil Mercurio talked about "Computer Animation at UCSD."

The other topic that struck me was standards. While /usr/group had begun its UNIX standardization efforts at UNICOM in 1981, now Heinz Lycklama announced the availability of a "draft UNIX interface standard." Jim Isaak spoke about "Standards Organization"; Rob Petersen gave a paper on "The History and Purpose of Standards"; and Robert Swartz talked about "Criteria for Standards."

Twenty years later, many issues of *;login:* have a section on the POSIX committees. Sigh.

There were many other interesting papers, but what strikes me as I write is that so many of the things that seemed important (UNIX on the NS6032, porting to the Gould 32/27, UNIX on Apollo computers) are meaningless today.

Oh, by the way, there was a special session on "Marketing and Venture Capital." How little we knew.

IOI 2002

Yong-In, Korea

by Don Piele

USACO Director

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Sunday evening, August 18, 2002, the US delegation arrived in Korea and were bussed to Kyung Hee University, the site of the International Olympiad of Informatics for 2002. Our delegation consisted of thirteen members, including a pair of international committee members, two team leaders, two observers (to learn how to run the IOI in the USA in 2003), four contestants, and three visitors.

The opening ceremony was held in Renaissance Hall in the Central Library for 277 contestants along with a host of leaders and guests, for a total near 600. It began with a short report on IOI 2002 followed by two messages, one from the president of IOI 2002 and another from the Minister of Science and Technology for Korea.

The contestants were sent off to their rooms by 8 p.m. while the team leaders approved the three problems for the first competition day and began the long task of translating them into their native language (since contestants are not required to know English). Some did not finish until the wee hours of the morning.

On the first competition day, the contestants were given five hours to work on the three problems of round one. The word after the time was up was that they were a very challenging set of problems.

Thursday, the second set of problems was appreciated by the competitors more than the first. Everyone came out feeling relieved it was finally over.

When we got the results back they were all very close together – around 200 points out of a possible 300 points on round 2. On the first day, Tiankai Liu had a higher than average score because of his success on one problem which he solved better than all other competitors at IOI. His total number of points (415) for the two days was over a hundred points ahead of the rest of our team. The other three, Jacob, Adam, and Alex, were close together with totals just under 300 and combined with day 1, good enough for medals.

Overall, the team did a wonderful job getting medals in a very difficult competition. The problems used by the Koreans were very original and forced the students to think outside the box. Tiankai showed his extraordinary ability to do just that by coming up with an original solution that surprised even the judges. He was the only one in the competition to get full marks on the problem called XOR. His winning solution was only 100 lines of code, about a third as long as expected, and it outperformed the judges' solution. Remember, this is only one of three problems he had to solve in five hours and the judges had spent weeks finding their best solution.

Tiankai Liu, a sophomore from Phillips Exeter Academy in Exeter, NH, captured a gold medal. The other three members of the US team won silver medals: high school seniors Adam D'Angelo, also from Phillips Exeter Academy, Jacob Burnim, from Montgomery Blair High School in Silver Spring, MD, and Alex Schwendner, a home-schooled freshman from Austin, Texas.

Burnim captured the highest silver medal during the competition. Schwendner, a freshman, was the youngest team member from the US ever to receive a silver medal. Tiankai had the fourth highest score in the whole contest and this was his first year at IOI.

In addition to his gold medal Liu was awarded the Sens Q prize, newly established by Samsung Electronics for the contestant who solved the problems the most creatively. He received a Samsung laptop computer as his prize.

Participation in the IOI 2002 was made possible by USENIX, our sponsor for the USACO.

The team: from l. to r.: Jacob Burnim, Alex Schwendner, Tiankai Liu, Adam D'Angelo