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inside:

USENIX NEWS



## USENIX & SAGE

The Advanced Computing Systems Association &  
The System Administrators Guild

# USENIX news

## 20 Years Ago in UNIX

by Peter H. Salus

USENIX Historian  
<pete@Matrix.Net>

One of the really nice things about publishing this set of historical notes is the way the participants contribute to my knowledge.

For years I've been reading columns by the "Jeffreys, Haemer and Copeland." Jeff Haemer is an old friend, but I'd never met Jeff Copeland. However, in June I received the following:

In your June "20 years ago . . ." column, you quote some correspondence from Ted Dolotta on the use of the word "touch" in Interactive's documentation for IBM. Ted minimizes his own role in preventing the travesty.

Certainly, Joyce Yoshihata uttering that she had been a press-typist for 25 years stopped the first round of IBM insisting on changing "touch" to "press," and that solved the problem with the IBM documentation managers. Unfortunately, as in many a large organization, the word didn't get passed down to the troops. As a result, when the documentation review for the text processing tools (with which I had some ego involvement) rolled around, the first words out of the young technical editor sitting across the table were something like "The first global issue is your pervasive use of the word 'touch' – that's going to have to be changed."

Ted by then had had enough. He leaned his elbows on the table, looked the editor in the eye, and said "OK. Fair enough. How about 'fondle?' Can we 'fondle the key?'"

After she turned seven shades of pink, Ted explained that (1) we'd been through this before, and (2) if AT&T – the other conservative high-tech monopoly in the country at the time – could sell "Reach Out and Touch Someone" nightshirts in their company store, perhaps IBM should loosen up, too.

Soon after I received this, I had the opportunity to actually meet Jeff, who is currently with a large (unmentionable) corporation in Redmond, Washington, whose opinions his email does not represent. I can assure you all that he is as witty in person as in print.

While this most likely ends the Dolotta documentation tale, it far from concludes this episode of history.

Fall 1980 saw Sam Leffler's arrival on the Berkeley campus. In October, the CSRG released 4BSD. This release contained a faster filesystem for use with virtual memory, job control, reliable signals, automatic reboot, "delivermail," and the Franz Lisp system.

Eric Allman's delivermail is what was renamed sendmail. (Eric said: "sendmail is really just delivermail version 2 or 3.") (The full story is in *Quarter-Century of UNIX*, pp. 161-163.)

Finally, Fall 1980 saw the resumption of the publication of *login*: – I'll leave that for the next installment.

### 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)>

ACCESS TO PAPERS from the USENIX Conferences online starting with 1993

<[www.usenix.org/publications/library/index.html](http://www.usenix.org/publications/library/index.html)>

THE RIGHT TO VOTE on matters affecting the Association, its bylaws, election of its directors and officers.

OPTIONAL MEMBERSHIP in SAGE, the System Administrators Guild.

DISCOUNTS on registration fees for all USENIX conferences.

DISCOUNTS on the purchase of proceedings and CD-ROMS from USENIX conferences.

SPECIAL DISCOUNTS on a variety of products, books, software, and periodicals. See <<http://www.usenix.org/membership/specialdisc.html>> for details.

FOR MORE INFORMATION REGARDING MEMBERSHIP OR BENEFITS, PLEASE SEE

<<http://www.usenix.org/membership/membership.html>>

OR CONTACT

<[office@usenix.org](mailto:office@usenix.org)>

Phone: 510 528 8649

# USENIX Association Financial Report 1999

The following information is provided as an annual report of the USENIX Association and represents the Association's statement of revenue and expenses for the year. Below are several charts that illustrate where your membership dues go. The Association's complete financial statements for the fiscal year ended December 31, 1999 are available on request from the USENIX Association at 2560 Ninth Street, Suite 215, Berkeley, CA, 94710.

The USENIX Association completed fiscal year 1999 with a net operating surplus of \$117,361.

Membership increased again, both in the general membership and SAGE, and now tops 10,000 members. About half of the members are also members of SAGE. However, with increasing membership, comes growth in expenses. Membership and publication expenses increased.

## Member Dues

Here are a few charts that show how your USENIX and SAGE dues are spent. Chart 1 shows the total dues income (\$746,402 in 1999) divided by type of membership. Chart 2 then presents how those dues are spent. Note that income from our conferences cover all costs of the conference office, exhibition and marketing. Chart 3 shows how the executive office spends its money. The "other" category covers such items as taxes, licenses, bank charges and miscellaneous expenses. Chart 4 indicates where most of the money allocated to Good Works and standards activities are spent (\$962,513) in 1999. (See the USENIX Web site at <http://www.usenix.org/about/goodworks.html> for a description of our Good Works program). These funds come from the income generated by the USENIX conferences and interest income from the Association's reserve fund.

Two charts deal with SAGE income (chart 5) (\$270,143 in 1999) and direct expenses (chart 6) (\$185,607).

Allocated expenses (staff and overhead) are not reflected in the direct expenses chart.

## Conferences

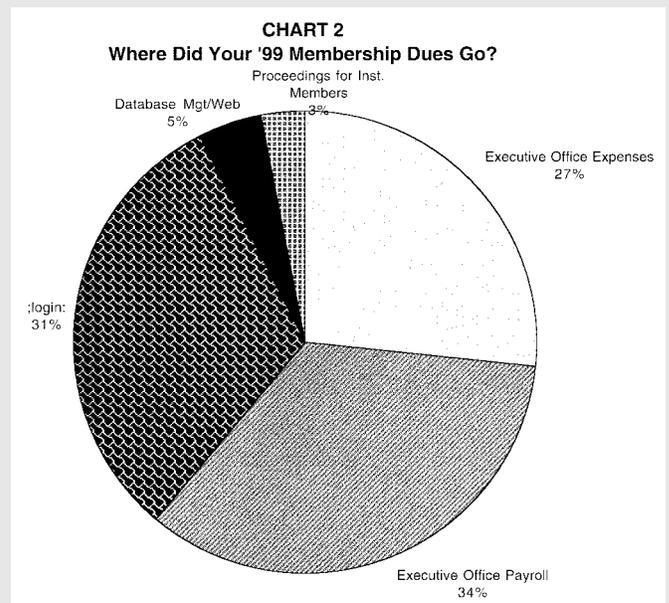
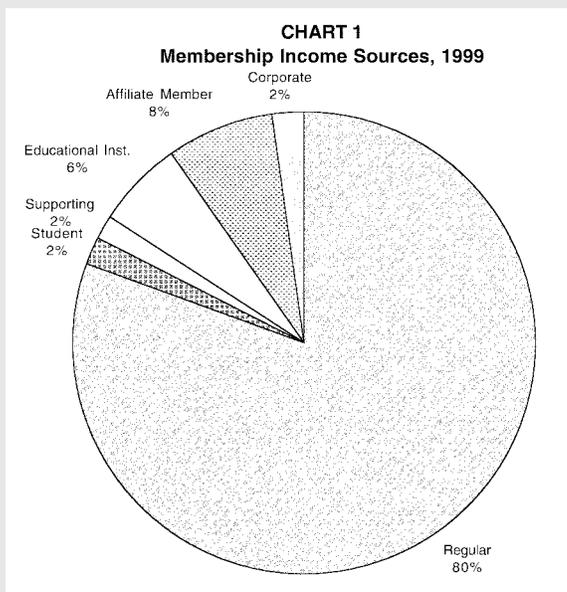
In 1999, USENIX sponsored the most conferences ever: three major conferences and 10 smaller workshops. Over 6,000 people attended these events. Tutorials continue to be popular. We boast some of the finest teachers in the industry and this is evidenced by the increasing number of persons taking them. Conferences and workshops that operated at a net loss were COOTS, Smart Cards, NETA, DSL, and USITS. Revenues exceeded expenses for all of the conferences included in the Annual Technical, LISA, and Security.

## Publications

We published 8 issues of ;login:. The quality and quantity of material keeps improving.

## Projects and Good Works

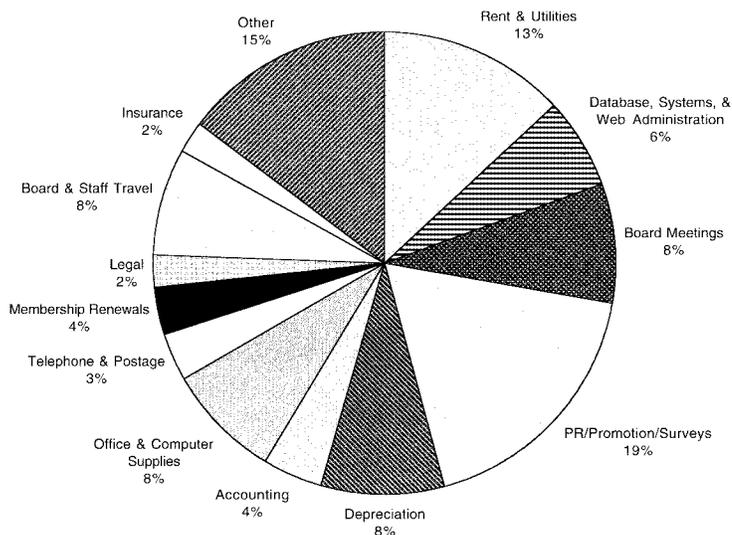
The Association's healthy year-end budget was supported by strong returns on our investments, which netted \$256,644 for our Good Works program. USENIX allocated over \$1,000,000 for its Good Works program, and spent nearly all of it. These funds are used to provide stipends to students to attend USENIX and SAGE conferences, scholarships,



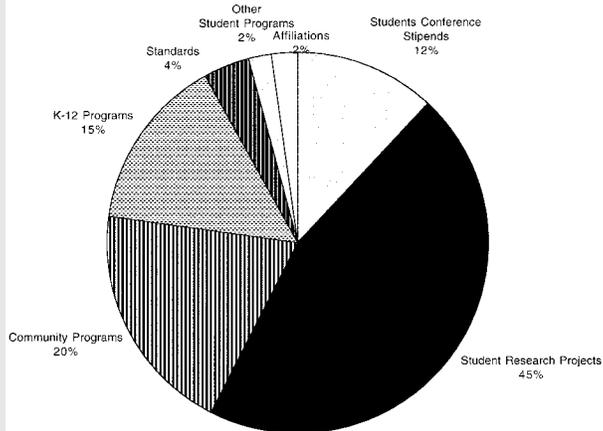
support student research, promote outreach to representatives on campuses, as well as several innovative, computing-related projects. Over 360 institutions have been represented in the USENIX Student Stipend Program. To date, over 100 schools have designated outreach representatives. Our Scholastic Program provides funding for scholarships and student research projects.

See <http://www.usenix.org/about/goodworks.html> for a complete list of our Good Works program.

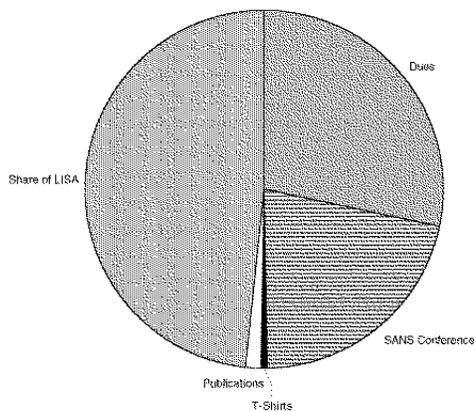
**CHART 3**  
**Executive Office Expenses, 1999**



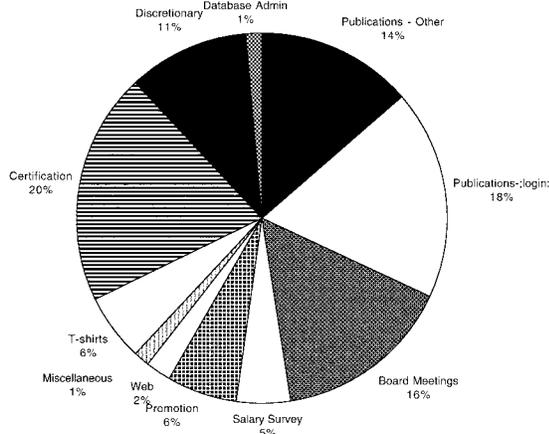
**CHART 4**  
**Projects and Good Works, 1999**



**CHART 5**  
**SAGE Income Sources, 1999**



**CHART 6**  
**SAGE Direct Expenses, 1999**



# 1999 Financial Statements

## STATEMENTS OF FINANCIAL POSITION AS OF DECEMBER 31, 1999 AND 1998

ASSETS	<u>1999</u>	<u>1998</u>
CURRENT ASSETS:		
Cash and cash equivalents	\$2,107,048	\$2,079,358
Receivables	115,555	60,714
Prepaid expenses	57,841	112,405
Inventory	<u>18,544</u>	<u>22,311</u>
Total current assets	2,298,988	2,274,788
INVESTMENTS	7,755,283	5,648,278
FURNITURE AND EQUIPMENT	<u>155,028</u>	<u>125,290</u>
Total assets	<u>\$10,209,299</u>	<u>\$8,048,356</u>
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES:		
Accrued expenses	<u>\$134,564</u>	<u>\$231,428</u>
Total current liabilities	134,564	231,428
COMMITMENTS AND CONTINGENCIES		
UNRESTRICTED NET ASSETS	<u>10,074,735</u>	<u>7,816,928</u>
Total liabilities and net assets	<u>\$10,209,299</u>	<u>\$8,048,356</u>

### USENIX BOARD OF DIRECTORS

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

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#### CONFERENCES

Barbara Freel <conference@usenix.org>

Registration/Logistics

Telephone: 510 528 8649

FAX: 510 548 5738

Dana Geffner <display@usenix.org>

Exhibitions

Telephone: 831 457 8649

FAX: 831 457 8652

Daniel V. Klein <dvk@usenix.org>

Tutorials

Telephone: 412 422 0285

**STATEMENTS OF ACTIVITIES FOR THE YEARS ENDED  
DECEMBER 31, 1999 AND 1998**

<b>REVENUE</b>	<u>1999</u>	<u>1998</u>
Conference revenue	\$4,102,871	\$3,696,590
Workshop revenue	928,746	729,267
Membership dues	746,402	533,129
SAGE membership dues and other income	270,143	190,952
Product sales	<u>47,712</u>	<u>48,616</u>
Total unrestricted revenue	<u>6,095,874</u>	<u>5,198,554</u>
 <b>OPERATING EXPENSES</b>		
Conference expenses	1,954,395	1,766,978
Personnel and related benefits	1,136,834	1,016,021
Projects and good works	962,513	812,167
Workshop expenses	724,596	500,677
Other general and administrative	628,736	545,406
Membership; login:/web	319,472	299,325
SAGE expenses	185,607	129,351
Product expenses	<u>66,360</u>	<u>46,886</u>
Total Expenses	<u>5,978,513</u>	<u>5,116,811</u>
Net operating surplus	<u>117,361</u>	<u>81,743</u>
 <b>NONOPERATING ACTIVITY</b>		
Donations	6,015	
Interest and dividend income	215,943	213,034
Gains and losses on marketable securities	2,011,441	788,667
Investment fees	<u>(86,938)</u>	<u>(43,797)</u>
Net investment income and nonoperating expense	<u>2,140,446</u>	<u>963,919</u>
INCREASE IN NET ASSETS	2,257,807	1,045,662
NET ASSETS, BEGINNING OF YEAR	<u>7,816,928</u>	<u>6,771,266</u>
NET ASSETS, END OF YEAR	<u>\$10,074,735</u>	<u>\$7,816,928</u>

**MEMBERSHIP**

Telephone: 510 528 8649  
Email: <office@usenix.org>

**PUBLICATIONS/WEB SITE**

<<http://www.usenix.org>>  
Jane-Ellen Long <jel@usenix.org>  
Telephone: 510 528 8649

**USENIX SUPPORTING MEMBERS**

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Earthlink Network  
Edgix  
Interhack Corporation  
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Nimrod AS  
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Sendmail, Inc.  
Smart Storage, Inc.  
Sun Microsystems, Inc.  
Sybase, Inc.  
Syntax, Inc.  
Taos: The Sys Admin Company  
UUNET Technologies, Inc.

**STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED  
DECEMBER 31, 1999 AND 1998**

<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>	<u>1999</u>	<u>1998</u>
Increase in net assets	\$ 2,257,807	\$ 1,045,662
Adjustments to reconcile increase in net assets to net cash provided by operating activities:		
Depreciation	44,498	40,748
Realized and unrealized gains on investments	(2,011,441)	(788,667)
(Increase) decrease in current assets:		
Receivables	(54,841)	(11,817)
Prepaid expenses	54,564	19,591
Inventory	3,767	8,013
Increase (decrease) in liabilities:		
Accrued expenses	(96,864)	107,917
Deferred revenue	—	(200,613)
Total cash provided by operating activities	<u>197,490</u>	<u>220,834</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Purchase of investments	(9,628,860)	(2,183,978)
Sale of investments	9,533,296	2,333,141
Purchase of furniture and equipment	(74,236)	(39,645)
Total cash provided (used) by investing activities	<u>(169,800)</u>	<u>109,518</u>
INCREASE IN CASH AND CASH EQUIVALENTS	27,690	330,352
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	<u>2,079,358</u>	<u>1,749,006</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 2,107,048</u>	<u>\$ 2,079,358</u>

## If This Be Open, Let Us Make the Most of It

by Daniel Geer

President, USENIX  
Board of Directors



<geer@usenix.org>

USENIX is home to a lot of people who look kindly on “open systems.” So long as we don’t try to define the term too closely, many of us can generally agree on a few things that fall under that category or, dare I say, that way of life. But try to be precise on what constitutes “open” and things tend to fall apart in a way that mimics the sectarian divisions arising in any set of millennial beliefs. This is not news.

What may be, relatively speaking, news is that open systems are no guarantee of perfection even at what they are best at, and what they are best at is harnessing the brains of a larger collection of critics than a profit-making company can ordinarily justify to its investors or its customers. Eric Raymond says, “Given enough eyeballs, all bugs are shallow.” This is just the information-age version of “Practice makes perfect” – but as my father would always correct me, the full form is “Practice makes perfect only when you are practicing perfection.”

As a specialist in security, I look for perfection when I can get it and risk management when I can’t. By now, everyone knows never to trust a cryptographic algorithm until everybody who is any good has taken a run at it. By now,

almost everyone has heard that substantial vulnerabilities are nearly never in the crypto part of a security system, but rather in handling hostile triggering of weird-ass error conditions. Within the past year my old friend Kerberos, certainly one of the most open and widely used security systems, turned out to have a buffer overflow vulnerability. There is no better example out there to prove by demonstration that even if there are enough eyeballs to make all bugs shallow, that does not mean that those eyeballs are paying attention. Just like my father said, practice makes perfect only when you are practicing perfection.

This is about rigor, tempered with brutal marketplace realities. It is naive to imagine that sustained rigor is a natural concomitant of volunteer labor. It is wishful to imagine that rigor can come without costs that don’t have to be covered by somebody with money to spend, whether that money flows from taxation, gratitude, profit, or charity. To the extent that the systems USENIX folk build and operate are ever more critical to the world as we know it, we cannot imagine that we’ll get what we want – systems that can be improved upon because we can understand them in detail – just by wishing it so. It is hard to be one for all and all for one in the glare of an IPO. It will be hard to ignore rigor when certification leads to licensure and thence to malpractice standards.

So here’s my challenge to you: That you are a USENIX member makes you atypical. That you are a USENIX member who actually reads this piece makes you more atypical. That you are a USENIX member who reads this piece and has enough spare cycles to coherently think through what it is USENIX can do, if anything, makes you more atypical still. Let me leave you with a problem statement:

How much rigor do systems need to let people like us stay in the driver’s seat, and can USENIX help?

## USENIX Conference Office Moves

In September, the USENIX Association moved its conference department from Lake Forest into headquarters in Berkeley. The southern California office was closed because Judy DesHarnais, who has been the USENIX meeting planner for the past 20 years, is moving to Hawaii. She will continue to work part-time for USENIX as an Associate Meeting Planner.

Barbara Freel <barbara@usenix.org>, has been hired as the new Conference Director. For the past nineteen years, Barbara has been managing large meetings and conventions for several professional associations in the healthcare field and, most recently for EPRI, the Electric Power Research Institute. She earned her Certified Meeting Professional designation in 1987.

Owen Rundall has been hired as an assistant meeting planner. He has just graduated from college, and has nine years of experience in the meetings industry, including the International Society for Magnetic Resonance in Medicine, and the Convention Sales department of the Hilton San Francisco and Towers. Moun Chau, who has been a production editor in the Berkeley office, is helping with registration and other conference activities on an interim basis.

### NOTE ADDRESS CHANGE!

Please change all address entries you may have for the USENIX Conferences to:

USENIX Conference Department  
2560 Ninth Street, Suite 215,  
Berkeley, CA 94710  
Phone: 1.510.528.8649  
Fax: 1.510.548.5738  
Email: conference@usenix.org