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NOTICE

;login: is the official newsletter of the USENIX Association, and is sent free of charge to Individual, Public and Institutional members of the Association.

The USENIX Association is an organization of AT&T licensees, sub-licensees, and other persons formed for the purpose of exchanging information and ideas about UNIX* and UNIX−like operating systems and the C programming language. It is a not-for-profit corporation incorporated under the laws of the State of Delaware. The officers of the Association are:

President         Lou Katz
Vice-President    John L. Donnelly
Secretary         Lewis Law
Treasurer         Thomas Ferrin

Directors         Bruce S. Borden
                  Alan G. Nemeth
                  Deborah K. Scherrer
                  Waldo M. Wedel

The Executive Director of the Association and editor of ;login: is Tom Strong.

Membership information can be obtained from the Association office:

USENIX Association
P.O. Box 7
El Cerrito, CA 94530
(415) 528-UNIX

Members of the UNIX community are heartily encouraged to contribute articles and suggestions for ;login:. Your contributions may be sent to the editor electronically at

cbvx@lg:usenix

or through the US mail to the Association office at the address above. The USENIX Association reserves the right to edit submitted material.

;login: is produced on UNIX using troff and a variation of the −me macros. We appreciate receiving your contributions in n/troff input format, using any macro package. If you contribute hardcopy articles please leave left and right margins of 1" and a top margin of 1½" and a bottom margin of 1¼". Hardcopy output from a line printer or most dot-matrix printers is not reproducible.

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*UNIX is a trademark of Bell Laboratories.
The USENIX Association Toronto Conference

The Summer, 1983, technical meetings of the USENIX Association and the Software Tools Users Group will be held July 12−15 in Toronto, Ontario, Canada, at the Harbour Castle Hilton Hotel. The host of the meeting will be Human Computing Resources Corporation. The local arrangements chairperson is Suzanne MacNary. Local arrangements are being handled by Rogal Boston. The technical program chairperson for USENIX is Michael Tilson of HCR and for the Software Tools Users Group is Neil Groundwater of Analytical Disciplines of Vienna, VA.

The Toronto conference will feature tutorials, a technical meeting and a vendor exhibit. The agenda for the meeting is printed in another article. The schedule of events is:

Tuesday 9:00am−5:00pm  USENIX Tutorials
• 4.2BSD File Systems — Facilities & Implementation
• The UNIX Shells
• Advanced C
9:00am—5:00pm  Vendor Exhibits
1:00am—5:00pm  Software Tools Users Group Tutorial
• Software Tools: Portable UNIX—like Software in the Public Domain
7:00pm—11:00pm  Software Tools Users Group Technical Presentations

Wednesday 8:45am—5:30pm  USENIX Technical Presentations
9:00am—5:00pm  Vendor Exhibits
5:30pm—7:00pm  Open meeting of the USENIX Board with Members
evening  Reception at the Ontario Science Center

Thursday 8:45am—5:00pm  USENIX Technical Presentations
9:00am—5:00pm  Vendor Exhibits
10:00pm—3:00am  IMAX Show

Friday 9:00am—5:00pm  USENIX Technical Presentations

Conference proceedings may be ordered at the meeting or afterwards. Ordering information will be printed when it is available.

Registration and vendor reservations are being received at a faster pace than was the case for the Boston meeting so a good turnout is expected.

A meeting announcement was mailed in early April and a registration packet was mailed in May. Further information on the meeting may be obtained from:

Rogal Boston
72 Langley Road
Newton Centre, MA 02159
(617) 965-1000

The Association office will have a desk at the conference to handle any membership, office, ;login:, or tape distribution business.
Fortune Systems to Sponsor IMAX Show during Toronto Conference

In January, USENIX convened in San Diego, near the first OMNIMAX theatre in the world, and we were fortunate to be able to attend a special screening. In July, USENIX will convene in Toronto, near the first IMAX theatre in the world. Our destiny is clear. There shall come to pass

THE IMAX MOVIE MARATHON
or
UNIX† MEETS IMAX‡

a special screening of several IMAX films at the Cinesphere (an Imax theatre) in Ontario Place (a theme park owned by the province of Ontario on Lake Ontario near downtown Toronto).

Imax is a high resolution motion picture system projected onto a very large rectangular screen (60x80 feet at the Cinesphere) backed by high fidelity six channel sound. Since the introduction of IMAX in 1970, many films have been made which exploit the medium, including the well-known film “To Fly”, which we will screen if possible. (OMNIMAX, the sister process to IMAX, is projected onto the inside of a hemispherical screen, while IMAX is projected onto a more traditional flat screen in front of the audience.)

The show will be at 10pm on Thursday, July 14. For the benefit of those who only want to stay for a couple of hours, we will try to play the most popular films at the beginning of the show. For the diehard fans, and there are many of us, the show will continue until 3am.

Details on how to obtain tickets will be announced at the conference. The Cinesphere seats 800 people.

... Dave Yost, Fortune Systems

Comments Due on the UniForum Draft Standard

Comments on the UniForum (formerly /usr/group) Standards Committee draft Systems Standard Interface proposal are due by July 6, 1983.

The next Standards Committee meeting will be held in Toronto on July 12 in conjunction with the USENIX meeting. Those interested in participating in the Standards Committee activities should contact

Heinz Lycklama  
Chairman, UniForum Standards Committee  
Interactive Systems Corporation  
1212 Seventh Street  
Santa Monica, CA  90401

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† IMAX is a trademark of IMAX Corporation.
‡ UNIX is a trademark of Bell Laboratories.
## Agenda for the USENIX Association Toronto Conference

**WEDNESDAY**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Length</th>
<th>Author(s)</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>8:45-11:45</td>
<td></td>
<td>SESSION A/B — Opening Session</td>
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<tr>
<td></td>
<td></td>
<td>Chair: Michael Tilson</td>
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<tr>
<td>8:45 - 9:30</td>
<td>45</td>
<td></td>
<td>Opening Remarks, USENIX</td>
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<tr>
<td>9:30-10:15</td>
<td>45</td>
<td>Lesk</td>
<td>Keynote address: Technology Driven Software vs. Psychology of Users: An Irresistible Force Meets an Immovable Object</td>
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<tr>
<td>10:15-10:45</td>
<td>30</td>
<td>BREAK</td>
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<tr>
<td>10:45-11:45</td>
<td>60</td>
<td>AT&amp;T</td>
<td>UNIX Licensing and New Product Offerings</td>
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<tr>
<td>11:45- 1:30</td>
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<td>LUNCH</td>
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<td>1:30- 3:00</td>
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<tr>
<td>1:30- 1:55</td>
<td>25</td>
<td>Baecker, Breslin &amp; Sturgess</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>On Enhancing the Presentation of C Source Code</td>
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<tr>
<td>1:55- 2:15</td>
<td>20</td>
<td>Nakamura &amp; Murai</td>
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<td></td>
<td></td>
<td></td>
<td>On-Line Manual System for Software Development on UNIX</td>
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<tr>
<td>2:15- 2:35</td>
<td>20</td>
<td>Kendall</td>
<td>Bcc: Runtime Checking for C Programs</td>
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<tr>
<td>2:35- 2:55</td>
<td>20</td>
<td>Farley, Kunkel &amp; Thompson</td>
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<td></td>
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<td>CDB — a C Source Language Debugger</td>
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<td>1:30- 3:00</td>
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<td>1:30- 1:55</td>
<td>25</td>
<td>Holt, Mendell &amp; Perelgut</td>
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<td></td>
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<td></td>
<td>Tunis: A Portable, UNIX Compatible Kernel Written in Concurrent Euclid</td>
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<tr>
<td>1:55- 2:20</td>
<td>25</td>
<td>Gien</td>
<td>The SOL Operating System</td>
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<tr>
<td>2:20- 2:40</td>
<td>20</td>
<td>Barrett</td>
<td>An Implementation of UNIX for the Intel iAPX 286</td>
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<tr>
<td>2:40- 3:00</td>
<td>20</td>
<td>Whistler</td>
<td>UNIX a la Data General</td>
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<tr>
<td>3:00- 3:30</td>
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<td>BREAK</td>
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<tr>
<td>3:30</td>
<td>SESSION A — Programming Tools 2</td>
<td></td>
<td>Bryan</td>
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<td>3:30</td>
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<td>25</td>
<td>Hirgelt</td>
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<tr>
<td>3:30</td>
<td></td>
<td>20</td>
<td>McGowan, Anderson &amp; Brumm</td>
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<tr>
<td>4:35</td>
<td></td>
<td>25</td>
<td>Novak</td>
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<tr>
<td>3:30</td>
<td>SESSION B — UNIX Implementation 2</td>
<td></td>
<td>Patriquin</td>
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<td>3:30</td>
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<td>25</td>
<td>Wilens</td>
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<td>4:15</td>
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<td>20</td>
<td>Dunietz &amp; Powell</td>
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<td>4:35</td>
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<td>Neff</td>
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**THURSDAY**

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<thead>
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<th>Schedule</th>
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<th>Author(s)</th>
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<tbody>
<tr>
<td>8:45</td>
<td>SESSION A — User Interface 1</td>
<td></td>
<td>Perlman</td>
<td>The Interface Arsenal</td>
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<tr>
<td>8:45</td>
<td></td>
<td>25</td>
<td>Buxton, Lamb, Sherman &amp; Smith</td>
<td>A User Interface Management System</td>
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<tr>
<td>9:40</td>
<td></td>
<td>20</td>
<td>Tuori</td>
<td>Talking to UNIX — Some Experience with Speech Input</td>
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<tr>
<td>8:45</td>
<td>SESSION B — UNIX Implementation 3</td>
<td></td>
<td>Lucas &amp; Lycklama</td>
<td>A General-Purpose Object-File Format</td>
</tr>
<tr>
<td>8:45</td>
<td></td>
<td>15</td>
<td>Hoover</td>
<td>A User Information Data Base for UNIX (What to do when <em>letclpasswrd</em> just isn’t enough)</td>
</tr>
<tr>
<td>9:40</td>
<td></td>
<td>20</td>
<td>Cole</td>
<td>Attaching an Array Processor in the UNIX Environment</td>
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<td>10:00</td>
<td>BREAK</td>
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<tr>
<td>10:30-11:45</td>
<td>SESSION A — User Interface 2</td>
<td>Chair: Robert Pike</td>
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<tr>
<td>10:30-10:50</td>
<td>Steffen &amp; Veach</td>
<td>The Edit Shell — Combining Screen Editing with the History List</td>
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<tr>
<td>10:50-11:15</td>
<td>Korn</td>
<td>KSH — A Shell Programming Language</td>
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<tr>
<td>11:15-11:40</td>
<td>Mankins &amp; Franklin</td>
<td>A Simple Window Management Facility for the UNIX Time-sharing System</td>
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<tr>
<td>10:30-11:45</td>
<td>SESSION B — Compilers and Languages 1</td>
<td>Chair: Jean Wood</td>
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<tr>
<td>10:30-10:50</td>
<td>Ryan, Spiller &amp; Weil</td>
<td>A New Portable Compiler for Xenix</td>
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<tr>
<td>10:50-11:20</td>
<td>Cox</td>
<td>Objective C Compiler: Programming Smalltalk-80 Methods in C</td>
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<tr>
<td>11:20-11:40</td>
<td>Zelitzky &amp; Srivastava</td>
<td>Compilers on the NS16000</td>
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<tr>
<td>11:45-1:30</td>
<td>LUNCH</td>
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<tr>
<td>1:30-3:00</td>
<td>SESSION A — UNIX Implementation 4</td>
<td>Chair: A.R. White</td>
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<tr>
<td>1:30-1:55</td>
<td>Ross &amp; Taylor</td>
<td>UNIX Support for Guaranteed Real-Time Processing</td>
<td></td>
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<tr>
<td>1:55-2:20</td>
<td>Teixeira</td>
<td>High Speed Laboratory Data Acquisition on the MC-500</td>
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<tr>
<td>2:20-2:40</td>
<td>Kridle</td>
<td>Performance Effects of Disk Subsystem Choices for VAX Systems Running 4.2BSD UNIX</td>
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<td>2:40-3:00</td>
<td>Lutz &amp; Shon</td>
<td>Running the UNIX Kernel in User Mode</td>
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<tr>
<td>1:30-3:00</td>
<td>SESSION B — Compilers and Languages 2</td>
<td>Chair: Jean Wood</td>
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<tr>
<td>1:30-1:55</td>
<td>Isaacson</td>
<td>QL: A General Purpose Programming Language with an Embedded Data Base Interface</td>
<td></td>
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<tr>
<td>2:25-2:55</td>
<td>Tanenbaum, Staveren &amp; Keizer</td>
<td>A UNIX Tool Kit for Making Portable Compilers</td>
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<td>3:00-3:30</td>
<td>BREAK</td>
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### 3:30- 5:15
**SESSION A — UNIX Directions**  
Chair: Michael Tilson

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<tr>
<td>3:30- 4:00</td>
<td>30</td>
<td>Pike</td>
<td>UNIX Style, or &quot;cat -v&quot; Considered Harmful</td>
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<tr>
<td>4:00- 4:15</td>
<td>15</td>
<td>Balter</td>
<td>Everything You Wanted to Know About System V, and Then Some</td>
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<tr>
<td>4:15- 4:30</td>
<td>15</td>
<td>Chambers &amp; Quartermann</td>
<td>A Practical Comparison of 4.2BSD and System V</td>
</tr>
<tr>
<td>4:30- 4:55</td>
<td>25</td>
<td>O'Dell</td>
<td>Berkeley UNIX after 4.2BSD — Where is it Going and Why Do We Want to Get There?</td>
</tr>
<tr>
<td>4:55- 5:15</td>
<td>20</td>
<td>PANEL</td>
<td>Panel Discussion: Where is UNIX Going, and Should It Go There?</td>
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<th>Time</th>
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<tr>
<td>3:30- 5:00</td>
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<td>(This time is open to allow daytime scheduling of birds-of-a-feather sessions.)</td>
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### FRIDAY

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<th>Schedule</th>
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<tr>
<td>8:45-10:00</td>
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<td></td>
<td>SESSION A — Networking</td>
</tr>
<tr>
<td>Chair: Michael O'Dell</td>
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<tr>
<td>8:45- 9:10</td>
<td>25</td>
<td>Gafke &amp; Bergan</td>
<td>Local Network with Virtual Ports</td>
</tr>
<tr>
<td>9:35-10:00</td>
<td>25</td>
<td>Foster</td>
<td>EtherTIP — A Virtual Terminal Interface to Ethernet</td>
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<th>Schedule</th>
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<th>Author(s)</th>
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<tr>
<td>8:45-10:00</td>
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<td></td>
<td>SESSION B — Applications</td>
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<tr>
<td>Chair: Barbara Arlow</td>
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<tr>
<td>8:45- 9:05</td>
<td>20</td>
<td>Haenlin</td>
<td>A Data Base Frontend, Driven by Tables Generated from a Data Dictionary</td>
</tr>
<tr>
<td>9:05- 9:30</td>
<td>25</td>
<td>Wolfe &amp; Hustler</td>
<td>A Powerful Accounting Package for UNIX-Based Systems</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>30</td>
<td>Smith</td>
<td>Writer’s Workbench Software at Colorado State University</td>
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<td>10:00-10:30</td>
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<tr>
<td>Time</td>
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<td>Chair</td>
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<tr>
<td>10:30-11:45</td>
<td>SESSION A — UNIX Mail</td>
<td>Michael O'Dell</td>
<td>Where is Europe?</td>
</tr>
<tr>
<td></td>
<td>10:30-10:50</td>
<td>McKie</td>
<td>UNIX and Electronic Mail: Trials, Tribulations, and Proposals</td>
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<td></td>
<td>10:50-11:20</td>
<td>O'Dell</td>
<td>Panel Discussion: Whither network mail and news?</td>
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<td></td>
<td>10:20-11:45</td>
<td>PANEL</td>
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<tr>
<td>10:30-11:45</td>
<td>SESSION A — Standards, Validation, and Portability</td>
<td>Michael Tilson</td>
<td>Developing a UNIX Validation Suite</td>
</tr>
<tr>
<td></td>
<td>10:30-10:55</td>
<td>Fostel &amp; Naylor</td>
<td>Early Experiences with UNIX on the Gould S.E.L. Concept Computer</td>
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<tr>
<td></td>
<td>10:55-11:15</td>
<td>Franke &amp; Truscott</td>
<td>UNIX Version 7 Compatibility under Systems 3/5</td>
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<td></td>
<td>11:15-11:30</td>
<td>Scheulen</td>
<td>Status Report from the /usr/group Standards Committee</td>
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<td>11:30-11:45</td>
<td>Lycklama</td>
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<td>11:45-1:30</td>
<td>LUNCH</td>
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<td>1:30-3:00</td>
<td>SESSION A — Open session: Applications</td>
<td>Ian Darwin</td>
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<tr>
<td>1:30-3:00</td>
<td>SESSION B — Open session: Systems</td>
<td>Henry Spencer</td>
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These talks will be scheduled first-come, first-serve. Speakers may sign up to give talks starting Wednesday morning. 10 minutes per speaker, any topic allowed. Titles and author addresses only will be printed in the conference proceedings. Scheduling closes Wednesday night to allow printing of a schedule. Sessions may extend to 5pm if there is sufficient interest.
Usenet: The Network News

Mark R. Horton
Bell Laboratories
cbosgd!mark

What is the Network News?

Usenet (Users' Network) is a bulletin board shared among many computer systems in the computer science community, around the United States, Canada, Europe, and Australia. There are currently around 500 machines on the network.

Usenet is a logical network, sitting on top of several physical networks, including UUCP, BLICN, BITNET, various Berknets and Ethernets, and the Arpanet. Sites on Usenet include many universities, private companies and research organizations. Most of the members of Usenet are either university Computer Science departments, private companies, or part of Bell Telephone Laboratories. Currently, most Usenet sites run the UNIX operating system, although there are Usenet sites running VMS, IBM's OS/360, and the Z80 MARC system.

The network news, or simply netnews, is the set of programs that provide access to the news, and transfer it from one machine to the next. Netnews was originally written at Duke University, and has been modified extensively by the University of California at Berkeley. Netnews allows articles to be posted for limited or very wide distribution. This document contains a list of newsgroups that were active at the time it was written, to assist you in determining the newsgroups to which you may want to subscribe. When creating a new article, the level of distribution is controlled by specifying the newsgroup.

Any user can post an article that will be sent out to the network to be read by persons interested in that topic. Users can specify which topics they are interested in via a subscription list. Then, whenever they ask to read news, they will be presented with all articles of interest that have not yet been read. There are also facilities for browsing through old news, posting follow-up articles, and sending direct electronic mail replies to the author of an article.

Why Usenet?

Usenet is useful in a number of ways. Someone wishing to announce a new program or product can reach a wide audience of interested people. A user can ask "Does anyone have an x?" and will usually get several responses within a day or two. Bug reports and their fixes can be made quickly available without the usual overhead of sending out mass mailings. Discussions involving many people at different locations can take place without having to get everyone together.

Another facility with similar capabilities to netnews is the electronic mailing list. A mailing list is a collection of electronic mailing addresses of users who are interested in a particular topic. By sending electronic mail to the list, all users on the list receive a copy of the article. While the mailing list facility is quite useful, Usenet offers a number of advantages not present in mailing lists. Getting yourself on a mailing list is not always easy. You have to figure out who maintains the list and ask them to put you on it. Often these people are out of town or busy, and don't put you on the list for several days. Sometimes you have to send mail to the entire mailing list, hoping that one of the readers will tell you who maintains the list. Once you are on the list, you often find yourself in the middle of a discussion. Netnews keeps old articles around until they expire (usually about two weeks) so you can browse through old news to catch up on what you missed. Similarly, referring to an old article is easy, without having to keep a personal file of all old mail.
Another advantage is appreciated by the users of the system. There is less overhead in having only one copy of each message sent to each machine, instead of having separate copies sent to each of several users on the same machine. This cuts down on computer time to process the messages, and on line costs for telephone calls to transfer messages from one machine to another (when phone lines are used). Another advantage is in the disk space consumed. When only one message is sent to each system, only one copy of the message is kept on disk. In a mailing list environment, each user has a copy in their own mailbox.

Another similar system is called Notesfiles. This system originated on CDC’s Plato system, and a UNIX implementation exists. Some Usenet sites run Notesfiles instead of or in addition to Netnews. Notesfiles is best known for its screen oriented user interface.

How do I Read News?

In the Usenet jargon, topics are called newsgroups. A partial list of current newsgroups appears in figure 1. You have your own subscription list of newsgroups to which you are said to subscribe.

There are different classes of newsgroups. Network newsgroups, e.g., net.misc, are sent to the entire network. Geographic areas and organizations can have local newsgroup classes, too. The newsgroup nj.general is only sent to machines in New Jersey. The company newsgroup bell.all is sent to all Bell System machines. Local newsgroups such as general stay on the local machine. For example, general might be used to post announcements of downtime or new software of interest to the local users. “From the Arpanet” (fa) newsgroups are used to gateway Arpanet mailing lists into Usenet.

To read news, type the command

readnews

Each newsgroup to which you subscribe will be presented, one article at a time. As each article is presented, you will be shown the header (containing the name of the author, the subject, and the length of the article) and you will be asked if you want more. There are a number of possible choices you can make at this point. You can type “y” for “yes” (or simply hit return) and the rest of the message will be displayed. Another choice you can make is “n” for “no”. This means you are not interested in the message — it will not be offered to you again.

Among the other commands you can type after seeing the header of an article are:

q Quit. The articles you have read or ignored are recorded and you are returned to the shell.

s filename

The article is saved in a disk file with the given name.

r Reply to the author of the message. You will be placed in the editor, with a set of headers derived from the message you are replying to. Type in your message, and exit the editor. The reply will be sent off via electronic mail. You are then returned to readnews.

f Post a follow-up message to the same newsgroup. This posts an article on this newsgroup with the same title as the original article. You will be placed in the editor — enter your message and exit.

U Unsubscribe from this newsgroup.

Variants of many commands use a “—” to refer to the previous message, e.g., “r—” replies to the previous message, whose complete contents you have now seen.
Submitting Articles

To submit a new news article type

```
postnews
```

You will be prompted for the newsgroup, title, and distribution on your terminal. Then you will be placed in the editor. Enter the text of your article, and then exit the editor. The article will be posted to the newsgroups specified, and distributed to the appropriate machines across the network.

Joining Usenet

Admission to Usenet is open to anyone interested. An interested site administrator should first find a nearby Usenet site that is willing to feed them news. Then the two administrators set up a `uucp` connection between the two sites, and transfer the Usenet software over the link. (The “B news” software is in the public domain, and comes with full documentation and installation instructions.) Next they set up the `news` connection. Test articles are sent over the link, and then the new site announces itself to the newsgroup `net.news.newsite`. (The list of Usenet sites, their Usenet neighbors, and who the contact persons are, is published monthly in `net.news.map`.) Once you have accepted a link from a site, unless there are good reasons not to, you should be willing to feed two or three more new sites in turn.

No money is charged for the news itself or the software, but it is up to the two sites to make arrangements for any phone bills involved. There are Usenet sites in nearly every major metropolitan area in the United States and Canada, with especially heavy concentrations in New Jersey, Illinois, and Silicon Valley. If you know of a nearby Usenet site, you can either connect to them (if they are willing), or ask them to look in `net.news.map` to find you a nearby site. If you don’t know of a nearby Usenet site, call me at (614) 860-4276 and I’ll refer you to one.

Figure 1 — Partial Newsgroup List

This is a list of some major Usenet newsgroups as of May 24, 1983. The full list is maintained by Adam Buchsbaum (research!alb).

<table>
<thead>
<tr>
<th>Newsgroup</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>net.announce</td>
<td>Moderated newsgroup for important announcements.</td>
</tr>
<tr>
<td>net.auto</td>
<td>Automobiles and automotive products and laws.</td>
</tr>
<tr>
<td>net.bugs</td>
<td>General bug reports and fixes.</td>
</tr>
<tr>
<td>net.bugs.4bsd</td>
<td>Subgroup for UNIX version 4BSD related bugs.</td>
</tr>
<tr>
<td>net.bugs.uucp</td>
<td>Subgroup for <code>uucp</code> related bugs.</td>
</tr>
<tr>
<td>net.columbia</td>
<td>The space shuttle and the STS program.</td>
</tr>
<tr>
<td>net.cse</td>
<td>Computer science education.</td>
</tr>
<tr>
<td>net.eunice</td>
<td>The SRI Eunice system.</td>
</tr>
<tr>
<td>net.games</td>
<td>Games and computer games.</td>
</tr>
<tr>
<td>net.garden</td>
<td>Gardening, methods and results.</td>
</tr>
<tr>
<td>net.graphics</td>
<td>Computer graphics, art, and animation.</td>
</tr>
<tr>
<td>net.jobs</td>
<td>Job announcements, requests, etc.</td>
</tr>
<tr>
<td>net.jokes</td>
<td>Jokes and the like. May be slightly offensive.</td>
</tr>
<tr>
<td>net.lan</td>
<td>Local area network hardware and software.</td>
</tr>
<tr>
<td>net.lang</td>
<td>Different computer languages.</td>
</tr>
<tr>
<td>net.lang.c</td>
<td>Subgroup for C.</td>
</tr>
<tr>
<td>net.mail</td>
<td>Proposed new mail/network standards.</td>
</tr>
<tr>
<td>net.med</td>
<td>Medicine and its related products and regulations.</td>
</tr>
<tr>
<td>net.micro</td>
<td>Micro computers of all kinds.</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>net.micro.68k</td>
<td>Subgroup for 68k's,</td>
</tr>
<tr>
<td>net.micro.atari</td>
<td>Subgroup for Atari's.</td>
</tr>
<tr>
<td>net.misc</td>
<td>Discussions too short lived for their own groups.</td>
</tr>
<tr>
<td>net.movies</td>
<td>Reviews and discussions of movies.</td>
</tr>
<tr>
<td>net.news</td>
<td>Discussions of Usenet itself.</td>
</tr>
<tr>
<td>net.news.group</td>
<td>Subgroup for discussions and lists of newsgroups.</td>
</tr>
<tr>
<td>net.news.map</td>
<td>Subgroup for maps.</td>
</tr>
<tr>
<td>net.news.newsite</td>
<td>Subgroup for new site announcements.</td>
</tr>
<tr>
<td>net.pets</td>
<td>Pets, pet care, and household animals in general.</td>
</tr>
<tr>
<td>net.politics</td>
<td>Political discussions. Could get hot.</td>
</tr>
<tr>
<td>net.rec</td>
<td>Recreational/participant sports.</td>
</tr>
<tr>
<td>net.religion</td>
<td>Religious, ethical, and moral implications of actions.</td>
</tr>
<tr>
<td>net.research</td>
<td>Research and computer research.</td>
</tr>
<tr>
<td>net.sf-lovers</td>
<td>Science fiction lovers' newsgroup.</td>
</tr>
<tr>
<td>net.sources</td>
<td>For the posting of software packages.</td>
</tr>
<tr>
<td>net.sport</td>
<td>Spectator sports.</td>
</tr>
<tr>
<td>net.taxes</td>
<td>Tax laws and advice.</td>
</tr>
<tr>
<td>net.unix-wizards</td>
<td>Discussions, bug reports, and fixes on and for UNIX.</td>
</tr>
<tr>
<td></td>
<td>Not for the weak of heart.</td>
</tr>
<tr>
<td>net.usenix</td>
<td>USENIX Association events and announcements.</td>
</tr>
<tr>
<td>net.wanted</td>
<td>Requests for things that are needed.</td>
</tr>
<tr>
<td></td>
<td>E.g. device drivers, pointers to people, etc.</td>
</tr>
<tr>
<td>net.women</td>
<td>Women's rights, discrimination, etc.</td>
</tr>
<tr>
<td>net.works</td>
<td>Assorted workstations.</td>
</tr>
<tr>
<td>fa.human-nets</td>
<td>Computer aided communications.</td>
</tr>
<tr>
<td>fa.info-vax</td>
<td>DEC's VAX line of computers.</td>
</tr>
<tr>
<td>fa.tcp-ip</td>
<td>TCP and IP network protocols.</td>
</tr>
<tr>
<td>fa.telecom</td>
<td>Telecommunications digest.</td>
</tr>
</tbody>
</table>
List of Sources for UNIX Device Drivers

Alan S. Watt
ITT Programming Technology Center
1000 Oronoque Lane
Stratford, Ct. 06497
(203) 375-0200

uucp: ittvax!swatt
via: decvax, duke, purdue, lbl-csam, research
Arpa: decvax!ittvax!swatt@Berkeley

Editors note: this listing has appeared on USENET and is reproduced here with the permission and assistance of Mr. Watt. Minor changes have been made for consistency and to format it for the typesetter.

How to Use This Listing

This catalog was assembled from information contributed in response to my requests over USENET. I have tried to leave the information alone, but make the formatting constant. The order presented is pretty much the order received, except where oversights on my part necessitated moving listings to the end to avoid disturbing the numbering. Each listing is numbered, and some summary information is presented under "Summary Information".

I have also tried to categorize devices into broad categories, such as "disk subsystems" for easy reference in the "Summary Information" section.

Editorial Policy

All contributions will be accepted. I try to leave the submitted contents completely alone except to present a consistent format. My notes are enclosed in square brackets ("[]"). I obviously can accept no responsibility for the truth of any assertions contained here. Entries listed as available may have been withdrawn, or individuals listed as contacts may have moved.

Please use the format presented here as it makes my job a lot easier. Also if you give network mail addresses for UUCP, if possible specify several paths. It is always a good idea to include a U.S. Mail address and phone number.

Any additions or corrections received will be incorporated in future revisions. ALL contributions will be acknowledged; if you do not receive an acknowledgment in a reasonable period, please re-send.

Suggestions For Shoppers

If you send network mail to people listed here for information, it is best to supply several return paths. I have had several requests which I could not answer because mail would not go the return path. Giving your phone number is also an excellent idea.
Revision Date

This listing reflects all submissions and corrections I have received as of May 16, 1983.

Summary Information

There are 65 listings, some for the same device.

1.1 Device names in alphabetical order:

<table>
<thead>
<tr>
<th>#</th>
<th>Mfr., Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>4.2BSD distribution devices</td>
</tr>
<tr>
<td>21</td>
<td>AED-512</td>
</tr>
<tr>
<td>36</td>
<td>Alpha 10</td>
</tr>
<tr>
<td>26</td>
<td>Britton-Lee IDM 200 and IDM 500</td>
</tr>
<tr>
<td>43</td>
<td>Comportal Megalink 90-0018</td>
</tr>
<tr>
<td>16</td>
<td>DEC DL-11 asynchronous link to DECsystem-10</td>
</tr>
<tr>
<td>57</td>
<td>DEC DL-11A/B (aka KL-11) — ABLE Quadrasync is a look-alike</td>
</tr>
<tr>
<td>23</td>
<td>DEC DQ11 and DEC DUP11</td>
</tr>
<tr>
<td>2,41,42</td>
<td>DEC DR11-B, DEC DR11-W</td>
</tr>
<tr>
<td>56</td>
<td>DEC DU-11</td>
</tr>
<tr>
<td>13</td>
<td>DEC DZ-11, Plessey DZ-11, Able DZ-11</td>
</tr>
<tr>
<td>18</td>
<td>DEC GT41</td>
</tr>
<tr>
<td>10</td>
<td>DEC KMC-11</td>
</tr>
<tr>
<td>64</td>
<td>DEC PCL-11B</td>
</tr>
<tr>
<td>30,55</td>
<td>DEC RK07 and DEC RK06 disk drives</td>
</tr>
<tr>
<td>14</td>
<td>DEC RL01 or RL02</td>
</tr>
<tr>
<td>17</td>
<td>DEC RM05</td>
</tr>
<tr>
<td>19</td>
<td>DEC RX01</td>
</tr>
<tr>
<td>51</td>
<td>DEC RX02 floppy disk</td>
</tr>
<tr>
<td>34</td>
<td>DEC TS-11 tape drive</td>
</tr>
<tr>
<td>9</td>
<td>DEC VS-11</td>
</tr>
<tr>
<td>12</td>
<td>DEC VSV01</td>
</tr>
<tr>
<td>37</td>
<td>DeAnza IP 8500 image processing display system</td>
</tr>
<tr>
<td>54</td>
<td>Digidata look-alike for DEC TM-11/TU-10</td>
</tr>
<tr>
<td>11</td>
<td>Digital Sound Corporation 200 Digital Audio Converter</td>
</tr>
<tr>
<td>3</td>
<td>Evans and Sutherland Multi Picture System</td>
</tr>
<tr>
<td>1</td>
<td>Floating Point Systems Array Processors: AP-120B and FPS-100</td>
</tr>
<tr>
<td>35</td>
<td>Fujitsu 160 Mbyte Winchester</td>
</tr>
<tr>
<td>22</td>
<td>Genisco GCT-3000</td>
</tr>
<tr>
<td>52</td>
<td>Grinnell GMR-27 via DEC DR-11B (with minor mods)</td>
</tr>
<tr>
<td>8,25</td>
<td>Ikonas RDS-3000</td>
</tr>
<tr>
<td>59</td>
<td>Intel Corp. iSBC 215, iSBX 218, iSBX 217</td>
</tr>
<tr>
<td>60</td>
<td>Intel Corp. iSBC 220 SMD Disks</td>
</tr>
<tr>
<td>61</td>
<td>Intel Corp. iSBC 534 4-line USART board, no intelligence</td>
</tr>
<tr>
<td>62</td>
<td>Intel Corp. iSBC 544 4-line USART board, on-board 8085</td>
</tr>
<tr>
<td>63</td>
<td>Intel Corp. iSBC 550 Ethernet Controller</td>
</tr>
<tr>
<td>33,48</td>
<td>Interlan N1010 Ethernet board</td>
</tr>
<tr>
<td>32</td>
<td>Lexidata 3400 color raster display system</td>
</tr>
<tr>
<td>65</td>
<td>Matrox GXB-1000 Graphics Board</td>
</tr>
<tr>
<td>28</td>
<td>Megatek 7000</td>
</tr>
<tr>
<td>4,6,20</td>
<td>Megatek 7200-series</td>
</tr>
<tr>
<td>38</td>
<td>Optronics C-4500 Model 30D</td>
</tr>
<tr>
<td>29</td>
<td>Paper tape reader</td>
</tr>
<tr>
<td>53</td>
<td>Plessy PM-DC1100 controller with CDC9766 disk pack</td>
</tr>
</tbody>
</table>
;login:

46  Ramtek 9200/9300 black and white graphics display
31  Ramtek RM9400 color raster display system
50  STC 800/1600/6250bpi magtape on S1 Unibus controller
39  Scientific Micro Systems FWT1127s
47  Ungeremann-bass NIU via DR11-W
58  Univ. of Illinois Arpanet Terminal System IMP Interface
27  Versatec 1200, v80, or similar
15  Versatec or Varian printer/plotter
  7  Xylogics Phoenix 211 Unibus Disk Controller

1.2 Modifications to standard drivers in alphabetical order

  #  Name
  ___
40  DEC DZ11
44  tty (V7 UNIX)

1.3 New line Disciplines

  #  Name
  ___
5   Summagraphics BitPad

1.4 Not really drivers

  #  Name
  ___
24  Vadic 3451PA, Bizcomp Smartmodem, changes for UUCP
49  Fast timer driver

2. Device Types (broadly speaking)

2.1 Disk subsystems:

   Alpha 10, DEC RK06, DEC RK07, DEC RL01 or RL02, DEC RM05, DEC RX01, DEC
   RX02 floppy disk, Fujitsu 160, Plessy PM-DC1100 controller with CDC9766 disk pack,
   Scientific Micro Systems FWT1127s, Xylogics Phoenix 211, Intel Corp. iSBC 215, iSBX 218,
   iSBX 217, Intel Corp. iSBC 220 SMD Disks

2.2 Tape subsystems:

   DEC TS-11, Digidata look-alike for DEC TM-11/TU-10, STC tri-density

2.3 Graphics display devices:

   AED-512, DEC GT41, DEC VS-11, DEC VSV01, DeAnza IP 8500, Evans and Sutherland
   Multi Picture System, Genisco GCT-3000, Grinnell GMR-27 via DEC DR-11B (with minor
   mods), Ikonas RDS-3000, Lexidata 3400, Megatek 7000, Megatek 7200-series, Ramtek
   9200,9300, Ramtek RM9400, Matrox GXB-1000

2.4 Communication devices:

   Able DZ-11, Computrol Megalink 90-0018, DEC DL-11, DEC DQ11, DEC DR11-B, DEC
   DR11-W, DEC DU-11, DEC DUP11, DEC DZ-11, DEC KMC-11, DEC PCL-11B, Interlan
   N1010 Ethernet, Plessey DZ-11, Ungeremann-Bass NIU via DR11-W, Arpanet IMP, Intel
   Corp. iSBC 534 4-line USART board with no intelligence, Intel Corp. iSBC 544 4-line USART
   board with on-board 8085, Intel Corp. iSBC 550 Ethernet Controller

2.5 Printers:

   Versatec 1200, Versatec or Varian printer/plotter, Versatec v80

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2.6 Miscellaneous:

Britton-Lee IDM 200 and IDM 500, Digital Sound Corporation 200 Digital Audio Converter, Floating Point Systems AP-120B and FPS-100 array processors, Optronics C-4500 Model 30D, Perkin-Elmer paper tape reader

3. CPU types covered

DEC LSI-11, Intel 286, Intel 8086, PDP-11, Perkin-Elmer 7/32 and 8/32, VAX-11

4. UNIX types covered

2.8BSD, 4.0BSD, 4.1BSD, 4.1aBSD, 4.2BSD, Microsoft Xenix, PWB/UNIX, SRI's PDP-11 port of 4.1aBSD, V6, V7, Wollongong/P-E Edition VII

Driver Listings

Listing #1

Device Type: High Speed Floating Point Array Processors
CPU Type: VAX 11/780 11/750 11/730, PDP-11, Perkin Elmer (in development)
UNIX Version: 4.1 BSD, V6, V7
Availability: Anyone
Terms & Cond.: $5000, includes large program development package (assembler, compiler, simulator, libraries, diagnostics) + signed copy of license agreement. Source is distributed.
Contact: Peter H. Berens
Apunix Computer Services
1380 Garnet Ave., Suite E-292
San Diego, CA 92109
619-452-7819
devax!ittvax!dcdwest!php
ucbvax!sdcvax!sdchema!php

Listing #2

Device Name: DEC DR11-B (should work for DR11-W, too). Currently used for Grinnell Frame Buffer.
Device Type: 16 bit parallel DMA interface
CPU Type: VAX and PDP-11
UNIX Version: 4.1BSD, UNIX V7
Availability: Anybody
Terms & Cond.: For just driver, can send over net. For driver+user level software for Grinnell FB, send tape with return postage or can send over net on Arpanet, or pay for phone time yourself.
Listing # 7

Device Name: Xylogics Phoenix 211 Unibus Disk Controller
Device Type: CDC, Ampex 80/300 Mb SMD drives
CPU Type: VAX, PDP-11
UNIX Version: 4.1BSD, 2.8BSD
Availability: Sure
Terms & Cond.: Send me a tape, or get it by net-mail
Contact: Donn Seely or Jim McGinness
Mail Code B-014
UC San Diego Chemistry Dept.
La Jolla CA 92037
ucbvax!sdesvax!sdcheme!{donn, jmcg}

Caveats: I think Xylogics has discontinued production because of reliability problems... but I can say that once you get a good board set (it took us 3 mo.) then it runs fine. The cute thing about the controller and drivers is that they support multi-porting of the controller. The controller is connected to as many as 4 couplers; the couplers sit in the various Unibuses and the controller has its own backplane and power supply. We boot a VAX and a PDP off the same disk and controller.

Notes: By the way, the 4.1 driver was adapted by Rusty Wright of the Center for Music Experiment at UCSD from the up driver and the 2.8 driver has an odd pedigree which I don’t remember just now. The 4.1 driver has fixed an apparent bug in the up driver whereby on systems with more than one drive on the same controller the "wrong" drive queue will occasionally be linked into the controller queue... sigh. Standalone boot drivers, bootblocks and even VAX 11/750 ROM code available on request. Other people at UCSD may have different versions of this driver but I have gotten the impression that ours is the only version that works (it may be that ours are the only controllers that work(!)).

Listing # 8

Device Name: Ikonas RDS-3000
Device Type: Image Frame Buffer
CPU Type: VAX
UNIX Version: Berkeley 4.1 and 4.2
Availability: Anyone with UNIX license
Terms & Cond.: Experimental, non-supported.
Contact: decvax!lallegralrdg

Listing # 9

Device Name: DEC VS-11
Device Type: High-resolution, bitmapped, interactive, color graphics display/workstation.
CPU Type: VAX
UNIX Version: 4.1BSD
Availability: Any licensee, but not for redistribution or resale
Terms & Cond.: Free.
Contact: DEC UNIX Engineering Group (decvax)
decvax!laps

June 1983
Listing # 10
Device Name: DEC KMC-11
Device Type: PDP-11 Auxiliary Processor
CPU Type: PDP-11's
UNIX Version: V6, V7, perhaps others
Availability: Anyone who wants it
Terms & Cond.: Driver source is ~3K bytes long. Send UUCP address.
Contact: Michael Lecuyer
Arts Computing Office
P.A.S. Building
University of Waterloo
Waterloo, Ontario Canada N2L 3G1
dcvax!watmath!watarts!spoon
Notes: Loads an ‘a.out’ image (both text portion and data) into KMC-11 memory.

Listing # 11
Device Name: Digital Sound Corporation 200 Digital Audio Converter
Device Type: digital to analog and analog to digital converter
CPU Type: VAX
UNIX Version: 4.1BSD
Availability: anybody with a 32V or System III license (source or binary)
Terms & Cond.: send tape or uucp address
Contact: ucbvax!sdcar!rusty
Rusty Wright
University of California San Diego
Computer Audio Research Laboratory
La Jolla, California 92093

Listing # 12
Device Name: DEC VSV01
Device Type: Non-DMA Bit Map Colour Television
CPU Type: PDP-11
UNIX Version: V6
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Collyer
dcvax!utzool!utcsrgv!utcsstat!geoff

Listing # 13
Device Name: DEC DZ-11, Plessey DZ-11, Able DZ-11
Device Type: Non-DMA tty multiplexer
CPU Type: PDP-11
UNIX Version: V6 or V7
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Colyer
devax!utzoo!utcsrgv!utcsstat!geoff

Listing # 14
Device Name: DEC RL01 or RL02
Device Type: 5 or 10 Mb removable disk
CPU Type: PDP-11
UNIX Version: V6
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Colyer
devax!utzoo!utcsrgv!utcsstat!geoff

Listing # 15
Device Name: Versatec or Varian printer/plotter
Device Type: electrostatic raster plotter
CPU Type: PDP-11
UNIX Version: PWB/UNIX (essentially V6) and after Jan. 1, 1983, V7
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Colyer
devax!utzoo!utcsrgv!utcsstat!geoff

Listing # 16
Device Name: DEC system-10 asynchronous link via DEC DL-11
Device Type: 1200 or 2400 baud (approx.) link with checksum, retransmission
CPU Type: PDP-11
UNIX Version: PWB/UNIX (essentially V6) and after Jan. 1, 1983, V7
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Colyer
devax!utzoo!utcsrgv!utcsstat!geoff
Caveats: requires some DECsystem-10 programs and UNIX programs (available from me) to make a complete link
Listing # 17
Device Name: DEC RM05
Device Type: 300 Mb removable disk
CPU Type: PDP-11
UNIX Version: PWB/UNIX (essentially V6) and after Jan. 1, 1983, V7
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Collyer
decvax!utzoo!utcsrgv!utcsstat!geoff

Listing # 18
Device Name: DEC GT41
Device Type: vector graphics display including display processor
CPU Type: PDP-11
UNIX Version: V6 and eventually V7
Availability: everyone
Terms & Cond.: send a tape or I can mail it
Contact: Geoff Collyer
decvax!utzoo!utcsrgv!utcsstat!geoff
Notes: Actually I have several GT41 drivers.

Listing # 19
Device Name: DEC RX01
Device Type: Single sided single density floppy disk drive.
CPU Type: PDP-11/40
Availability: I don’t remember where I acquired it, so I can’t enforce restrictions. I.e., for any licensed UNIX system. But don’t market it.
Terms & Cond.: I don’t want to spend any of my money or a lot of my time shipping it. It is 4606 chars or 212 lines.
Contact: Charles Colbert
Rm 2e222
6 Corporate Plc.
Piscataway, NJ 08854
(201) 981-2370
mhuxmlpyuxjicolbert
ucbvx!pyuxjicolbert
Caveats: The RX01 hardware does not use DMA, so it is very slow & hoggy. It is also very low density.
Listing # 20
Device Name: Megatek 7250
Device Type: Color graphics system (vector/raster hybrid)
CPU Type: PDP-11/45
UNIX Version: V7
Availability: Anyone
Terms & Cond.: Not for resale or redistribution. Send magtape.
Contact: Jim Guyton
guyton@rand-unix, randvax!guyton
Caveats: Not used very much and not very polished. A cerivation of a Megatek 7200 UNIX-V6 driver from Purdue.

Listing # 21
Device Name: AED-512
Device Type: Color raster system
CPU Type: PDP-11/45
UNIX Version: V7
Availability: Anyone
Terms & Cond.: Not for resale or redistribution. Send magtape.
Contact: Jim Guyton
guyton@rand-unix, randvax!guyton
Caveats: Weird AED dma mode not supported. Still uses PIO for all but direct video buffer loads.

Listing # 22
Device Name: Genisco GCT-3000
Device Type: Color raster system
CPU Type: PDP-11/45
UNIX Version: V7
Availability: Anyone
Terms & Cond.: Not for resale or redistribution. Send magtape.
Contact: Jim Guyton
guyton@rand-unix, randvax!guyton
Caveats: Runs with custom Rand microcode for the Genisco, not the standard code supplied by Genisco. Also, this is a horrible device, don't buy one!

Listing # 23
Device Name: DEC DQ11 and DEC DUP11
Device Type: Synchronous line interfaces, DMA and non-DMA respectively.
Protocol: Honeywell Grts remote computer bisync; probably not too difficult to modify for similar protocols.
CPU Type: written for VAX
UNIX Version: 4.1BSD
Availability: to anyone
Terms & Cond.: prefer to send via uucp mail.
Contact: decvax\watmath\watcgl\dmmartindale
Dave Martindale
Computer Graphics Lab
University of Waterloo
Waterloo, Ontario
Canada N2L 3G1

Listing # 24
Device Name: Vadic 3451PA Autodialer/triple modem
Device Name: Bizcomp Smartmodem (300 baud only — I haven’t seen the 1200 baud version yet)
Device Type: RS 232 Autodialers for UUCP
CPU Type: any (including micros)
UNIX Version: any which supports uucp
Availability: anyone
Terms & Cond.: send electronic mail
Contact: Peter Gross
High Altitude Observatory
National Center for Atmospheric Research
PO Box 3000
Boulder CO 80307
(303)-494-5151 ext. 348
seismo!hao!pag
decvax!brl-bmd!hao!pag
ucbvax!plabs!hao!pag
CSVAX.pag@BERKELEY

Notes: There are separate versions (the only changes are in conn.c) for the VA3451PA and
the Hayes Smartmodem.

Listing # 25
Device Name: Ikonas RDS-3000 (IK-11B)
Device Type: Host interface to Ikonas' Raster Display System
CPU Type: VAX, PDP-11
UNIX Version: 4.1BSD, V7
Availability: Anyone can have the V7 driver. Send for information on the 4.1BSD driver.
Terms & Cond.: 
Contact: Mike Mitchell
Ikonas Graphics Systems, Inc.
531 Pylon Drive
Raleigh, NC 27606
decvax!duke!mcnc!mcm
Listing # 33
Device Name: Interlan N1010 Ethernet board.
Device Type: Ethernet controller
CPU Type: VAX
UNIX Version: 4.1BSD with the BBN TCP/IP network software
Availability: Available free with proof of UNIX license
Contact: decvax!mcnc!swd (Stephen Daniel)
Caveats: Still a prototype driver. It works, but performance is poor.

Listing # 34
Device Name: DEC TS-11 tape drive
Device Type: 1600 bpi (only) 9 track tape drive.
CPU Type: PDP-11 (ours is an 11/44)
UNIX Version: 2.8 BSD
Availability: Public domain.
Terms & Cond.: We'll send it by netmail, or by tape (you supply the tape, it will be 1600 bpi).
Contact: pur-ee!pur-physuitti, or to pur-ee!pur-phy:root
(there is always the possibility of change of command.)
Caveats: I've not seen any bugs in 6 months of use. This device driver was written here at Purdue Physics by Mike Demoney. The one that comes with the BSD's is overly buggy, tending to crash the system.
Stephen Uitti (system manager)
pur-ee!pur-physuitti

Listing # 35
Device Name: Fujitsu 160 Mbyte Winchester with System Industries 9400 controller
CPU Type: 11/70
UNIX Version: Version 7
Availability: Anybody
Terms & Cond.: Send tape.
Contact: Gary Schlickeiser
Academic Computing
Reed College
Portland, OR 97202
(503) 771-1112 x571
teklabs!reed!schlick

Listing # 36
Device Name: Alpha 10 from Iomega Corp., Ogden Utah
Device Type: 10 Mbyte Cartridge Floppy
CPU Type: 11/23
UNIX Version: Version 7
Availability: Anybody
Terms & Cond.: Send tape.
Contact: 
Gary Schlickeiser
Academic Computing
Reed College
Portland, OR 97202
(503) 771-1112 x571
teklabs!reed!schlick

Listing #37
Device Name: DéAnza IP 8500 image processing display system
CPU Type: VAX 780, 750, 11/45
UNIX Version: 4.1BSD, PWB1.0
Availability: Just request it
Contact: duke!adiron!bob (bob gray)

Listing #38
Device Name: Optronics C-4500 Model 30D
Device Type: Color film scanner/reader
CPU Type: Unibus Device on a VAX 11/780
UNIX Version: 4.1BSD
Availability: An educational/research product. Commercial use to be negotiated.
Terms & Cond.: To be arranged.
Contact: 
Robert J. Woodham
lbl-csam!uw-beaver!ubc-vision!woodham
Department of Computer Science
University of British Columbia
2075 Wesbrook Mall
Vancouver, B.C. V6T 1W5 Canada
(604) 228-4368

Listing #39
Device Name: Scientific Micro Systems FWT1127s
Device Type: Floppy disk drive, RX02 substitute with "extended mode" that provides multiple sector DMA transfers, a format command, and supports several IBM formats
CPU Type: VAX
UNIX Version: 4.0BSD
Availability: to anyone
Terms & Cond.: send tape with self addressed and STAMPED envelope or send uucp address
Contact: 
Daniel R. Strick
Office of Communications Programs
University of Pittsburgh
833 LIS building
135 N. Bellefield Ave.
Pittsburgh, PA 15260
duke!mcnc!idis!dan
Local UNIX User's Groups

The Association office has received information on three local UNIX groups.

Front Range Users Group
N.B.I., Inc.
P.O. Box 9001
Boulder, CO 80301
Attn.: Wally Wedel
(303) 938-2923

Dallas / Fort Worth UNIX User's Group
Advanced Computer Seminars
2915 L.B.J. Freeway, Suite 161
Dallas, TX 75234
Attn.: Irv Wardlow
(214) 484-UNIX

The Front Range group meets about every two months at different UNIX sites for informal discussions.

There is also an informal group in the Washington, D.C., area that meets every two months or so. The current contact for that group is

Neil Groundwater
Analytic Disciplines, Inc.
Suite 300
8320 Old Courthouse Road
Vienna, VA 22180
(703) 893-6140
npg@lbl-csam

The office often receives questions from people trying to find local UNIX user's groups; if you know of a group in your area please let us know so we can share the information. The office is maintaining a list of local groups and will it publish in ;login; periodically.

Association Office Report

The office will have a desk at the Toronto Conference to handle memberships, resolve questions and problems, and receive software contributions and papers for the proceedings.

Software Distribution Tapes

The office has mailed 1983 Software Distribution Tape release forms to the Institutional delegate for each 1983 Institutional member.

Contributions for the next Distribution Tape may be submitted at the Association office desk at Toronto or may be mailed to the office.
Request for Proposal for a Computer for the USENIX Association

Editor’s note: The following request for proposal has been sent to all companies that exhibited at past USENIX meetings. Other companies are invited to respond.

May 31, 1983

The USENIX association has outgrown its current UNIX timesharing facilities and has decided to purchase a small computer system. The system will be used to maintain our membership database and various mailing lists, and to prepare our newsletter. You are invited to submit a system proposal for our consideration. Our selection of the best proposal will be based on cost, memory+disk per dollar, performance, expandability, reliability and maintenance. All proposals which meet our requirements will be considered, but USENIX retains the right to accept any or none of the proposals received.

Subsequent to choosing a system, we will include an article in our newsletter describing our new computer system, and print a notice in each newsletter identifying the computer system on which the newsletter was generated.

Requirements:
- Service at least 6 interactive users without excessive degradation
- UNIX Version 7, System III, Berkeley 4.x
- 512K bytes main memory (or more)
- 8 serial lines
- 40 megabytes of disk (or more)
- 1/2" 9 track 1600 bpi (or 1600/800 bpi) tape
- Berkeley additions: vi, csh, troff
- All standard UNIX utilities (awk, sed, bc, uucp, etc.)
- Native C compiler + loader + libraries
- Maintenance repair on a board/drive/power-supply basis within 24 hours.

Preferences:
- Standard bus, such as Multibus, Q-Bus, etc.
- SMD disk interface
- Fujitsu 80MB disk (2312) or equivalent
- Berkeley 4.x UNIX
- Under $20,000

Your company must demonstrate responsiveness in fixing software problems. Appropriate documentation on system maintenance, specifically on file backup and recovery, must be provided.

Our newsletter is produced with nroff and troff and the -me macro package and will normally run only with several bug fixes to the standard Version 7 releases of these programs. USENIX must be able to work with you to build versions which we can use.

Your proposal should include a price for the specified system, as well as the cost for additions/upgrade to more memory, disk, serial lines, and another tape drive. Please include fixed prices or price basis for repairs at the system and/or component level. In order for us to analyze your system performance, we need to know the system architecture, cpu, cpu speed, memory and bus wait states, disk and tape speeds, and bus performance.

If you are interested in submitting a proposal, please address it to me at the USENIX office. Proposals must be in our office by July 1, 1983. We will review all the proposals and purchase a system (if one of the proposals meets our needs) by the end of July.
Thank you for your consideration of this request for proposal.

Sincerely,
USENIX Association

Bruce S. Borden
Director

San Diego Proceedings

The proceedings for the San Diego UNICOM meeting went to the printer on June 6. They are about 380 pages long. They will be mailed as soon as they are received from the printer.
USENIX Association
Application for Institutional Membership for Calendar Year 1983
Please type or print

[ ] New  [ ] Renewal
Name of Institution ____________________________
Dept/Campus/Plant site: _________________________

The annual dues depend on the type of license held; check one:
[ ] $100: Educational license
[ ] $300: AT&T or subsidiary (non-voting membership)
[ ] $300: Other license

For the CPU at your plant site or campus please indicate the type of license(s) held by S (for source) or B (for binary)

____ Version 6 ___ Prototype. ___ PWB/UNIX ___ Version 7 ___ 32V
____ System III ___ System V ___ UNIX/TSS ___ UNIX/UNIVAC
____ Other: _________________________________

Name and work address of the Institutional delegate. This person will receive all official correspondence and the renewal notice for next year.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Phone: (____) _______________ Phone: (____) _______________
uucp address: __________________________ uucp address: __________________________

[ ] Check enclosed: $_________  [ ] Purchase order enclosed; invoice required

Authorized Signature: __________________________ Date: ________________

Please return the completed form to the address below with copies of the following pages of the license for your CPU: the signature page and the pages that show the version of UNIX you are licensed for, whether it is for source or binary, the name of the institution owning the license, and the type, serial number, and location of the CPU(s). If you have more than one license please send the above information for each license.

This form must accompany your purchase order or payment. You will receive a card acknowledging your membership as soon as it is processed.

USENIX Association
P.O. Box 7
El Cerrito, CA 94530

Volume 8, Number 3 June 1983
Toronto Conference Agenda
Joining Usenet
Device Driver Catalog