SERVICES AVAILABLE TO USERS OF THE
UNT COMPUTING FACILITIES

The UNT Computing Center is located in the Information Sciences Building (ISB), Room 119. Phone Numbers:
Computing Center: (817) 565-2324
Help Desk: (817) 565-4050
Micro Support: (817) 565-2316, 565-2319
Graphics Lab: (817) 565-3479
ISB 1/0 Area: (817) 565-3890
BA 1/0 Area: (817) 565-2350

All personnel listed below can be contacted either by calling the Computing Center or by sending them electronic mail on MUSIC/SP (ID-codes follow each name. All IDs are on BITNET node UNTMUSIC).

Benchmarks - Claudia Lynch (AC03)
Information & ID-Codes; Disk Space Problems - Theresa Russell

Statistical/Research Support - George Morrow (AC01), Panu Sittiwong (AC09), Phanthi Laosrirat (AC04)
AcademicADABAS/COM-PLETE - Janis Burkham (AC05)
CRSP & COMPUSTAT Problems - Panu Sittiwong (AC09), Phanthi Laosrirat (AC04)

Student Programming Problems - CSCI Dept., GAB Room 542A; BCIS Dept., BA Room 152
Problems with JCL, Passwords, or Operating Systems; or Communication/Terminal Problems - Help Desk

Data Entry; Test Scoring & Analysis - Betty Grise
Administrative Applications - Coy Hoggard
Printout Retrieval - ISB or BA 1/0 Operators

DIALING-UP UNT COMPUTERS OVER THE TELEPHONE

Phone numbers for the Local Area Network (LAN) are:
300-2400 BAUD: (817) 565-3300
300/1200 BAUD: (817) 565-3499
300-9600 BAUD: (817) 565-3461
300-9600 BAUD: D/FW METRO 429-5006, 429-9314

Area code 214 must dial 817 before the METRO #.

The numbers that accommodate multiple baud rates have an autobaud feature that requires you to hit the <RETURNS> key repeatedly so that the receiving modem can determine the appropriate baud rate. When you have established a communications link, the # prompt will appear on your screen and you can enter one of following CALL commands to connect with the computer of your choice.

CALL 5040 connects with the NAS/8083 (supports line editing or PCWS). Operating environments available are: MUSIC/SP, VM/CMS.

CALL 3270 connects with the NAS/8083 through a 3270 protocol converter [supports full-screen editing]. Operating environments are: MUSIC/SP, VM/CMS, ADABAS/COM-PLET, PHOENIX

CALL DEC connects with the VAX cluster (VMS, Unixess)
CALL 780 connects with the Research VAX (Unix)
CALL 3000 connects with the Libraries' HP-3000 [Bibliographic database]
CALL 6800 connects with the NBI (Unix)

COMMUNICATION SETTINGS

<table>
<thead>
<tr>
<th>LAN addresses</th>
<th>Data Bits</th>
<th>Parity</th>
<th>Stop Bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEC 3000</td>
<td>8</td>
<td>N</td>
<td>1</td>
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<tr>
<td>6040, 3270, 780, 5600</td>
<td>7</td>
<td>E</td>
<td>1</td>
</tr>
</tbody>
</table>

HOURS FOR UNIVERSITY OF NORTH TEXAS COMPUTER ACCESS AREAS: FALL 1989*

<table>
<thead>
<tr>
<th>Location</th>
<th>Days</th>
<th>Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing Center  RJE</td>
<td>Sunday</td>
<td>Noon-Midnight</td>
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<tr>
<td></td>
<td>Monday</td>
<td>7 a.m.-Midnight</td>
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<tr>
<td></td>
<td>Tuesday-Saturday</td>
<td>7 a.m.-5:00 P.M. (Open 24 hours/day)</td>
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<tr>
<td>ISB 110 Terminal Area</td>
<td>Sunday</td>
<td>1 p.m.-Midnight</td>
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<tr>
<td></td>
<td>Monday-Thurday</td>
<td>7:30 a.m.-5:00 p.m.</td>
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<tr>
<td></td>
<td>Friday</td>
<td>7:30 a.m.-9:00 p.m.</td>
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<td></td>
<td>Saturday</td>
<td>9 a.m.-9:00 p.m.</td>
</tr>
<tr>
<td>College of Business</td>
<td>Sunday</td>
<td>Noon-11:45 p.m.</td>
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<tr>
<td></td>
<td>Monday-Thurday</td>
<td>8:15 a.m.-11:45 p.m.</td>
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<tr>
<td></td>
<td>Friday</td>
<td>8:15 a.m.-7:45 p.m.</td>
</tr>
<tr>
<td>GAB 5500</td>
<td>Sunday</td>
<td>2 p.m.-Midnight</td>
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<tr>
<td></td>
<td>Monday-Thurday</td>
<td>8 a.m.-Midnight</td>
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<tr>
<td></td>
<td>Friday</td>
<td>8 a.m.-5:00 p.m.</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>2 p.m.-Midnight</td>
</tr>
<tr>
<td>Graphics Lab</td>
<td>Sunday</td>
<td>Noon-10 p.m.</td>
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<td></td>
<td>Monday-Thurday</td>
<td>8 a.m.-11 p.m.</td>
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<td>Friday</td>
<td>8 a.m.-5:00 p.m.</td>
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<td></td>
<td>Saturday</td>
<td>Noon-6 p.m.</td>
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<tr>
<td>Willis Library</td>
<td>Sunday</td>
<td>1 p.m.-Midnight</td>
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<td></td>
<td>Monday-Thurday</td>
<td>7:30 a.m.-Midnight</td>
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<td>Friday</td>
<td>7:30 a.m.-9:00 p.m.</td>
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<tr>
<td></td>
<td>Saturday</td>
<td>9 a.m.-9:00 p.m.</td>
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</table>

*Hours may vary. Check MUSIC/VAX News and/or posted schedules for exceptions.
Happy Holidays!

By Claudia Lynch, Benchmarks Editor (BITNET: A594@UNTYML)

As you read this you are probably busy preparing for the holidays, and at least thinking about what you will be doing during the semester break. If you are a student, you no doubt have term papers to complete and end of semester assignments to give attention to. Faculty members can look forward to grading those assignments as well as composing and grading comprehensive exams.

This is one of the busiest times of the semester for everyone associated with the University, including the Computing Center staff. Members of Academic Computing Services are busy supporting faculty and students in their end of semester computing activities. We are windwing up our Short Courses and, in many cases, doing non-stop consulting on numerous topics and applications. Members of Administrative Computing are busy getting ready for the production of grade reports and Spring registration (yes, it will soon be that time again). An additional concern, this particular semester, is preparing for the installation of the new computer system dedicated to administrative computing activities (you will hear more about this in the January issue of Benchmarks). Due to all these other activities, this issue of Benchmarks does not have a particular focus. We have simply called it the "Holiday Issue." Below you will find a table of holiday hours for the various public access areas around campus to help you in planning for your holiday computing.

<table>
<thead>
<tr>
<th>Location</th>
<th>Dates</th>
<th>Times</th>
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<tbody>
<tr>
<td>Computing Center Rm</td>
<td>Nov. 22, Nov. 24-25,</td>
<td>8 a.m.-Midnight:</td>
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<tr>
<td></td>
<td>Dec. 16, Dec. 18-23,</td>
<td>CLOSED</td>
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<tr>
<td></td>
<td>Jan. 2-4, Jun. 8-13</td>
<td>8 a.m.-5 p.m.</td>
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<td></td>
<td>Dec. 23, Dec. 24-25,</td>
<td>CLOSED</td>
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<tr>
<td></td>
<td>Dec. 31-Jan. 1</td>
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<td></td>
<td>Dec. 26-30</td>
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<tr>
<td>ISB 110 Terminal Area</td>
<td>Nov. 22</td>
<td>7:30 a.m.-5 p.m.</td>
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<tr>
<td></td>
<td>Nov. 23, Dec. 17, 23-25,</td>
<td>CLOSED</td>
</tr>
<tr>
<td></td>
<td>Dec. 30-Jan. 1, Jan. 6-7</td>
<td>7:30 a.m.-6 p.m.</td>
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<tr>
<td></td>
<td>Dec. 15</td>
<td>9 a.m.-6 p.m.</td>
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<tr>
<td></td>
<td>Dec. 16, Jan. 13</td>
<td>1-10 p.m.</td>
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<td></td>
<td>Nov. 24, Dec. 18-22,</td>
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<td>Dec. 26-29, Jan. 3-5,</td>
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<td>Jan. 8-12</td>
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<td></td>
<td>Jan. 14</td>
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<tr>
<td>College of Business</td>
<td>Nov. 22, Dec. 15</td>
<td>8:15 a.m.-4:00 p.m.</td>
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<td></td>
<td>Nov. 23-24, Dec. 16-14</td>
<td>CLOSED</td>
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<tr>
<td>GAB 550C</td>
<td>Nov. 22</td>
<td>8 a.m.-Noon</td>
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<td></td>
<td>Nov. 23-25, Dec. 16-14</td>
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<tr>
<td></td>
<td>Nov. 26</td>
<td>4 p.m.-Midnight</td>
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<td>Graphics Lab</td>
<td>Nov. 22, Nov. 24, Dec.</td>
<td>8 a.m.-5 p.m.</td>
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<td></td>
<td>18-23, Dec. 24-26, Jan.</td>
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<td></td>
<td>1-3, Jan. 8-12</td>
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<td>Nov. 23, Dec. 16-17,</td>
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<td>1, Jan. 6-7, Jan. 13-14</td>
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<tr>
<td>Willis Library</td>
<td>Nov. 22</td>
<td>7:30 a.m.-5 p.m.</td>
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<tr>
<td></td>
<td>Nov. 23, Dec. 17-Jan. 1</td>
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<tr>
<td></td>
<td>Jan. 6-7</td>
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<td></td>
<td>Nov. 24, Dec. 18-22,</td>
<td>9 a.m.-6 p.m.</td>
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<tr>
<td></td>
<td>Jan. 3-5, Jan. 8-12</td>
<td>1-10 p.m.</td>
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<tr>
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<td>Jan. 13</td>
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<td>Jan. 14</td>
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</tbody>
</table>

Dates not listed have normal operating hours (see facing page)

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THE BITNET CONNECTION

By Philip Baczewski, bitnet INFOREP(BITNET: AC12@UNITVM1)

This Column is a continuing feature of Benchmarks intended to present news and information on various aspects of the BITNET wide area network.

CREN is Here...

What, you say, is CREN? CREN stands for the Corporation for Research and Educational Networking and is the result of the BITNET and CSNET merger. Effective September 18, 1989, CREN replaced BITNET, inc. as the governing body of the BITNET network. The original name was to have been ONETNET, however, this was apparently rejected in favor of the more academic sounding CREN. The rejection of the ONETNET name also prevents me from using the inspired title "All for ONE and ONE for All" for this column and somehow, "All for CREN and CREN for All" just doesn't have the same ring to it.

The creation of CREN and has included the authoring of new bylaws for that organization as well as the election of a new Board of Trustees. The new officers of CREN are Bernard Galler, Chairman (Galler was previously the Chairman of CSNET), Ira Fuchs, President and CEO (Fuchs was previously the President of BITNET), Philip Long, Secretary, and Martin Solomon, Treasurer.

The first question that comes to mind might be "how does all this change effect my use of BITNET?" In the short term, no changes will be evident. Your mail, files, and LISTSERV subscriptions are currently handled no differently than previous to the merger. EDUCOM will still be responsible for BITNET Network Information Services and BBN (Bolt, Beranek, and Newman) will still be employed to provide services to CSNET.

The initial goal of the merger will be to eliminate the overlap between the two organizations. Galler has stated "The aims of CSNET and BITNET -- to support and promote the use of computer networks on campuses and with research organizations -- have converged over the last several years. We believe that by bringing these two networks into a single organization, we will be able to provide better service to our network users and more effectively participate in the fast-changing national network environment."

So for the moment, both BITNET and CSNET will continue to operate as they have in the recent past, with the combined efforts of EDUCOM and BBN devoted to their support and improvement. What the future holds is uncertain at this point, but the probable result will be greater access to CSNET nodes from BITNET and vice versa as well as a greater amount of information interchange as a result of that access.}

Membership Committee on the Judiciary

Majority Members (Democrat)
Joseph R. Biden, Jr. - Delaware Chairman of Judiciary Committee Room 221 Russell Senate Office Building
Washington, D.C. 20510 (202) 224-5642

Howard Cable - R-NC 400 Cannon House Office Building
D. French Slaughter, Jr. - R-VA 1404 Longworth House Office Building
225-3565
225-4564
225-5441
225-3101

House Members of Sub-Committee Courts, Intellectual Property and Administration
Washington, D.C. 20515

Robert W. Kastenmeier, D-Wis. 2325 Rayburn House Office Building 225-2960
George W. Crockett, Jr. - D-Mich. 2335 Rayburn House Office Building 225-3225
Howard L. Berman - D-Calif. 157 Cannon House Office Building 225-4699
John Bryant - D-Texas 268 Cannon House Office Building 225-2230
Benjamin Cardin - D-Md. 347 Cannon House Office Building 225-2257
Frederick C. Bosher, Jr. - D-Va. 428 Cannon House Office Building 225-5618
George S. Voinovich - D-Ohio 1407 Longworth House Office Building 225-2603
William J. Hughes - D-NJ 341 Cannon House Office Building 225-7572
Mike Synar - D-Okla. 2441 Rayburn House Office Building 225-2791
Carlos J. Moorhead - R-Calif. 2346 Rayburn House Office Building 225-4176
Henry J. Hyde - R-Ill. 2104 Rayburn House Office Building 225-5611

2
LIST of the Month

Each month we will highlight one of the BITNET LISTSERV Special Interest Group (SIG) mailing lists. This month’s list...

INFO-MAC@RICE

This list is an USENET SIG list that is cross-posted to LISTSERV on BITNET. The topic of the list includes any discussions of Apple Macintosh hardware and software. The list is maintained in digest form -- in other words, the list moderator accepts messages from the list members, compiles them, and then sends a group of messages out as one large message file. The advantage of this format is that non-topical or trivial messages are not forwarded to all subscribers. The disadvantage is that it takes longer to get a response to a question posted to this list.

To subscribe to INFO-MAC, send the following command to LISTSERV@RICE:

SUBSCRIBE INFO-MAC <your full name>

INFO-MAC can also be maintained in ANUNET on the VAX under the name COMP/SYS/MAC.DIGEST (this is the "real" INTERNET name of the list).

---

BENCHMARKS FORUM

BENCHMARKS FORUM is intended to serve as a vehicle for answering questions that may be of general interest to the user community. If you have a question, please send electronic mail to the Benchmarks editor (BENCHMARKS@UNTVM1) or write it down and drop it by the Computing Center. We will try to answer it in the next issue.

Question: How can I print certain pages of a document in WP50?

Answer: When in WP50, press Shift-F7 for Print, then select Document on Disk from the Print menu. You will be asked for the name of the file. Type in the entire name, i.e.: C:\WP50|Report1.

The command, Pages: (All) will be on the screen. At this point type in the page numbers you want to have printed. For example: Page: 12 will print from page 12 to the end of the document. Another example would be: Page: 4-10 This will print pages 4 through 10.

Question: How can I transfer Microsoft Word files into WP50 files?

Answer: Both Microsoft Word and WordPerfect can save and retrieve files in DCA format. First convert the Microsoft Word document to DCA format (Revisable-Form-Text), and then use the WordPerfect Convert program to transfer it to WordPerfect with option 2 on the Convert menu."
BBS Files Available on the UNT Novell Internet

by Billy Barron, VAX System Manager (BILLY@UNT/VAX)

All of the files available to UNT BBS users are now accessible on the UNT Novell Internet through Netware. Any UNT Novell Internet user on a MS-DOS machine (not a Macintosh since the VAX is Netware 2.0a) including users in the Willis Library and ISB 110 computer labs can utilize these files.

To access the BBS files, perform the following steps:

1) Log into any Netware file server (this is done automatically on boot for Willis and ISB 110 lab users).

2) Type MAP drive name:= NTVAXR/DUAI:BBS/FILE.
   (For example, MAP O:= NTVAXR/DUAI:BBS/FILE).
   When prompted for a username, enter GUEST.

3) Then the BBS files will be on the drive mapped (drive O in the example).

The major advantage is that files can be downloaded transparently at very fast speeds. The major disadvantage is that the file descriptions are not accessible from Netware. In addition, uploads are impossible from the Netware side. Netware users who wish to use the message base of the BBS must log into the VAXcluster as before.

All of the software on the BBS is public domain or shareware.

Shareware software is usually free for a trial period. However, if the software is used beyond the trial period, the user should pay for the software as described in the program documentation.

EDUCOM/NCRRIPTAL
Higher Education Software Awards for 1989

EDUCOM and NCRRIPTAL (the National Center for Research to Improve Postsecondary Teaching and Learning) located at the University of Michigan are giving awards for outstanding software for higher education. Following is a list of this year's award winners.

EDUCOM and NCRRIPTAL (the National Center for Research to Improve Postsecondary Teaching and Learning) located at the University of Michigan are giving awards for outstanding software for higher education. Following is a list of this year's award winners.

Best Software

Best Biology: A Tutorial in Recombinant DNA Technology by Marcia L. Cordts, Ronald Beloin, and Jane Gibson (Cornell University). Life Sciences Telecomputing, PO Box 815, Ithaca, NY 14850; 607-273-1796. Apple Macintosh Plus w/2 disk drives and Hypercard; $35.00 for a single copy, $10.00 for an educational single copy, site licenses from $150 to $400.

Best Chemistry

Best Integrated: Chemical Reactions by Loretta Jones and Stanley Smith (University of Illinois). Falcon Software, PO Box 200, Wentworth, NH 03282; 603-764-5788. IBM PC, XT, AT, PS/2 series; $400 for software, manual, and videodisc; additional copies, $150 each.

Best Engineering: MacPoisson: Instructional Finite Element Analysis for Solving Poisson's Equation with the Macintosh by J. Robert Cooke, E. Ted Sobel (Cornell University), and D. C. Davis (Washington State University). Cooke Publications, PO Box 4448, Ithaca, NY 14852; 800-482-4438 ext. 15.
Apple Macintosh Plus, SE, II; $495 for professional version, $99.95 for a single-user student license; $495 for course adoption.

Best Humanities: A Right to Die? The Case of Dax Cowart by Preston Covey and Scott Roberts (Carnegie Mellon University). The ALIVE Center, 1248 Weatherervane Lane, Akron, OH 44313; 216-896-9623. IBM XT; pricing not yet determined.


Best Physics: MacScope by Elisha R. Huggins (Dartmouth College). Thornton Associates, 1432 Main Street, Waltham, MA 02154; 617-890-3399. Apple Macintosh series; free to purchasers of hardware.

Best Psychology: Laboratory in Cognition and Perception (2nd edition) by C. Michael Levy (University of Florida) and Sarah E. Ransdell (University of Maine). CONDUIT, University of Iowa, Oakdale Campus, Iowa City, IA 52242; 800-365-9774. IBM PC, XT, AT, PS/2 series; $160 for software and manual; EdPack 6, $320; EdPack 15, $540; network, $640; other quantity orders (larger EdPacks, student copies, etc.) available.

Best Social and Behavioral Science


Best Tutorial: Introduction to Statistics by Arthur E. Hoel, Victor R. Martuza, and John H. Schuenemeyer (University of Delaware). Clearinghouse for Academic Software, Iowa State University, Ames, IA 50011; 515-294-0323; DEC Pro, Rainbow, or DECMA TE series, MicroVAX I or II; $3,000 for software and manual, $1,500 for educational institutions.


Best Curriculum Innovations


Best Curriculum Innovation - Underprepared: English Natural Form Instruction Project (ENFI Project) by Trent Batson (Gallaudet University). Realtime Learning Systems, 2700 Connecticut Avenue, Washington, DC 20008-5330; 800-TEACHPC or 202-483-1510. IBM PC, XT, AT, PS/2 series; $4,000; $3,000 to educational institutions; price includes installation and support; site licenses available; uses Realtime Writer Software from Realtime Learning Systems.

Best Curriculum Innovation - Writing: Collaborative Writing and Telecommunications Project by Ann Hill Duin (University of Minnesota). Research Design Associates, Inc., PO Box 848, Stony Brook, NY 11790; 800-654-8715. Apple Macintosh Plus; $249 per network; uses software developed by the University of Minnesota.

Distinguished Software and Distinguished Curriculum Innovations

Engineering: Digital Magic 1.0 by Greg Kostello, Sailish Ranchod, Dan Rutz, Mark Womack, and Thomas Standish (University of California at Irvine). Kinko's Academic Courseware Exchange, 255 W. Stanley Avenue, PO Box 8000, Ventura, CA 93002-8000; 800-235-6919 or in California 800-292-6640. Apple Macintosh series; $29.95 for software, manual and HyperCard stacks, $1,200 for site license.

Engineering: Todor by Earl M. Murman, Judson Baron, Mark Drela, Stephen Ellis, Michael Giles, Joseph Haritonidis, Martin Landahl, Anne LaVin, Jean Louis, James McCune, Leon Trilling, Harold Wachman, Sheila Widnall (MIT), and Isaac Greber (Case Western Reserve University). Technology Licensing Office, MIT, Room E23-300, Cambridge, MA 02139; 617-253-6956. Apollo 4000 series; IBM RT 6150; DEC Micro VAX II, VS 2000, VS 3000 workstations; $500; $3,000 for site license.

English (Curriculum Innovation): Simulating the Operation of Theory with Hypertext by Peter
Hasholm and Larry Stewart (College of Wooster). Publisher not given. Apple Macintosh series; no price indicated; uses software from OWL International Guide.

Hebrew: The Safe Affair: An Interactive Video Hebrew Lesson by Edna A. Coffin and Amit Schitai (University of Michigan), Hebrew Interactive Project, 3083 Frieze Building, University of Michigan, Ann Arbor, MI 48109, 313-764-0316. IBM XT, AT, PS/2 series; $400 for software and video disc; discount prices scaled from $500 to $1,200 depending on number of video discs.

Mathematics: MicroCalc 4.0 by Harley Flanders (University of Michigan), MathCalc Education, 1449 Covington Dr., Ann Arbor, MI 48103-5630; 313-761-4666. IBM PC, XT, AT, PS/2 series; $25 for software and manual, price includes site license.

Physics: The Lorentz Transformation by Dave A. Campbell (Saddleback College), Amy Hartsough (Media Learning Systems), Michael Salisbury (California Institute of Technology), and Robert Sirko (McDonnell Douglas Corporation), Applied Intelligence, 19151 Woodford Terrace, Irvine, CA 92715; 714-854-0988. IBM PC, XT, AT, PS/2 series; $300 for videodisc.

Psychology: Color Perception by Douglas L. Chute (Drexel University), MacLaboratory, 314 Exeter Rd., Devon, PA 19333; 215-688-3114. Apple Macintosh II, IIx, IIcx, SE 30; $39.95 for software and ColorCard 1.0, site license or discount prices available on request.

Spanish: Spanish MicroTutor by Frank A. Dominguez (University of North Carolina), Harcourt Brace Jovanovich, 1250 Sixth Avenue, San Diego, CA 92101; 619-699-6227. IBM PC, XT, AT; $18 net per student for software and manual for adopting institutions.

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Increasing Your Micro's Productivity

By David Durni, State University of New York at Buffalo, Copied with permission from the UB MICRO, Volume 1, November 1989, Issue 4.

A poorly tuned automobile, as we all know, can greatly affect the performance of the engine in the form of slow acceleration, backfiring, poor gas mileage, etc. This is analogous to improper use of a microcomputer. A poorly installed and maintained microcomputer can decrease speed, stability and overall production. Both software and hardware installations are involved.

I cannot stress enough the importance of performing software and hardware installations thoroughly and accurately. As the microcomputer arena has become more complex, the configuring of the resulting advanced systems has also become more complex. For instance, the proper configuration of memory boards was always difficult, but with the addition of more advanced expanded memory boards, the proper configuration of your memory can make or break the speed and efficiency of your machine and software.

The following is a list of some things I would suggest you take the time to check out and perform regularly to insure that you have a happy and healthy microcomputer:

- Check your CONFIG.SYS file. Are there an adequate number of FILES and BUFFERS selected? See if there are any DEVICE drivers for which you no longer have a need. Many device driver statements have parameters that are necessary. Check your manuals to see if the correct parameters have been selected. Many times you are required to experiment with drivers and their parameters to make sure everything is working together as planned.

- Check your AUTOEXEC.BAT file. Are there any programs or utilities you are loading at bootup that you no longer need? Are you loading any terminate-stay-resident (TSR) programs that you could run non-resident to save memory? Are you loading utilities that could help speed up your micro, such as cache programs, SHARE, VDISK, FASTOPEN, etc.

Continued on Page 7.
More WordPerfect 5.1 Information

By Claudia Lynch, Benchmarks Editor
(BITNET: A594@UTNVM)

This is a continuation of the article entitled "WordPerfect 5.1 Upgrade Highlights," that appeared in the October 1989 issue of Benchmarks, Volume 10, Number 8.

Free Updates?

According to The Word-Perfectionist, the newsletter of the WordPerfect Support Group (Vol. 11, No. 10, page 2), customers who purchased WordPerfect 5.0 between October 1 and November 30, 1989, are eligible for a free update. To request an update, send a dated proof of purchase and the title page of the WordPerfect 5.0 reference manual. Your request must be postmarked no later than December 31, 1989. If you have an individual, i.e. retail copy of WordPerfect (not a site licensed copy obtained from the Computing Center), you will pay $85 plus $2.50 shipping and handling. To get an update, send your payment, if you need to make one, the title page of your reference manual, and a statement as to your printer make and model, template type, and preferred disk size (5.25" or 3.5") to:

WordPerfect 5.1 Update
1555 N. Technology Way
Orem, UTAH 84057

Hardware Requirements

According to "WordPerfect 5.1," the article in The WordPerfectionist referenced above, WordPerfect 5.1 will not run on two 360K drives. It will run on a two drive system if both drives have a capacity of 720K or more. A hard drive is definitely recommended. WordPerfect 5.1 will use between 2.5M and 4.5 M of hard disk space in most configurations, and it requires 384K of free RAM (minimum) at the time of startup. LIM expanded memory version 3.2 or 4.0 (4.0 is supposed to be faster) is also supported. If you load WordPerfect 5.1 with the /R option, over 500K of expanded memory will be required. You can, however, limit the amount of RAM it grabs in both conventional and expanded memory with the /W start-up option.

For more information on ordering WordPerfect 5.1, call WordPerfect Corporation at (800) 321-4566. For information about site licensed WordPerfect obtained from the Computing Center, contact Microcomputer Support (565-2316, 565-2319).§

Micro-Tips continued from page 6.

- Do you have sufficient available disk space? When a hard disk nearing its capacity, there tends to be a lot of disk fragmentation. (Basically, fragmentation is when a file is not written on consecutive tracks of the disk, thereby being scattered around the hard disk because there is not enough consecutive area on the disk available for the size of file you wish to save. Consequently, it takes longer to retrieve and store files, since they are scattered around the disk.) There are disk optimizing programs available, such as Norton Utilities, that will rearrange your files on your disk so that they are stored in the most efficient manner for access. An alternative way to optimize your disk is to make a backup of your hard disk on floppy or tape, reformat your hard disk, and then restore the floppies or tape back onto the disk. Either way, you will end up with all your files written consecutively on the hard disk and, hopefully, you will see an improvement in file access and program startup time.

- Software installation is another area that cannot be thought of lightly. A properly installed software package can make all the difference in performance. It is a big misconception on the part of many users that all you need to do is create a subdirectory and copy the program disks into that subdirectory. Times are changing. Many software packages have install programs that will ask you a multitude of questions and scan your system for certain features. Others actually execute installers to make a customized program executable so as to run most efficiently on your machine. If anyone has installed Microsoft Windows, you should have an idea about what I am describing. Windows can be incredibly slow if not installed properly. I'd suggest taking a look at your WIN.INI file to see if everything looks appropriate.

- Do you use subdirectories? Does a DIRECTORY of your root directory fill up several screens worth of file names? Do you have to spend 5 minutes looking through 500 files to find the name for which you're looking? Is so, learn about subdirectories! Subdirectories enable you to segregate different application programs so that you have an idea of what files belong to which programs, and which files you can delete when you no longer use that application. They're easy to use and master. Give it a try.

Basically what I want to say is that, if your machine seems to be slower than when you first used it, don't chalk it up to old age. See what you can do to rejuvenate it. Many times, newer equipment is necessary as your usage progresses, but you could encounter the same problems if that new equipment isn't installed properly. You say you need help figuring out your optimal configuration? Give the Micro Support line a call [565-2316, 565-2319] and the consultants on duty will do their best to assist you. Good luck!§
Netware VMS is Here!

By Billy Barron, VAX System Manager (BITNET: BILLY@UNTVAX)

Netware VMS is a VAX version of the PC Netware networking software that allows a VAX to act as a PC file server. To PC users, Netware VMS will look like just another Netware file server. Unfortunately, to VAX users, Netware VMS is invisible and adds no new VAX functions, such as being able to access the PC file servers from the VAX.

Purpose

On the UNT campus, Netware VMS' primary purpose is to provide transparent access to VAX files for PC users. Also, Netware VMS allows Netware users to log into the VAX without a Sytek or TCP/IP connection. The VAX server is very slow compared to other Novell servers due to the interactive load on the VAX. For this reason among others, the VAX server will not be used for the loading applications -- just VAX-PC file transfer.

How Do I Get a Netware VMS Account?

All interactive VAX users will automatically be assigned Netware VMS accounts. If you are not VAX user and you want a Netware VMS account you should apply for a VAX account through the Computing Center. The password of the Netware VMS account will be the same as the VAX password. Passwords must be changed on VMS not Netware. Any user with a double password on the VAX will be unable to use their Netware VMS account. If you have this problem, please contact the VAX operators.

Drives

The Netware VMS server is known as NTVAXB. NTVAXB has the following volumes available:

- SYS: Netware VMS System Files
- DUA0: VMS System Disk
- DUA1: Public files and software packages
- DUA2: Class and IAS Accounts
- DUA3: More System Files and IAS Accounts
- DRA0: Individual Accounts

Continued on page 9.
Logging into Netware VMS

To use Netware VMS, a new file called SHELLCFG should first be created in the PC directory where IPX and NET3 (or NET2 or NET4) reside. SHELLCFG should contain one line of text "READ ONLY COMPATIBILITY=ON". IPX and NET3 (or NET2 or NET4) should then be loaded. Willis Library and ISB 110 lab users can ignore the above steps as they should already be done for you.

To login into the Netware VMS server, type LOGIN NTVAXB/userid and then when prompted, enter your password. For example (userid - AC02 password - HELLO),

F: LOGIN NTVAXB/AC02
   Enter your password: HELLO

When you log in to the NTNAXB server, you will be placed in H: which is your home directory.

Another way to access the Netware VMS server is to map a network drive to it. The first step is to figure out what drive your account is on. Class account users will be on DUA2 and almost all individual account users are on DRA0:. Then type MAP drive_name=NTVAXB/vax drive: userid. When prompted for a userid and password, enter them. Example for mapping the P: drive to AC02, which is an individual account with the password PAPER:

F: MAP P=NTVAXB/DRA0:AC02
   Enter login name: AC02
   Enter your password: PAPER

Filenames

Netware and VMS filenames are different which leads to a few difficulties:

- Netware filenames are 1 to 8 characters with an extension of 1 to 3 characters. VMS filenames can be much longer. If the VMS filename is not of the Netware format, then the file will be inaccessible to Netware.
- If the Netware filename contains special characters that are not allowed with VMS filenames, the file will be inaccessible on the VMS side, but under a differently named.
- VMS supports multiple versions of the same filename. However, Netware is incapable of doing this. If multiple versions of the same file exist, Netware VMS will only be able to access the latest version. If a Netware user deletes or renames a file with multiple versions, then all versions of the file will be deleted or renamed.

Logging into VMS using Netware VMS

Netware VMS includes a PC program called TES (Terminal Emulation Service), which will allow any Netware user on campus to log into the VAX with the VMS operating system over Netware. TES is a little hard to use. The computing center plans on making TES easier to use in the near future. If any Netware user has the need to use TES now, please contact the computing center for more information.

Help

Any questions about Netware VMS should be directed to the VAX Operators at 565-4161 or by sending mail to the OPERATOR account on the VAX.

Best of the BBS, continued from page 9

difficult? hard when you don't quite understand it and stick as soon when you do understand it?

#21665 Reply to #21640 8-SEP-1989
12:12:06.07
Subject: OOP
Try out Smalltalk V - only 99 bucks. And there is Microsoft Quick Pascal which is oop also for $99. Of course every article I have read says that the Turbo Pascal 5.5 is better than microsoft's implementation. TP is available from many sources for around $100 to $120 or so...

#21826 Reply to #21640 8-SEP-1989
18:39:19.72
Subject: RE: The holy-toity C[++] Language
OOP will make your brain hurt if you have no background in it. C++ has a few concepts that appear quite daunting (they are) when read without the proper background.

As far as OOP goes, it is totally backward from the current way programming is taught (ie. procedural). OOPS allows you to define a set of "commands" that object classes can respond to. Take for instance writing a drawing program in a procedural language.

Let's say you have two types of objects: a square and a triangle. You want to be able to draw, resize and rotate your squares and triangles. In a traditional procedural language, you would have to write 6 separate procedures:

DrawSquare
ResizeSquare
RotateSquare
DrawTriangle
ResizeTriangle
RotateTriangle

since you cannot apply the same algorithm to draw/resize/rotate squares and triangles.

Now, in an OOP language, you would define a class and then subclasses for squares and triangles. For instance, both a square and a triangle are SHAPES. In the class SHAPES, you could define parameters that apply to all shapes. For instance, you might say all SHAPES are filled in 50% grey, or you could define an + operator for the class SHAPE that defines what happens when you add to shapes together.
Both the class SQUARE and TRIANGLE would be defined in terms of SHAPES, plus with their own operative definitions.

It looks something like this:

class SHAPES
{
  // common info about shapes...such as an overloaded + operand
}
class SQUARE {
  Draw
  Resize
  Rotate
}
class TRIANGLE {
  Draw
  Resize
  Rotate
}

No you can define the following

SQUARE aSquare
TRIANGLE aTriangle
SHAPES aShape

and in your program make the following calls

Draw(aSquare)
Rotate(aTriangle)
aShape = aSquare + aTriangle

The compiler knows, from your class definition, that it should draw aSquare according to the rules given in the SQUARE subclass and rotate aTriangle according to the rules given in the TRIANGLE subclass.

Since both aSquare and aTriangle are SHAPES, you can use the overloaded + operand you defined in class SHAPES to add the two together, quite likely getting a polygon (which, rightly, could be a SUBCLASS one step above SQUARE and TRIANGLE).

So, there you have a really SIMPLIFIED discussion of OOP vs non-OOP programming.

If you are really interested in OOP, I suggest whole heartedly that you do some programming in HyperCard, since it is very forgiving and gives you a good introduction to OOP programming.

---

#21989 10-SEP-1989 18:09:35.51
Subject: D0S
DOES ANYONE KNOW HOW TO UPGRADE DOS IN A HARD DRIVE WITH EASE. I HAVE HEARD DIFFERENT STORIES INCLUDING REFORMATTING...

#21989 11-SEP-1989 09:22:14.23
Subject: RE: DOS
What DOS versions are you: comming from and: going to? most of the time, you can just do a SYS C: and then copy COMMAND.COM over, but that doesn't always work.... (remember: ALWAYS backup before you do something this drastic)
You don't NEED to re-format unless you're doing a drastic change (2.1 to 3.3 or 3.3 to 4.0). If you haven't formatted or even low-level formatted your hard drive in a long time, it would be good for the drive to do that. It'll clean up your disk, give you some free space, etc.

#21964 Replying to #21826 10-SEP-1989 12:04:37.25
Subject: RE: The hoity-toity C[++] Language and OOP in general.
Give me your opinion, here.... It was said that OOP is totally different from the procedure methods of old. What about languages like Turbo Pascal 5.5 which give you new keywords, and the ability to stuff procedures inside types. Does this really classify as a full-fledged OOP ? The problem I have with it is that it allows lazy people to still use the old methods. Maybe that isn't all bad, but I wish there were more drastic change for me to see. Maybe I should get Smalltalk. Now THAT would be an adventure!!!
there," after reading through the current issue of Benchmarks, I now know how to logon to the LAN system, and access this board. What I really wanted to know how to do was use services such as PASCAL, EDT, etc. How does one connect to these systems and use them?

Are there instructions for doing any of these things? Although I could be considered proficient in the use of telecommunications at the micro-computer/local BBS level, I know nothing of the ways of the mainframe system here at UNT, and would like more information. Anyone who can help... please do!

#21145 Reply to #21114 5-SEP-1989 22:12:16.21
Subject: RE: Sysops and VAX usage

Well, if you are taking a computer class that uses the VAX, then you will get a VAX account issued to you automatically. If not, you can ask one of your computer science teachers to help you get an individual account on the VAX cluster. From any regular VAX account (class or individual) you will be able to access things such as the EDT and TPU editors and the PASCAL, C, FORTRAN, and other compilers.

#21197 Reply to #21114 6-SEP-1989 09:09:43.85
Subject: RE: Sysops and VAX usage

Mainframe and Minicomputer services at UNT are provided by the UNT Computing Center, and managed by Academic Computing Services. If you have a copy of the September, 1989 issue of Benchmarks, the Computing Center newsletter, please refer to page 13, "UNT Computing Center Policy and Procedure highlights." This article will tell you, among other things, how to get an ID on one of the academic systems. If you want to learn about using the VAX, see the listing of Academic Computing short courses on p. 10. Among these is an introduction to VAX/VMS. If you need to acquire a copy of the September issue, check the terminal labs, or come by the Computing Center offices (ISB 119).

Using NOVELL or WordPerfect at home

#21595 8-SEP-1989 01:15:50.46
Subject: NOVELL Network

I know that this is a faint hope, but is it possible to call in and somehow log onto the NOVELL Network? I'm in Tech Writing and need to use the WordPerfect 5.0 (which I don't have nor do I have a hard disk to run it from). I tried doing a paper in WordStar (a very old, inadequate version) at home in non-document format and then taking the disk to the Tech Writing Lab to convert and print it, but it made "lovely" garbage of my paper. It somehow converted the last letter of almost every word to a Greek letter. Of course, it took me as long to fix the paper as it had to write it in the first place. I was told by my Tech Writing teacher that it (logging on from home) couldn't be done, but I just HAD to check with someone who knew more about the computer systems and the LAN.

#21642 Reply to #21595 8-SEP-1989 10:50:49.62
Subject: RE: NOVELL Network and wordstar/word perfect

At present there isn't any way to use Novell from home. But as to your problem, it sounds to me like you had edited the wordstar document in DOCUMENT mode, not non-document mode. When wordstar edits in document mode, it sets the high bit on the last character of each word, and word perfect took that to mean Greek letters. (I can give a longer explanation if you want one). So I would suggest making sure you do a non-document edit, or save it as a dot text file, and then trying to bring it into word perfect.

#21649 Reply to #21595 8-SEP-1989 11:09:42.87
Subject: RE: NOVELL Network

Because DOS wasn't meant to go through COM ports (ala modems) you'd have to get a copy of something like Carbon Copy or PC Anywhere and also have one on a machine up at school that you could call into - but, if I remember, UNT doesn't have that type of service.

#21889 Reply to #21595 9-SEP-1989 09:33:38.35
Subject: RE: NOVELL Network

There are currently two ways that one could call in to and log into a Novell Network. One is to have a modem and a software package like Co-Session or PC Anywhere connected to a PC that's on the network. This option allows you to basically "run" the host PC from remote. The other option is to attach to a Novell station that is connected via ethernet TCP/IP to the mainframe system. This is the only NT server which can do this, and that's all you can get to. At the Novell network that I manage, we are building up the hardware for a third option, but it won't be ready for about 6 to 9 months. This feature would be somewhat similar to calling in to the Sytek LAN to connect to the BBS. You would be calling a Communications Server connected directly to a specific server (TW_LAB in your case) and would establish a network session just as you would from a PC directly on the network. Like I said, though, this option is far off for our system. I haven't even heard what the TW_LAB people are wanting to do with theirs.

Well, I'll stop now, as that's probably more information than you wanted. Feel free to ask any other questions, though.

---

VAXCLUSTER USAGE STATISTICS

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Number of Runs</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LOGINOUT</td>
<td>User login</td>
<td>112833</td>
<td>18.0</td>
</tr>
<tr>
<td>2. SET</td>
<td>VMS Utility</td>
<td>66753</td>
<td>16.1</td>
</tr>
<tr>
<td>3. DELETE</td>
<td>VMS Utility</td>
<td>34165</td>
<td>5.2</td>
</tr>
<tr>
<td>4. SHOW</td>
<td>VMS Utility</td>
<td>29715</td>
<td>4.5</td>
</tr>
<tr>
<td>5. DIRECTORY</td>
<td>VMS Utility</td>
<td>29507</td>
<td>4.5</td>
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<tr>
<td>6. EDT</td>
<td>Editor</td>
<td>26816</td>
<td>4.3</td>
</tr>
<tr>
<td>7. User programs</td>
<td>Compiled Programs</td>
<td>26583</td>
<td>4.0</td>
</tr>
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<td>8. TYPE</td>
<td>VMS Utility</td>
<td>24661</td>
<td>3.7</td>
</tr>
<tr>
<td>9. NETSERVER</td>
<td>DECnet Server</td>
<td>17451</td>
<td>2.7</td>
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<td>10. SYSLONG</td>
<td>User login</td>
<td>16398</td>
<td>2.5</td>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>657850</strong></td>
<td></td>
</tr>
</tbody>
</table>

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September Top Ten Programs: Frequency of Runs
Your Co-worker Could Be A Space Alien

From J0KE-LE8TRI'TU.BITNET@MITVMA.MIT.EDU

YOUR CO-WORKER COULD BE A SPACE ALIEN, SAY EXPERTS ... here's how you can tell (by Michael Cassels of the "National Inquirer") Many Americans work side by side with space aliens who look human - but you can spot these visitors by looking for certain tip-offs, say experts. They listed 10 signs to watch for:

1. Odd or mismatched clothes. "Often space aliens don't fully understand the different styles, so they wear combinations that are in bad taste, such as checked pants with a striped shirt or a tuxedo jacket with blue jeans or sneakers," noted Brad Steiger, a renowned UFO investigator and author.

2. Strange diet or unusual eating habits. Space aliens might eat French fries with a spoon or gobble down large amounts of pills, the experts say.

3. Bizarre sense of humor. Space aliens who don't understand earthly humor may laugh during a serious company training film or tell jokes that no one understands, said Steiger.

4. Takes frequent sick days. A space alien might need extra time off to "rejuvenate its energy," said Dr. Thomas Easton, a theoretical biologist and futurist.

5. Keeps a written or tape recorded diary. "Aliens are constantly gathering information," said Steiger.


7. Constant questioning about customs of co-workers. Space aliens who are trying to learn about earth culture might ask questions that seem stupid, Easton said. "For example, a co-worker may ask why so many Americans picnics on the Fourth of July," noted Steiger.

8. Secretive about personal life-style and home. "An alien won't discuss domestic details or talk about what it does at night or on weekends," said Steiger.

9. Frequently talks to himself. "An alien may not be used to speaking as we do, so an alien may practice speaking," Steiger noted.

10. Displays a change of mood or physical reaction when near certain high-tech hardware. "An alien may experience a mood change when a microwave oven is turned on," said Steiger. The experts pointed out that a co-worker would have to display most if not all of these traits before you can positively identify him as a space alien.

Watch out!!!"
Computing Technical Services

Mainframe Performance Statistics

### NAS/8083 Dual Processor Performance Statistics for September

<table>
<thead>
<tr>
<th>CPU</th>
<th>SYSTEM</th>
<th>Planned Production Hours</th>
<th>Production Hours Achieved</th>
<th>System Uptime</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACAD</td>
<td>VM/SP5</td>
<td>715.08</td>
<td>714.66</td>
<td>99.9%</td>
</tr>
<tr>
<td>ACAD</td>
<td>MUSIC/SP</td>
<td>678.84</td>
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<td>MVS/IES2</td>
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<tr>
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<td>MVS/IES2</td>
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<tr>
<td>ADMN</td>
<td>COMPLETA</td>
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<tr>
<td>ADMN</td>
<td>ADABASA</td>
<td>690.94</td>
<td>680.02</td>
<td>99.9%</td>
</tr>
</tbody>
</table>

- The ACAD CPU achieved 100% uptime in September and October.
- The NAS/7360 DASD achieved 100% uptime in September and October.
- The NAS/7380 DASD achieved 100% uptime in September and October.
- The ADMN CPU achieved 100% uptime
- The NAS/7360 DASD achieved 100% uptime in September and October.
- The NAS/7380 DASD achieved 100% uptime in September and October.
- The EMC Solid State Disk United completed its extended certification period satisfactorily.

### Key Causes Of Lost Productivity in September

**ACAD CPU:**

**CPU, Tape, and Disk Subsystems (NAS)**

1. Rearranging tape, DASD, and console equipment for staging of another NAS 8083 processor.  **2.71 HOURS**

**Miscellaneous**

1. Systems development.  **5.78 HOURS**
2. COMPLETA system maintenance.  **3.88 HOURS**

**GRAND TOTAL 9.45 HOURS**

**ADMN CPU:**

**CPU, Tape, and Disk Subsystems (NAS)**

1. Rearranging tape, DASD, and console equipment for staging of another NAS 8083 processor.  **5.85 HOURS**

**Miscellaneous**

1. Keeping COMPLETA down to run FISCAL jobs.  **2.00 HOURS**
2. System development.  **0.92 HOURS**

**TOTAL 2.92 HOURS**

### NAS/8083 Dual Processor Performance Statistics for October

<table>
<thead>
<tr>
<th>CPU</th>
<th>SYSTEM</th>
<th>Planned Production Hours</th>
<th>Production Hours Achieved</th>
<th>System Uptime</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACAD</td>
<td>VM/SP5</td>
<td>744.00</td>
<td>737.37</td>
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<tr>
<td>ACAD</td>
<td>MUSIC/SP</td>
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<td>ADABASA</td>
<td>715.17</td>
<td>702.42</td>
<td>98.2%</td>
</tr>
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</table>

### Key Causes Of Lost Productivity in October

**ACAD CPU:**

**Miscellaneous**

1. System shut down for installation of a fan and coil cooling unit in GAB 560.  **4.47 HOURS**
2. Systems development.  **1.21 HOURS**
3. Undetermined causes for systems restarts.  **0.83 HOURS**

**GRAND TOTAL 9.51 HOURS**

**ADMN CPU:**

**Miscellaneous**

1. System shut down for installation of a fan and coil cooling unit in GAB 560.  **10.23 HOURS**
2. Systems development.  **1.57 HOURS**
3. Power failure in IB caused BYMPX 0 to fail.  **0.95 HOURS**

**GRAND TOTAL 12.75 HOURS**
ACADemic (NAS) Program Hit Parade

September Top Ten Programs: Frequency Of Runs

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th># of Runs</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEBGENER</td>
<td>IBM Utility</td>
<td>17123</td>
<td>21.6%</td>
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<tr>
<td>IEW</td>
<td>Linkage Editor</td>
<td>10462</td>
<td>13.2%</td>
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<tr>
<td>PGM=*DD</td>
<td>Compiled Program</td>
<td>10360</td>
<td>13.1%</td>
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<tr>
<td>IDCAMS</td>
<td>VSAM Utility</td>
<td>9949</td>
<td>12.6%</td>
</tr>
<tr>
<td>IKFCBL00</td>
<td>VS COBOL Compiler</td>
<td>8209</td>
<td>10.4%</td>
</tr>
<tr>
<td>SASLPA</td>
<td>SAS</td>
<td>5061</td>
<td>6.4%</td>
</tr>
<tr>
<td>IEBCPTCH</td>
<td>IBM List Utility</td>
<td>3581</td>
<td>4.5%</td>
</tr>
<tr>
<td>CASMA001</td>
<td>Sort Utility</td>
<td>2098</td>
<td>2.6%</td>
</tr>
<tr>
<td>PTPCH</td>
<td>Dataset Lister</td>
<td>2031</td>
<td>2.6%</td>
</tr>
<tr>
<td>SPSSX</td>
<td>SPSS-X</td>
<td>1839</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

September Top Ten Programs: CPU Seconds Used

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>CPU Seconds</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SASLPA</td>
<td>SAS</td>
<td>46810</td>
<td>36.6%</td>
</tr>
<tr>
<td>PGM=*DD</td>
<td>Compiled Program</td>
<td>22247</td>
<td>17.4%</td>
</tr>
<tr>
<td>COMPLET4</td>
<td>Academic COM-PLETE</td>
<td>16267</td>
<td>12.7%</td>
</tr>
<tr>
<td>IKFCBL00</td>
<td>VS COBOL Compiler</td>
<td>8887</td>
<td>6.9%</td>
</tr>
<tr>
<td>SPSSX</td>
<td>SPSS-X</td>
<td>6333</td>
<td>4.9%</td>
</tr>
<tr>
<td>IDCAMS</td>
<td>VSAM Utility</td>
<td>2942</td>
<td>2.3%</td>
</tr>
<tr>
<td>IEBCGENER</td>
<td>IBM Utility</td>
<td>2627</td>
<td>2.1%</td>
</tr>
<tr>
<td>FATS</td>
<td>Tape Verification Utility</td>
<td>2228</td>
<td>1.7%</td>
</tr>
<tr>
<td>SCRIPT</td>
<td>Waterloo/SCRIPT</td>
<td>2152</td>
<td>1.6%</td>
</tr>
<tr>
<td>IEW</td>
<td>Linkage Editor</td>
<td>2002</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

October Top Ten Programs: Frequency Of Runs

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th># of Runs</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEBCPTCH</td>
<td>IBM List Utility</td>
<td>28219</td>
<td>25.2%</td>
</tr>
<tr>
<td>IEW</td>
<td>Linkage Editor</td>
<td>15561</td>
<td>13.9%</td>
</tr>
<tr>
<td>PGM=*DD</td>
<td>Compiled Program</td>
<td>15324</td>
<td>13.7%</td>
</tr>
<tr>
<td>IKFCBL00</td>
<td>VS COBOL Compiler</td>
<td>10962</td>
<td>9.8%</td>
</tr>
<tr>
<td>CASMA001</td>
<td>Sort Utility</td>
<td>7760</td>
<td>6.9%</td>
</tr>
<tr>
<td>SASLPA</td>
<td>SAS</td>
<td>7689</td>
<td>6.9%</td>
</tr>
<tr>
<td>IEBCGENER</td>
<td>IBM Utility</td>
<td>7357</td>
<td>6.6%</td>
</tr>
<tr>
<td>IGYCRCTL</td>
<td>VS COBOL2 Compiler</td>
<td>3170</td>
<td>2.8%</td>
</tr>
<tr>
<td>SPSSX</td>
<td>SPSS-X</td>
<td>2881</td>
<td>2.6%</td>
</tr>
<tr>
<td>IEV90</td>
<td>Assembler H</td>
<td>2262</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

October Top Ten Programs: CPU Seconds Used

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>CPU Seconds</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SASLPA</td>
<td>SAS</td>
<td>93849</td>
<td>33.8%</td>
</tr>
<tr>
<td>PGM=*DD</td>
<td>Compiled Program</td>
<td>72404</td>
<td>26.0%</td>
</tr>
<tr>
<td>COMPLET4</td>
<td>Academic COM-PLETE</td>
<td>38571</td>
<td>13.8%</td>
</tr>
<tr>
<td>SPSSX</td>
<td>SPSS-X</td>
<td>15618</td>
<td>5.6%</td>
</tr>
<tr>
<td>IKFCBL00</td>
<td>VS COBOL Compiler</td>
<td>11301</td>
<td>4.1%</td>
</tr>
<tr>
<td>ADARUN</td>
<td>ADABAS Utility Module</td>
<td>6023</td>
<td>2.2%</td>
</tr>
<tr>
<td>IGYCRCTL</td>
<td>VS COBOL2 Compiler</td>
<td>4478</td>
<td>1.6%</td>
</tr>
<tr>
<td>SCRIPT</td>
<td>Waterloo/SCRIPT</td>
<td>4357</td>
<td>1.6%</td>
</tr>
<tr>
<td>IEW</td>
<td>Linkage Editor</td>
<td>4305</td>
<td>1.5%</td>
</tr>
<tr>
<td>IEBCPTCH</td>
<td>IBM List Utility</td>
<td>3584</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

The programs listed in this section were used the most frequently on the NAS CPU during the months of September and October, 1989.

Please Note that ACAD is the official designation of the part of the NAS/8083 CPU that is dedicated to faculty and student use. The portion of the computer reserved for University administrative purposes is termed ADMN. §

Richard A. Harris, Associate Vice President for Computing
Steve Minnis, Director of Computing Technical Services
Dave Molta, Director of Academic Computing
Coy Hoggard, Director of Administrative Computing
Claudia Lynch, Benchmarks Editor
Philip Baczewski, Benchmarks Associate Editor
# Disk Backup Schedules

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>BACKUP</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative MVS/SP</td>
<td>Daily</td>
<td>Monday - Friday around 7 p.m. (after COM-plete is shut down) &amp; on Saturday &amp; Sunday if COM-plete has been up that day.</td>
</tr>
<tr>
<td></td>
<td>Weekly</td>
<td>Full pack dumps taken each Sunday morning.</td>
</tr>
<tr>
<td></td>
<td>Monthly</td>
<td>Full pack dumps taken on the first day of each month.</td>
</tr>
<tr>
<td>Academic MVS/SP</td>
<td>Daily</td>
<td>Monday - Sunday during the early hours of the morning.</td>
</tr>
<tr>
<td></td>
<td>Weekly</td>
<td>Full pack dumps taken each Sunday.</td>
</tr>
<tr>
<td></td>
<td>Monthly</td>
<td>Full volume dumps taken on the first day of each month.</td>
</tr>
<tr>
<td>MUSIC/SP</td>
<td>Daily</td>
<td>Wednesday - Monday starting at 4 a.m. and lasting about 30 minutes.</td>
</tr>
<tr>
<td></td>
<td>Weekly</td>
<td>Tuesday mornings at 3 a.m., these last about 2 hours.</td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td>Once a semester, a permanent backup is taken.</td>
</tr>
<tr>
<td>VM/SP</td>
<td>VM Weekly</td>
<td>Early every Wednesday morning.</td>
</tr>
<tr>
<td></td>
<td>CMS mini-disks</td>
<td>Daily backup performed early every morning. Weekly backup every Wednesday starting at 3 a.m.</td>
</tr>
<tr>
<td>VAXcluster</td>
<td>Daily</td>
<td>Incremental backups are performed Monday - Thursday at 6 p.m.</td>
</tr>
<tr>
<td></td>
<td>Weekly</td>
<td>Full backups are performed every Friday beginning at 8 a.m. and generally last all day.</td>
</tr>
<tr>
<td></td>
<td>Monthly</td>
<td>A &quot;stand alone&quot; backup is performed monthly. Dates and times are given in the system log-on message.</td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td>Once a semester, a permanent backup is taken.</td>
</tr>
</tbody>
</table>

A full description of the system backup procedures can be found by typing HELP BACKUP on MUSIC/SP or the VAXcluster.
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