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NEW POLICIES, PROCEDURES, AND OTHER IMPORTANT STUFF

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BENCHMARKS Reader/User feedback is encouraged.
Send all letters, suggestions, etc., to:
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The Computing Center
NT Station, Box 13495
Denton, Texas 76203

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Richard Harris
Director of Computer Systems
Thomas Wm. Madron
Manager, Computer Services
Robert G. Brookshire
Manager,
Academic Computing Services
BENCHMARKS

SERVICES AVAILABLE TO USERS OF THE NTSU COMPUTING FACILITIES


BENCHMARKS QUESTIONS/CONTRIBUTIONS, ETC. - Claudia Lynch

INFORMATION & ID CODES; DISK SPACE PROBLEMS - Carolyn Goodman

PRE-RESEARCH COUNSELING; STATISTICAL/RESEARCH SUPPORT - George Morrow, Scott Barber, Claudia Lynch, Tim King, Panu Sittiwong

ACADEMIC ADABAS/COM-PLETE; CRS & COMPSTAT PROBLEMS - Telka Clem

STUDENT PROGRAMMING PROBLEMS - CSCI Dept., GAB Room 542A; BCIS Dept., BA Room 192

JCL PROBLEMS; PASSWORD & OPERATING SYSTEM PROBLEMS; COMMUNICATION/Terminal PROBLEMS - Help Desk

DATA ENTRY & KEYPUNCH; TEST SCORING & ANALYSIS - Betty Grise

ADMINISTRATIVE APPLICATIONS - Cay Hoggard

PRINTOUT RETRIEVAL - RJE Operators

DIALING UP NTSU COMPUTERS OVER THE TELEPHONE

Phone numbers for the Local Area Network (LAN) are:

300 BAUD: (817) 565 - 3300
1200 BAUD: 565 - 3499
300 BAUD: DFW METRO 429 - 6006

After a communications link has been successfully established, the user will receive the # prompt. At this point, it will be necessary to issue the appropriate CALL command to connect with a computer.

The numbers that will accept either 300 or 1200 baud communications (connected to modems with an autobaud feature) are currently out of order. Watch MUSIC/SP News and Benchmarks for information concerning their availability.

CALL 8040 will connect with the

8050 NAS/8043 (for MUSIC/SP access)
8060

CALL 3270 will connect with the

3280 NAS/8043 through the 3270 protocol converter

CALL DEC will connect with the VAX Cluster

CALL 760 will connect with the Research VAX

CALL 2000 will connect with the HP-2000

NTSU CABLE SYSTEM SCHEDULE

The current configuration of the NTSU cable system is as follows:

Channel 8 — Tager microwave channel. Carries broadcasts to and from NTSU to other links in the Tager network.

Channel 10 — NTSU Computer System Status Monitor (SSM). Displays the current status of the NAS, VAX and HP computer systems supported by the Computing Center.

Channel 7 — NT Daily. Broadcast originates from the NTSU Journalism Department.

Channel 12 — Summons Cable. Currently broadcasts Cable News Network (CNN), unless a special program is requested.

Special broadcasts to and from classrooms (on channel 11), etcetera can be arranged by contacting the Media Library (565-2484).

HOURS FOR NTSU COMPUTER ACCESS AREAS*

SPRING 1986:

<table>
<thead>
<tr>
<th>Days</th>
<th>Times</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>2-10 p.m. Noon-Midnight</td>
<td>ISB 110 Terminal Area</td>
</tr>
<tr>
<td></td>
<td>2-11 p.m. Noon-5 p.m.</td>
<td>Computing Center RJE</td>
</tr>
<tr>
<td>Saturday</td>
<td>7:00 a.m.-2:10 p.m.</td>
<td>College of Business</td>
</tr>
<tr>
<td></td>
<td>2:10 p.m.-Midnight</td>
<td>Graphics Lab</td>
</tr>
<tr>
<td></td>
<td>7:00 a.m.-Open 24 hrs/day</td>
<td>Computing Center RJE</td>
</tr>
<tr>
<td>Monday</td>
<td>7:30 a.m.-10 p.m.</td>
<td>ISB 110 Terminal Area</td>
</tr>
<tr>
<td>Tuesday</td>
<td>8:15 a.m.-11:45 p.m.</td>
<td>College of Business</td>
</tr>
<tr>
<td></td>
<td>8 a.m.-Midnight</td>
<td>GAB 550C</td>
</tr>
<tr>
<td>Wednesday</td>
<td>8 a.m.-10 p.m.</td>
<td>Graphics Lab</td>
</tr>
<tr>
<td>Thursday</td>
<td>7:30 a.m.-9 p.m.</td>
<td>ISB 110 Terminal Area</td>
</tr>
<tr>
<td>Friday</td>
<td>8:15 a.m.-7:45 p.m.</td>
<td>College of Business</td>
</tr>
<tr>
<td></td>
<td>8 a.m.-8 p.m.</td>
<td>GAB 550C</td>
</tr>
<tr>
<td>Saturday</td>
<td>9 a.m.-6 p.m.</td>
<td>ISB 110 Terminal Area</td>
</tr>
<tr>
<td></td>
<td>CLOSE Midnight CLOSED</td>
<td>Computing Center RJE</td>
</tr>
</tbody>
</table>

*Exceptions to above schedule for GAB 550C: 5/15 10 a.m.-8 p.m.; 5/12-5/15 8 a.m.-10 p.m.; 5/16 8 a.m.-5 p.m.
Upgrade of NTSU Computer Systems
By Richard Harris, Associate Vice President for Computing

On February 14, 1986, during an open meeting in Austin, Texas, the state Automated Information and Telecommunications Council (ATTC) approved (and complimented) the proposal I presented on behalf of NTSU for a major computer upgrade. This somewhat unique upgrade will provide a significant increase in both academic and administrative computing power at a four year cost that will be $174,000 less than the the equivalent replacement of either the current NAS academic or administrative computer. In fact, academic CPU power will be increased by 80%, with an initial increase in I/O capacity by over 50%. Academic disk storage will also increase by 67%. Administrative CPU power will be increased by 211%, with an initial I/O capacity increase of over 60%. Maintenance and software costs, in the meantime, will be reduced by $115,000 per year.

The upgrade is currently scheduled to occur between semesters, during the week of May 19, 1986. During this time, the current NAS/8043 IBM-compatible mainframe computer will be upgraded to a dual processor NAS/8083. The 8083, however, will actually be operated as two NAS/8065 processors, thus continuing to provide separate and secure academic and administrative computing support.

Computing Center Spring Short Courses, Round Two

The Computing Center is offering its second series of short courses this semester. Please pre-register to attend. Only 20 people will be admitted per section. Courses marked with an * require knowledge of the MUSIC/SP Context Editor. THE COMPUTING CENTER RESERVES THE RIGHT TO CANCEL COURSES WITH LESS THAN 5 PEOPLE SIGNED UP.

1. Three separate 2-hour introductory sessions on the MUSIC/SP interactive operating system, using the 3270 Protocol Converter to do FULL-SCREEN EDITING ON MUSIC/SP. To be held in Room 110 of the Science Library (ISB).
   - Monday, April 14 : 1-3 p.m.  Instructor: Telka Clem
   - Tuesday, April 15: 6-8 p.m.  Instructor: Tim King
   - Wednesday, April 16: 9-11 a.m. Instrutor: Janice Green

2. Advanced Statistical Packages (File manipulation etc. in SAS & SPSS-X)*. To be held in the Graphics Lab (ISB):
   - Monday, April 14 : 3-5 p.m.  Instructor: Scott Barber

3. A 3-hour session on VAX Utilities & Commands. To be held in Room 110 of the Science Library (ISB).
   - Tuesday, April 15: 9 a.m. - Noon  Instructor: Ron Brashear

4. A 2-hour introductory session on SAS.* To be held in Room 110 of the Science Library (ISB).
   - Wednesday, April 16: 2-4 p.m.  Instructor: Panu Sitiwong

5. Using MUSIC/SP Utilities.* To be held in Room 110 of the Science Library (ISB).
   - Monday, April 21: 3-5 p.m.  Instructor: Janice Green

6. A 2-hour introductory session on SPSS-X.* To be held in Room 110 of the Science Library (ISB).
   - Tuesday, April 22: 1-3 p.m.  Instructor: Tim King

7. Introduction to Interactive Data Analysis with BMDP on the VAX Cluster. To be held in Room 110 of the Science Library (ISB).
   - Thursday, April 24: 3-5 p.m.  Instructor: Bob Brookshire
Procedure for Obtaining User-ID Codes for Classroom Instruction
By Bob Brookshire, Manager of Academic Computing Services (AS03 @ NTSMUSIC)

When applying for ID codes for classroom use, we ask that faculty fill out two forms for each class for which they need computer user ID codes. The first form, called the "NTSU Computing Center User-ID Request Form," is used in assigning all computer ID codes at the University. The information on this form is entered into a computer database by our clerical staff. This database forms the input for a program which automatically assigns ID codes and passwords on all of our computer systems. It is critical, therefore, that this form be filled out accurately and completely.

In addition to the faculty member's name and Social Security Number, there are several other important items on the Request Form. Instructors should indicate they are requesting classroom User-IDs, and specify the course information with department, course and section. Failure to provide this information will slow down the processing procedures.

The form also contains a space to indicate the number of students in the class. If this area is left blank, our program will assign user ID codes to all students registered for that class. Each ID code will be matched with the name of a student in the class as contained in the University student records database. At the beginning of each new semester, therefore, it would be wise to wait until most add/drops have been completed before requesting computer User-ID codes for classes. To reiterate, normally the space for number of students should be left blank.

The ID codes will be composed of two letters and two digits. The two digits will start with 00, then 01, 02, etc. until the number is equal to the number of students in the class. The ID code numbered 00 is the instructor's name, and each of the other codes is assigned to a student by name. Slips containing the ID codes, passwords and names should be picked up by the instructor at the Computing Center Reception Area, located in the Information Science Building, Room 119.

If additional students are added to the class, the instructor need only call Sharon, Nancy or Carolyn in the Computing Center, Ext. 2324, letting them know the last number in the original range assigned. The required number will then be added, and may be picked up shortly thereafter in the Computing Center. Likewise, instructors may cancel the ID codes of students who drop the class by providing the student names and ID codes in a written memo.

Under some circumstances, instructors may prefer that ID codes not be assigned to each student by name. This may occur, for example, when students will be working only as teams, or when codes are needed before the class rolls are determined. Only in cases like these should instructors indicate the number of ID codes required for the class. All these codes will be assigned in the instructor's name, and will range from 00 to the number requested. Once again, the 00 ID code should only be used by the instructor.

Instructors should indicate on the Request Form the computers and operating systems required for the class. The MUSIC/SP system is required to access almost all software on the IBM compatible mainframe NAS/8043 computer, including those programs that run only under the OS batch operating system. Normally, then, classes that use the IBM compatible system will require both MUSIC/SP and OS batch ID codes. Classes which use the VAX computers will also be assigned OS batch ID codes, so that students may use the central printers in the ISB. No class ID codes will be assigned on the NAS/6650 computer under any circumstances. Classes which require access to the CMS operating system, or the COM-PLETE teleprocessing monitor on the NAS/8043, must first have my approval.

Faculty should also fill in the departmental account number and department name. This information allows us to collect data on computer usage by department and college which is useful in planning for future computer and software purchases.

The request form is not complete until it has been signed by both the faculty member and the department head. These signatures certify that the computing services requested are in support of NTSU activities, and will not be used for commercial purposes or personal financial gain.

When requesting classroom accounts, a "Classroom ID Usage Projection Form" must also be completed. The information provided on this form fulfills two purposes. First, information on course enrollment, number of ID codes, systems and software usage aids the Computing Center in planning for future computer and software purchases. Second, the form collects information on other special facilities provided by Academic Computing, such as terminal rooms, the Graphics Lab, and short courses, which the class may require.

Computer Crime and You: Know the Law
By Claudia Lynch, Benchmarks Editor (AS04 @ NTSMUSIC)

The Texas State Legislature amended Title 7 of the Penal Code, effective September 1, 1985, to include computer crimes. After providing definitions for such terms as 'communications common carrier,' 'computer,' 'computer program,' 'computer security system,' 'data,' and 'electric utility,' Senate Bill 72 goes on to state:

"Section 33.02. BREACH OF COMPUTER SECURITY. (a) A person commits an offense if the person:
(1) uses a computer without the effective consent of the owner of the computer or a person authorized to license access to the computer and the actor knows that there exists a computer security system intended to prevent him from making that use of the computer; or
“(2) gains access to data stored or maintained by a computer without the effective consent of the owner or licensee of the data and the actor knows that there exists a computer security system intended to prevent him from gaining access to that data.
“(b) A person commits an offense if the person intentionally or knowingly gives a password, identifying code, personal identification number, or other confidential information about a computer security system to another person without the effective consent of the person employing the computer security system to restrict the use of a computer or to restrict access to data stored or maintained by a computer.
“(c) An offense under this section is a Class A misdemeanor.

Section 33.03. HARMFUL ACCESS.
(a) A person commits an offense if the person intentionally or knowingly:
“(1) causes a computer to malfunction or interrupts the operation of a computer without the effective consent of the owner of the computer or a person authorized to license access to the computer; or
“(2) alters, damages, or destroys data or a computer program stored, maintained, or produced by a computer, without the effective consent of the owner or licensee of the data or computer program.
“(b) An offense under this section is:
“(1) a Class B misdemeanor if the conduct did not cause any loss or damage or if the value of the loss or damage caused by the conduct is less than $200;
“(2) a Class A misdemeanor if the value of the loss or damage caused by the conduct is $200 or more but less than $2,500; or
“(3) a felony of the third degree if the value of the loss or damage caused by the conduct is $2,500 or more.

Section 33.04. DEFENSES. It is an affirmative defense to prosecution under Sections 33.02 and 33.03 of this code that the actor was an officer, employee, or agent of a communications common carrier or electric utility and committed the proscribed act or acts in the course of employment while engaged in an activity that is a necessary incident to the rendition of service or to the protection of the rights or property of the communications common carrier or electric utility.

If you are interested in seeing the text of the entire document, I will be glad to provide you with a copy. Contact me at 565-2324, or send me electronic mail on MUSIC/SP.

**TCOM Update**

By Scott Barber, Academic Computing Consultant (AC10 @ NTSMUSIC)

**Introduction**

An inter-agency contract was approved, effective November 1985, by the Board of Regents to provide for the handling of computing services for the TCOM community at NTSU. This contract makes available a sum of money which is to be applied to mainframe computer access and usage for all TCOM departments, faculty and students; microcomputer and software acquisition; and staff support (located at NTSU and TCOM).

Several persons from NTSU have been at TCOM in recent months helping to develop the computing resources available to TCOM faculty and staff. This article is a brief rundown of recent developments which are affecting access to computing resources and will continue to do so for quite some time.

**Needs Assessment**

First of all, a needs assessment is in progress which should provide basic information for Computing Center staff. Opinions and perspectives gathered will be useful for developing computing resources that will be used effectively and that will be seen as positive by staff, faculty, and students.

At the time of this writing, several members of the TCOM Computing Council have been polled, and have responded to 7 pages of questions. These initial “pre-test” questionnaires have been completed, and a much smaller questionnaire will be prepared and sent to all full-time faculty and staff at TCOM. This questionnaire should not require more than 15-20 minutes of careful consideration, but will go a long way in helping us plan for useful, appropriate, and timely computing services for this community. With luck(?), this survey should be completed and analyzed within the next month, and the development of computing will be well on its way at TCOM.

**TCOM Local Area Network**

One of the developments which will affect some of you in the most immediate future is the acquisition of a Local Area Network for the “Academic administration” departments at TCOM. Essentially, there will be a “trunk” line running through all three buildings to which departments can volunteer to “hook” into.
Due to the architecture of this network (actually very similar to the standard PC Network sold by IBM), any PC will be able to communicate with any other PC on the network. This will provide you with the ability to send documents, letters, and data to others, share software (through common "file servers", or PCs which contain data or software to be accessible by others), and communicate with other members via electronic mail. Bundled with this will be some data management software to provide security for users' files. The data management software being considered provides protection at the file, record, and field levels, leaving you complete control over your data. All this, and data security too!

Academic Computing Consultants

As mentioned earlier, some members of the Academic Computing Staff at NTNU have been providing direct support for TCOM users of microcomputers and NT mainframes and will continue to do so. The Academic Computing Staff may be contacted at any time during normal working hours by calling (817) 565-2924.

Consulting is available in many areas including microcomputer configurations, purchase, and installation; communications with the NTNU mainframes; PC software acquisition and usage, research design and statistical analysis; and various other areas encountered when trying to use computers in this academic environment. We are also presently interviewing for a full-time Academic Computing Consultant to reside at TCOM, thus paving the way for a major increase in computing capacity and support.

Communications with NTNU mainframes

This is the last item for this article, but possibly the most exciting for TCOM and metro phone line users who wish to access the NT mainframe computers. Within the next few months, the Computing Center will be upgrading the communications lines between TCOM and NTNU in two important ways.

First, there will soon be an upgrade of the eight 300 baud modems which are presently used for metro access. We will be upgrading from 8 to 16 2400 baud modems for metro access. This will increase the speed of mainframe communications by a factor of eight, and double the number of ports available. Due to the development of technology in this area and the drastic lowering of prices for such high-speed devices, more or better phone lines will not be required for this upgrade.

The second improvement will be the installation of a microwave link among several metroplex universities in September of this year. This will provide even more high-speed capacity communications with the participating institutions. In addition to TCOM and North Texas, other nodes on the microwave network will include TCU, UTA, and one or two of the Dallas Community Colleges.

With these acquisitions of communications and microcomputer hardware, access to mainframe and PC applications software, and greatly increased staff support, the power of computers to change the way work is done will be increasingly evident.

SPSS-X TABLES Error

A "Known Error" exists in the SPSS-X TABLES procedure. This error occurs when "NFRAME" is used in the FORMAT parameter, which sometimes causes the table not to run. The reason it doesn't always occur is that the error is somewhat associated with the length of the table. You could experiment with making your table shorter and possibly get it to work. SPSS Inc. is working on a "fix" for this, and we will let you know whenever we hear something.

* * * OPERATIONS * * *

Disk Backup Schedules

Backup Schedule for OS/MVS

OS/MVS disk packs (academic and administrative) are backed up daily, Tuesday through Saturday, from 4:30 a.m., and Sunday from Midnight to 3 a.m. A backup of all the operating systems on the NAS machines and their contents is done once every two weeks at some low activity period over a weekend.

MUSIC/SP Backup Hours

A message will be sent to all users signed on to MUSIC/SP approximately 10 minutes before backups are begun. It will be in the form ** MUSIC SHUT DOWN AT xxxx AM - SCHEDULED BACKUP **. To find out the backup hours while signed on to MUSIC/SP, enter HELP HOURS. The following backup schedule is currently in effect:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time (for about)</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>3 a.m. (for about 3 hours)</td>
<td>Weekly backup</td>
</tr>
<tr>
<td>Wednesday - Saturday</td>
<td>4 a.m. (for about 2 hours)</td>
<td>Daily backup</td>
</tr>
<tr>
<td>Saturday</td>
<td>Midnight (for about 2 hours)</td>
<td>Daily backup</td>
</tr>
</tbody>
</table>
PHOENIX Backup Schedule

PHOENIX is backed up weekly on Sunday night. The backup begins at midnight and lasts for approximately 30 minutes.

VAX Backup Schedule

Incremental backups of both VAX systems are performed Monday through Thursday at 4 p.m. Users do not have to log-off, but any files that are open at the time of the backup will NOT be backed up.

Full backups of both systems are done every Friday beginning at 8 a.m. These generally will take all day to complete. Again, users do not have to log-off, but any files that are open will not be backed up.

A "Stand Alone" backup of the system disk is done the third Tuesday of every month, in the afternoon, just before preventative maintenance. This procedure makes a copy of the system disk that can be used to restore its contents if the disk is completely destroyed. The system will be shut down; watch the system log-on message for specific times and dates.

Note: No backups are taken on the weekends. Requests for restoration of files should be made via MALL to the username OPERATOR. Your file can only be restored if it existed before the last backup was done.

NAS/8043 and NAS/6650 Performance Statistics for January

<table>
<thead>
<tr>
<th>CPU SYSTEM</th>
<th>SYSTEM UPTIME</th>
<th>CPU</th>
<th>SCHEDULED OPERATING HOURS</th>
<th>PLANNED MAINT. HOURS</th>
<th>PLANNED PRODUCTION HOURS</th>
<th>UNPLANNED MAINT. HOURS</th>
<th>PRODUCTION HOURS ACHIEVED</th>
<th>SYSTEM UPTIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM/SP</td>
<td>99.3%</td>
<td>8043</td>
<td>744</td>
<td>0.00</td>
<td>744.00</td>
<td>5.26</td>
<td>738.74</td>
<td>99.3%</td>
</tr>
<tr>
<td>MUSIC/SP</td>
<td>99.2%</td>
<td>8043</td>
<td>744</td>
<td>18.42</td>
<td>725.58</td>
<td>5.77</td>
<td>719.81</td>
<td>99.2%</td>
</tr>
<tr>
<td>MVS/JES2</td>
<td>99.1%</td>
<td>8043</td>
<td>744</td>
<td>0.00</td>
<td>744.00</td>
<td>7.04</td>
<td>736.96</td>
<td>99.1%</td>
</tr>
<tr>
<td>COMPLETEA</td>
<td>98.9%</td>
<td>8043</td>
<td>744</td>
<td>0.00</td>
<td>744.00</td>
<td>8.52</td>
<td>735.48</td>
<td>98.9%</td>
</tr>
<tr>
<td>MVS/JES2</td>
<td>99.1%</td>
<td>6650</td>
<td>744</td>
<td>0.00</td>
<td>744.00</td>
<td>6.47</td>
<td>737.53</td>
<td>99.1%</td>
</tr>
<tr>
<td>COMPLETEA</td>
<td>98.5%</td>
<td>6650</td>
<td>327</td>
<td>0.00</td>
<td>327.00</td>
<td>5.04</td>
<td>321.96</td>
<td>98.5%</td>
</tr>
<tr>
<td>ADABASA</td>
<td>96.5%</td>
<td>6650</td>
<td>744</td>
<td>25.17</td>
<td>718.83</td>
<td>24.88</td>
<td>693.95</td>
<td>96.5%</td>
</tr>
</tbody>
</table>

System Uptime = (Production Hrs. Achieved)/(Planned Production Hrs.)
Production Hrs. Achieved = (Planned Production)-(Unplanned Maint.)
Scheduled Operating Hrs. = (Planned Maint.) + (Planned Production)
MUSIC/SP Planned Maintenance Hours include 18.42 Hrs. for system backup.
ADABASA'S Planned Maintenance Hours include 25.17 Hrs. for system backup.

The NAS/8043 CPU achieved 99.9% uptime. The NAS/7360 DASD achieved 100% uptime. The NAS/7350 DASD achieved 100% uptime. The NAS/6650 CPU achieved 100% uptime. The STC 8650 DASD achieved 100% uptime.

Lost productivity is calculated as the greatest amount of elapsed time that any one of the production systems was unavailable for scheduled operation. Lost productivity hours were contributed to by the following key causes:

NAS/8043 CPU:
CPU, Tape, and Disk Subsystems (NAS)
1. Program Word Address Failure in CPU 0.32 HOURS

Terminal Control System (COMTEN)
1. Corrective Maintenance on 3690 TCU 1.13

Miscellaneous
1. COMPLETEA System Tuning/Improvements 0.29
2. MVS/JES2 System Tuning/Improvements 1.85
3. Emergency Power Down Due to Air Conditioning Chiller Failures 5.06

TOTAL 7.20

GRAND TOTAL FOR NAS/8043 8.65 HOURS

NAS/8650 CPU:
Terminal Control System (IBM)
1. Corrective Maintenance on 3690 TCU 0.97 HOURS
BENCHMARKS

FEBRUARY, 1986

Miscellaneous
1. Undetermined Causes for System Restarts 0.69
2. MVS/JES2 System Tuning/Improvements 4.14
3. ADABASA System Tuning/Improvements 2.30
4. ADABASA Shut Down to Process Single Run Production Jobs 11.01
5. COMPLETA System Tuning/Improvements 0.72
6. COMPLETA System Failures 0.28
7. Electrical Contractor Accidentally Tripped Main Breaker to
   DASD and the COMTEN TCU 1.02
8. Power Failure in ISB caused BYMPX 0 to fail 0.90
9. Emergency Power Down Due to Air Conditioning Chiller Failures 4.20

TOTAL 25.21 HOURS

GRAND TOTAL FOR NAS/6650 26.18 HOURS

NAS/8043 and NAS/6650 Performance Statistics for February

<table>
<thead>
<tr>
<th>CPU</th>
<th>SYSTEM</th>
<th>SCHEDULED OPERATING HOURS</th>
<th>PLANNED MAINT. HOURS</th>
<th>PLANNED PRODUCTION HOURS</th>
<th>UNPLANNED MAINT. HOURS</th>
<th>PRODUCTION HOURS ACHIEVED</th>
<th>SYSTEM UPTIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>8043</td>
<td>VM/SP3</td>
<td>672</td>
<td>2.12</td>
<td>669.88</td>
<td>0.34</td>
<td>669.54</td>
<td>99.9%</td>
</tr>
<tr>
<td>8043</td>
<td>MUSIC/SP</td>
<td>672</td>
<td>20.50</td>
<td>651.50</td>
<td>2.21</td>
<td>649.29</td>
<td>99.7%</td>
</tr>
<tr>
<td>8043</td>
<td>MVS/JES2</td>
<td>672</td>
<td>2.48</td>
<td>669.52</td>
<td>2.03</td>
<td>667.49</td>
<td>99.7%</td>
</tr>
<tr>
<td>8043</td>
<td>COMPLETA</td>
<td>672</td>
<td>2.93</td>
<td>669.07</td>
<td>3.31</td>
<td>665.76</td>
<td>99.5%</td>
</tr>
<tr>
<td>6650</td>
<td>MVS/JES2</td>
<td>672</td>
<td>2.95</td>
<td>669.05</td>
<td>0.18</td>
<td>688.87</td>
<td>99.9%</td>
</tr>
<tr>
<td>6650</td>
<td>COMPLETA</td>
<td>245</td>
<td>0.00</td>
<td>245.00</td>
<td>0.72</td>
<td>244.28</td>
<td>99.7%</td>
</tr>
<tr>
<td>6650</td>
<td>ADABASA</td>
<td>672</td>
<td>22.58</td>
<td>649.42</td>
<td>0.88</td>
<td>648.54</td>
<td>99.8%</td>
</tr>
</tbody>
</table>

System Uptime = (Production Hrs. Achieved)/(Planned Production Hrs.)
Production Hrs. Achieved = (Planned Production) - (Unplanned Maint.)
Scheduled Operating Hrs. = (Planned Maint.) + (Planned Production)
MUSIC/SP Planned Maintenance Hours include 17.63 Hrs. for system backup.
ADABASA'S Planned Maintenance Hours include 19.28 Hrs. for system backup.

The NAS/8043 CPU achieved 100% uptime. The NAS/7360 DASD achieved 100% uptime. The NAS/7350 DASD achieved 100% uptime. The NAS/6650 CPU achieved 100% uptime. The AS/7380 DASD achieved 100% uptime.

Lost productivity is calculated as the greatest amount of elapsed time that any one of the production systems was unavailable for scheduled operation. Lost productivity hours were contributed to by the following key cause:

NAS/8043 CPU:

CPU, Tape, and Disk Subsystems (NAS)
1. Scheduled Preventive Maintenance 2.95 HOURS

Miscellaneous
1. COMPLETA System Tuning/Improvements 0.05
2. MVS/JES2 System Tuning/Improvements 1.10
3. MUSIC/SP System Failures 2.08
4. VM/SP3 System Tuning/Improvements 0.70

TOTAL 3.93

GRAND TOTAL FOR NAS/8043 6.86 HOURS

NAS/6650 CPU:

CPU, Tape, and Disk Subsystems
1. Scheduled Preventive Maintenance 3.30 HOURS

Miscellaneous
1. MVS/JES2 System Tuning/Improvements 0.81
2. ADABASA System Failures 0.70
3. COMPLETA System Tuning/Improvements
4. COMPLETA System Failures

TOTAL 1.57 HOURS
GRAND TOTAL FOR NAS/6650 4.87 HOURS

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**NAS/8043 Program Hit Parade**

The following programs were used the most frequently on the NAS/8043 during the months of January and February.

### JANUARY TOP TEN PROGRAMS IN TERMS OF FREQUENCY OF RUNS

<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. OTHER</td>
<td>Programs not Categorized</td>
<td>5046</td>
<td>21.7</td>
</tr>
<tr>
<td>2. IEBGENER</td>
<td>IBM Utility</td>
<td>2945</td>
<td>12.7</td>
</tr>
<tr>
<td>3. IKJEFT01</td>
<td>Password Change</td>
<td>2825</td>
<td>12.1</td>
</tr>
<tr>
<td>4. SCRIPT</td>
<td>Waterloo/SCRIPT</td>
<td>2588</td>
<td>11.0</td>
</tr>
<tr>
<td>5. SASLPA</td>
<td>SAS</td>
<td>2435</td>
<td>10.5</td>
</tr>
<tr>
<td>6. IEW1</td>
<td>Linkage Editor</td>
<td>1621</td>
<td>7.0</td>
</tr>
<tr>
<td>7. PGX=*,.DD</td>
<td>Compiled Program</td>
<td>1527</td>
<td>6.6</td>
</tr>
<tr>
<td>8. PTPCH</td>
<td>Dataset Lister</td>
<td>1144</td>
<td>4.9</td>
</tr>
<tr>
<td>9. IEFBK14</td>
<td>IBM Null Utility</td>
<td>791</td>
<td>3.4</td>
</tr>
<tr>
<td>10. IKFICB00</td>
<td>VS COBOL Compiler</td>
<td>743</td>
<td>3.2</td>
</tr>
</tbody>
</table>

### JANUARY TOP TEN PROGRAMS IN TERMS OF CPU SECONDS USED

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>CPU Seconds</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PGX=*,.DD</td>
<td>Compiled Program</td>
<td>93584</td>
<td>49.3</td>
</tr>
<tr>
<td>2. OTHER</td>
<td>Programs not Categorized</td>
<td>33086</td>
<td>17.4</td>
</tr>
<tr>
<td>3. LOADER</td>
<td>System Loader</td>
<td>27404</td>
<td>14.4</td>
</tr>
<tr>
<td>4. SASLPA</td>
<td>SAS</td>
<td>19551</td>
<td>10.3</td>
</tr>
<tr>
<td>5. SCRIPT</td>
<td>Waterloo/SCRIPT</td>
<td>6286</td>
<td>3.3</td>
</tr>
<tr>
<td>6. IKJEFT01</td>
<td>Password Change</td>
<td>2692</td>
<td>1.4</td>
</tr>
<tr>
<td>7. PTPCH</td>
<td>Dataset Lister</td>
<td>1161</td>
<td>0.6</td>
</tr>
<tr>
<td>8. IEW1</td>
<td>Linkage Editor</td>
<td>891</td>
<td>0.5</td>
</tr>
<tr>
<td>9. IFX000</td>
<td>System Assembler</td>
<td>848</td>
<td>0.4</td>
</tr>
<tr>
<td>10. IEHPROGM</td>
<td>IBM Utility</td>
<td>822</td>
<td>0.4</td>
</tr>
</tbody>
</table>

### FEBRUARY TOP TEN PROGRAMS IN TERMS OF FREQUENCY OF RUNS

<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. IEW1</td>
<td>Linkage Editor</td>
<td>11219</td>
<td>16.9</td>
</tr>
<tr>
<td>2. PGX=*,.DD</td>
<td>Compiled Program</td>
<td>11109</td>
<td>16.8</td>
</tr>
<tr>
<td>3. IKFICB00</td>
<td>VS COBOL Compiler</td>
<td>8033</td>
<td>12.1</td>
</tr>
<tr>
<td>4. SCRIPT</td>
<td>Waterloo/SCRIPT</td>
<td>7120</td>
<td>10.8</td>
</tr>
<tr>
<td>5. IEBGENER</td>
<td>IBM Utility</td>
<td>6217</td>
<td>9.8</td>
</tr>
<tr>
<td>6. OTHER</td>
<td>Programs Not Categorized</td>
<td>6118</td>
<td>9.2</td>
</tr>
<tr>
<td>7. PTPCH</td>
<td>Dataset Lister</td>
<td>4772</td>
<td>7.2</td>
</tr>
<tr>
<td>8. SASLPA</td>
<td>SAS</td>
<td>3828</td>
<td>5.8</td>
</tr>
<tr>
<td>9. IFX000</td>
<td>System Assembler</td>
<td>1661</td>
<td>2.5</td>
</tr>
<tr>
<td>10. IEBSAM</td>
<td>IBM ISAM Utility</td>
<td>1644</td>
<td>2.5</td>
</tr>
</tbody>
</table>

### FEBRUARY TOP TEN PROGRAMS IN TERMS OF CPU SECONDS USED

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>CPU Seconds</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PGX=*,.DD</td>
<td>Compiled Program</td>
<td>140381</td>
<td>59.3</td>
</tr>
</tbody>
</table>
VAX Changes
By Lee Harper, VAX Operator (AO17 @ NTSMUSIC)

There are many new things for the VAX, so please excuse some of the inconveniences while we try to clean up the VAX environment and make it the easiest, most reliable, and most efficient one available. Meanwhile, here is a summary of changes and other things you may need to know since the installation of the VAX cluster:

1) You are probably aware that the NTSM Local Area Network addresses for the VAX have changed. No longer do you call A780 or B780. Now you type CALL DEC (stands for Digital Equipment Corporation, the makers of the VAX system). It is a little difficult to get used to a multi-CPU system at first, but it eliminates duplication of computer resources, which makes for a much cleaner system. Should you have trouble getting through with DEC, here is a complete list of the HEX LAN calls that can be made to the Cluster, beginning with DEC:

DEC  DED  DEE  DEF  DF0  DF1  DF2  DF3  DF4  DF5  DF6  DF7  DF8  
DF9  DFA  DBF  DFC  DF0  DF1  DF2  DF3  DF4  DF5  DF6  DF7  DF8  
E06  E07  E08  E09  E0A  E0B  E0C  E0D  E0E  E0F  E0A  E0B  E0C  
E13  E14  E15  E16  E17  E18  E19  E1A  E1B  E1C  E1D  E1E  E1F  
E2D  E2E  E2F  E30

2) Conversion to a single MAIL database has caused a ghost mail problem. If you are a new user and/or have no MAIL.MAI file, you may run into this due to our recent conversion from two separate MAIL systems into one.

PROBLEM: You get a message saying, "You have 2 new Mail messages", so you type MAIL, press return, and get a long 'error opening file' message.

EXPLANATION: There is no mail for you really, so there is no MAIL.MAI file.

SOLUTION: To get rid of the ghost new mail, simply type this:

MAIL  MAIL- SEND
To: (your id code)  enter the MAIL utility
Subj:  send a message to yourself
type your id code at the prompt To:
just press -RETURN- here
press -CTRL- -Z- to exit the SEND
press return and the message you just sent will now be displayed
this command will get rid of that ghost new mail message

3) When you log on to the VAX cluster, you log on to one of two nodes (CPUs): VAXA or VAXB. Ideally, it does not matter which node you are on, but sometimes problems come up that only affect only one node. To find out which node you are on, you can type the command SHOWNODE and you will get the response something like: You are logged-on to node VAXA.

If you know that you need to log-on to the other node to be able to perform a certain task, you can type: SET HOST VAXA or SET HOST VAXB depending on which node you want to log-on to. Type the SET HOST command from the VMS 'S' prompt.
4) The scheme of directory organization is presently as follows:
   A) class account directories are divided between DUA1: and DUA2: disks.
   B) individual accounts and miscellaneous software such as the DEC users group directory [DECUS] are on
   DRA0:
   C) system files are on DUA0:
   The directory DUA2:[MEDIAREPR.LIVE] and its subdirectories have been moved to the directory DRA0:
   [DECUS.OLD]

5) This pertains to users with individual (not class-assigned) accounts only. Your home directory is now on the
   DRA0: disk. If you had accounts on both systems having the same username, you will find a subdirectory
   VAXB.DIR in your present home directory. Your home directory is randomly selected from the two systems.
   VAXB.DIR consists of the directory that is not selected. Make changes in your login.com so that it will point
   to the right place.

6) At present, the VAX cluster uses terminal servers which will not close your NTSU LAN network session
   (future versions of the terminal server software will allow for this). In order to do this for yourself, you will
   have to escape to the LAN and type DONE (do this only AFTER YOU TYPE LOGOUT on the VAX!!). Normally,
   escaping to the LAN is accomplished by pressing the -ESC- (escape) key, and then another key, usually the -DELETE- or -RETURN- key. So when you type LOGOUT from the VAX/VMS prompt ($), wait for
   the logout messages to finish, press the -ESC- and -DELETE- keys (or whatever your command sequence is) to
   get a pound sign (#) prompt, then type DONE, followed by two -RETURN-s.

VAX Cluster Configuration

Current System Configuration
for the VAX Computers at North Texas State University
as of January 1986
How To Use Tapes on the VAX
By Lee Harper, VAX Operator (AO17 @ NTSMUSIC)

If you have a tape you would like to use to dump files to the VAX, dump VAX files to tape, or do any other type of tape processing, what you need to do is:

1) Call the VAX operator @ 565-1161 to tell him you have a tape to use on the VAX. If no tape processing is already scheduled or underway, you should then:

2) Bring the tape you want to use to the VAX room (GAB 511). The operator will meet you at the 5th floor doorway at the end of the hall (opposite the terminal lab).

3) Sign on to a terminal in the 5th floor lab area (or anywhere you want). Make sure the operator knows where you are and what ID code you are using so that they may contact you in the event they need to dismount your tape before you are finished processing it.

4) Type the following command to reserve the tape drive: ALLOCATE MFAO:

   If the tape is new or you want to write over what is on the tape, issue the command to initialize the tape: INITIALIZE/DENSITY = 6250 MFAO: tapename

   MFAO: is the name of the tape drive; tapename is the volume name (or label) of the tape. Now you want to mount the tape. One way is to type: MOUNT MFAO: tapename

   The mount command will cause a mount request to appear on the operator's console. The operator will then mount the tape. Then you can use commands to process the tape. For example, you may want to save all the files in your directory and its subdirectories to the tape using the following command: BACKUP/LOG [AB12...]* MFAO:SBSsavesebck

   or if you didn't use MOUNT/FOREIGN: COPY/LOG [AB12...]* MFAO:*.

   (AB12) is the name of your directory. SAVESAVET is the name of the file save set, and can be any name you choose. If you wanted to restore the files you backed up with the above command, use the following: BACKUP/LOG MFAO:SBSsavesebck [AB12...]*.

   or if you are using COPY: COPY/LOG MFAO:*[...]* [AB12...]

   When you are finished processing the tape, you can then relinquish the use of the tape drive using the following commands.

   DISMOUNT MFAO:

   DEALLOCATE MFAO:

   You also have the option to include the previous commands in a command procedure and then run the command procedure, or submit it to batch.

5) The last and most important step is to PICK UP YOUR TAPE. Once again, call the VAX operator to meet you at the hallway door and return your tape. VAX operations will not be responsible for tapes that are left for over one week.

For more information on the commands INITIALIZE, ALLOCATE, MOUNT, BACKUP, COPY, DISMOUNT and DEALLOCATE, type HELP followed by the command name when logged on to the VAX, or see the VAX/VMS DCL Dictionary located in one of the documentation areas (GAB 550, ISB 110, and BA 151).
Get a “Subscription” to Benchmarks

Benchmarks is a vital link between the NTSU Computing Center and the users of our facilities. It is important for all users of the computing facilities to maintain a file of these newsletters because they contain materials which will periodically update existing documents as well as information and suggestions on uses of OS/MVS, MUSIC/SP, the VAX Cluster, Microcomputers, and other resources available to NTSU students and faculty. To facilitate the dispersal of Benchmarks, ***FREE*** subscriptions are available. To receive yours, send the following information to us either by “snail mail” (the post office or campus mail) or electronically, through the MEMO facility on MUSIC/SP to AS04.

Name

Mailing Address

Name

Mailing Address

PLEASE GIVE A CAMPUS ADDRESS (NOT BOX) IF POSSIBLE! - It’s Cheaper !!
PLEASE RETURN TO:
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The Computing Center
NT Box 13495
North Texas State University
Denton, TX 76203
Registration Form for Computing Center Short Courses

Please complete this form and return it AS SOON AS POSSIBLE if you wish to attend any of the short courses listed below. You may also register over the phone by calling 565-2324.

NAME: ___________________________________________ PHONE: ________________

DEPT: _________________________ CLASSIFICATION: ___________________

I wish to attend:

* Introduction to MUSIC/SP:
  - Monday, April 14: 1-3 p.m. (ISB 110)
  - Tuesday, April 15: 6-8 p.m. (ISB 110)
  - Wednesday, April 16: 9-11 a.m. (ISB 110)

* Advanced Statistical Packages (SAS & SPSS-X):
  - Monday, April 14: 3-5 p.m. (Graphics Lab, ISB)

* VAX Utilities & Commands:
  - Tuesday, April 15: 9 a.m.-Noon (ISB 110)

* Introduction to SAS:
  - Wednesday, April 16: 2-4 p.m. (ISB 110)

* Using MUSIC/SP Utilities:
  - Monday, April 21: 3-5 p.m. (ISB 110)

* Introduction to SPSS-X:
  - Tuesday, April 22: 1-3 p.m. (ISB 110)

* Introduction to Interactive Data Analysis (BMDP):
  - Thursday, April 24: 3-5 p.m. (ISB 110)
PLEASE RETURN TO:
Academic Computing Services
The Computing Center
NT Box 13495
North Texas State University
Denton, TX 76203