Stanford University
Computing Bulletin

Contents   Number 3, July 1982

Stanford University
Center for Information Technology

CIT DIRECTORY AND SERVICE SCHEDULE

Director - Edward E. Shaw
Deputy Director - Michael M. Roberts

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GENERAL INFORMATION
Computing services are provided on an IBM 3081 under OS/MVS Release 3.8 with SP 1.3.0, running JES with MILTEN, WYLBUR, and ORVYL (the Stanford time-sharing system), and on a DECSYSTEM-2060 with TOPS-20 Version 4, and TVEDIT (a text editor developed at Stanford).

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Editor....................Dana Madsen
Printing................Word Graphics

CURRENT TIME BLOCKS (3081)
DAY
  Monday-Friday   6:00 AM to 6:00 PM
NIGHT
  Monday-Thursday 6:00 PM to 6:00 AM
  Friday   6:00 PM to midnight
WEEKEND
  Friday midnight to Monday 6:00 AM

PREVENTIVE MAINTENANCE
(No computer services are available during preventive maintenance.)
3081 System
  Wednesday, Friday 6:00 PM to 8:00 PM
  Saturday, Sunday   6:00 AM to noon
Context System
  Tuesday   5:00 PM to 9:00 PM

FORSYTHE SERVICES
Forsythe Hall is open 24 hours a day.
Office hours are (M-F):

Accounting   9:30 AM to noon
                         1:30 PM to 4:00 PM
Consulting   10:00 AM to noon
                         2:00 PM to 4:00 PM
Document Sales   9:30 AM to noon
                         1:30 PM to 4:00 PM
Information Desk (M-F) 8:30 AM to noon
                         1:00 PM to 9:00 PM
          (weekends) 1:00 PM to 5:00 PM

(All hours are given in Pacific time.)

CONTACT/EMS (TM), Context (TM), and SPIRES (TM) are trademarks of The Board of Trustees of the Leland Stan-ford Junior University.

WYLBUR is a registered trademark of The Board of Trustees of the Leland Stanford Junior University.

SHARE Installation Code: STU
Telenet Access Codes:
    C 415 27 (30 cps)
    C 415 30 (120 cps)
Tymnet Access Code: CIT

RATES AND ACCOUNTS

Charges Go to Zero

Sunny Birkhead

Stanford University's fiscal year ends on August 31 of each calendar year. At midnight on that date, the year-to-date charges on all 3081 accounts are reset to $0.00. The year-to-date charges for the 1981-82 fiscal year are subtracted from the budget limit on your account as of August 31 and the resulting balance is the new budget limit for the fiscal year beginning September 1, 1982. For example:

	Aug. 31	Sep. 1
Budget limit	$100.00	$70.00
Year-to-date charges	30.00	0.00

The status of your account will not be affected by this change. To establish a new budget limit or to change the status of your account, send a written request, with the signature of the account sponsor, to the CIT Accounting Office, Forsythe Hall, Stanford University, Stanford, California 94305.

TEXT HANDLING

New Version of SCRIPT EXEC File

Adapted from UPDATE 5/21/82

A new version of the EXEC file used to run batch SCRIPT, which has been available in TESTLIB since October 1981, has now been placed in LIB PUBLIC. This version assumes that when your SCRIPT input is saved in a library, that library will also be used as the SCRIPT library. However, you can specify a different library or no library at all. For example:

```
SCRIPT Input? (CR=quit): exam#driver
Name of SCRIPT library
       (CR=WYL.gg.uuu.EXAM,ATTN=none)?
```

You can respond in one of three ways to the last prompt shown:

- Press RETURN to use the library EXAM as the SCRIPT library.

- Press BREAK (or ATTN) to have no SCRIPT library used.

- Type in the name of the library to be used as the SCRIPT library.

This version also prompts for the character set to be used, allowing you to specify a character set without modifying the JCL. You can no longer specify CHARS as a RUN option.

Using Modify Command Options for Easier Editing

Eleanor Brown

If you are familiar with WYLBUR, you know that the MODIFY command is used to make changes to a line or range of lines. Once you issue a MODIFY command, WYLBUR displays a MODS> prompt that you respond to with various key characters (e.g., r to replace, i to insert, x to delete). This basic procedure can get tedious, especially when you are editing many lines of text. However, there are ways to use MODIFY that make the editing process faster and easier. You can include special options with the MODIFY key characters or respond to the MODS> prompt with line-oriented functions.

<u>Use 'n' to Specify Length</u>

The special options n, where n stands for a number, and * allow you to in-

clude a length specification. If you use a key character with an n option, you can specify the length of your modification, thus making more than one type of modification per line or modifying a specific portion of the line. For example, if you type 10x in response to the MODS> prompt, you delete a specific portion of the line (the next ten characters), starting with the character above the 1 in 10x.

Use '*' to Modify the Rest of a Line

The * option is also a type of length specification.   When used with a key character in response to a MODS> prompt, * is equivalent to the number of characters left in the line. Thus, *x means delete all the rest of the characters.   Using *r gives the same result, except that any text following the *r replaces the rest of the line. You can also use * in combination with other key characters.   For example, you can use * with t (the tab key character) to make changes to the end of a line from any place in that line.

The following examples illustrate several ways to use both the n and the * options.   In the first example, two deletions and two insertions are made. You make the first deletion in the usual way by typing an x under each character to be deleted.   Then you type 4, followed by the key character i, to indicate that you want to insert 4 characters (baby). Using 4 as the n option allows you to make the second deletion and insertion.

```
   1.   A small whale weighs 400 tons.
MODS>   xxxxx4ibaby          xxxilb
   1.   A baby whale weighs 400 lbs.
```

In the next example, four separate modifications are made to one line. You type 8c to change eight characters to lower case, 6x to delete six characters, 3i and your insertion (' no') and *x to delete the rest of the line.

```
   2.   OSTRICHES don't have teeth. Wow.
MODS>  8c       6x       3i no   *x
   2.   Ostriches have no teeth.
```

In this example, * is used with t (the tab key character) to indicate that the insertion should be made at the end of the line.

```
   3.   Killer whales eat
MODS> *ti polar bears!?
   3.   Killer whales eat polar bears!?
```

The combination of *t with a minus sign, an n option and a key character (e.g., *-5ti) allows you to make editing changes to text at the end of the line. In the next example, a combination of *, the n option (-1), the tab key character (t), and the x key character are used to delete the last character in the line.

```
   3.   Killer whales eat polar bears!?
MODS> *-1tx
   3.   Killer whales eat polar bears!
```

Line-Oriented Functions

These functions also speed up the editing process.   They allow you to respond to the MODS> prompt so that you can go backward and forward in a line range and perform other editing functions like deleting, inserting, collecting, replacing, and joining lines.   There is even a line-oriented function, .REVERT, that retrieves your original text, when you are not happy with the changes you have made.

Line-oriented functions are preceded by a period (e.g., .COLLECT, .NEXT, .PREVIOUS).   They are especially useful if you are modifying a range of lines. For example, if you issue a command like MODIFY 3/24, you can respond to a MODS> prompt with the line-oriented function, .COLLECT, and then collect a series of lines.   Once you press BREAK in response to a line number, WYLBUR issues a MODS> prompt for the next line in the range to be modified.

The following examples illustrate several ways to use line-oriented functions. In the first example, the s key character is used to split a line. Then the line-oriented functions .PREVIOUS and .NEXT are used to modify both portions of the split line.

```
   4.   They have no teeth, so eat rocks
MODS>                   s
   4.   They have no teeth,
   4.5  so eat rocks
MODS> .previous
   4.   They have no teeth,
MODS> *-ltr.
   4.   They have no teeth.
MODS> .next
   4.5  so eat rocks
MODS> c 5i they *ti to grind food.
   4.5  So they eat rocks to grind food.
```

In the next example, a line-oriented function, .LINE 7, is typed in response to the MODS> prompt to indicate that line 7 is the next line to be modified. Once changes are made to line 7, .REVERT is typed in response to the MODS> prompt to indicate that the line should be returned to its original state (before changes were made).

```
   5.   Why do ostriches eat diamonds?
MODS> .line 7
   7.   They like bright pebbles.
MODS>        xxxxiswallow
   7.   They swallow bright pebbles.
MODS> .revert
   7.   They like bright pebbles.
```

This article describes just a few ways to use the special options and line-oriented functions of MODIFY. For a useful summary of the MODIFY commands, type "?" at a MODS prompt. More extensive online information about the modify command can be read by typing DESCRIBE MODIFY. To find out more about making MODIFY easier to use, see the WYLBUR User's Guide. It describes all line-oriented functions and key characters (including those which can take special options).

New Version of Interactive Pascal/VS Compiler

Adapted from UPDATE 5/10/82

On May 24, 1982, the current interactive Pascal/VS compiler was replaced with version 2.B. There were no changes to the language; however, several problems involving the debugger have been fixed. If you have any problems using the new version, please report them to Consulting in Forsythe Hall. Note that the batch version of the Pascal/VS compiler will not be changed (it is currently version 2.B).

EDUCATION, DOCUMENTATION, AND CONSULTING

Documents—New and Revised

The ORVYL User's Guide, announced in the last issue of the Bulletin, is now available in Document Sales (#511, 165 pages, $8.25). This manual describes how to write or use interactive programs at CIT and includes program examples in FORTRAN, Pascal, APL, and other languages. It incorporates information from various ORVYL documents, such as the ORVYL/370 Command Reference Card and Using the ORVYL File Utility.

The WYLBUR User's Guide (#424, 168 pages, $6.50) was reprinted in mid-June. Minor revisions made to the document do NOT outdate the October 1980 version.

The CONTACT/EMS User's Guide (#512, 57 pages, $3.25) has been revised to include an appendix on name addressing, a general index, and error corrections or updates made since the implementation of the new EMS system in February of this year. A CONTACT/EMS Reference

Card has also been included in the document.

Using SURFACE II (#69, 8 pages, $.50) has been revised and is now available in Document Sales.

An update package for Character Sets for the 3800 Laser Printer was published late in July. This package includes information on new and adjusted character sets for use with the 3800 laser printer, and is sold both separately and as an addition to the existing document.

The new NCP Calc User's Guide (#558, 113 pages, $6.75) describes an "electronic spreadsheet" service introduced by Context. NCP Calc is similar to the VisiCalc program that is widely used on microcomputers to prepare budgets, analyze fiscal alternatives, and develop charts.

Using Top Drawer (#349, 25 pages, $1.75) has been updated, and now includes instructions for using the Tektronix 4025 graphics terminal.

OF GENERAL INTEREST

Tape Services at the Information Desk

Roberta Lucier

The Information Desk provides a number of special services to assist you in dealing with tapes.

Tape Checkout

There are several ways a user-owned tape may be checked out: send a WYLBUR Mail message to account GW.INF; call the Information Desk at 497-4392 (a maximum of 5 tapes may be checked out by phone); or come to the Information Desk in Forsythe Hall.

In all cases you must supply the following information: your name, account number, the volume serial number(s) of the tape(s), and whether the checkout is temporary or permanent.

Tape Initialization

Tape initialization creates a volume label or, for nonlabeled tapes, a dummy record that allows the system to recognize the tape as nonlabeled. Existing data on the tape is destroyed.

You can now receive online notification about tape initialization if you have a WYLBUR mailbox. (To set up a mailbox, see the document Using WYLBUR Mail). When your tape has been initialized, you will receive a MAIL message like the following:

    Tape AX1234 has been successfully
    initialized.

Do not use your tape until you receive this message.

Standard Tapes for Sale

You may purchase a standard tape (2400 feet) at the Information Desk if you have a chargeable CIT computer account and the tape is to be written with a standard or ANSI label, at a density of 1600 or 6250 BPI. If the tape does not meet these requirements you may purchase a tape from Document Sales.

Tape Transactions

Following is a brief description of the forms used by the Information Desk for tape transactions. (Note that there is a two-hour turnaround time for all tape transactions.)

Form	Purpose
SUBMIT	assign a number to a 'new' tape and collect descriptive information.
CHECKIN	return a temporarily checked out tape.
CHECKOUT	remove a tape from the tape library, either temporarily or permanently.
UPDATE	change descriptive information about a tape, such as output use code, data set name, user name, and owning account. (The SET TAPE command may be used instead of this form except when changing the owning account.)
INITIALIZATION	erase all data from the tape and, in some cases, create a label.
RELEASE	return rental tapes to the scratch pool. (The SET TAPE command may also be used to accomplish this.)

Notes on 3800 Laser Printer Character Sets

Malcolm Brown

An update packet for the 3800 Character Set Catalog is now available in Document Sales. This packet includes corrections to the first edition of the catalog, new CIT-supported character sets, and changes to CIT-supported character sets affected by minor table adjustments.

The changes involve four character sets that print vertically on the page, namely DN10, DN12, UP10, and UP12. Until now, these sets used an IBM-supplied character arrangement table that made it impossible to use them in the fourth position in a CHARS parameter. The table also made an IBM character, the lozenge, print in these sets. The four character sets now utilize a slightly different arrangement table which allows you to use them in the fourth position. This means that the lozenge character has been removed from these sets.

In conjunction with the publication of the update packet, the 15 pitch set, GSFT, will be removed, along with many of the sets whose names begin with an 'X'. These were originally experimental sets, and most of them are no longer needed. If you have been using any of these sets, you should switch to a CIT-supported or a user-developed character set. Anyone who has been using set X100 to print foreign language text should switch to set U610, which contains the same characters.

To assist you in finding an appropriate user-developed character set, an inventory has been compiled and stored in the following data set:

SYS3.IMAGELIB.USERSRC#INVENTRY

Each user-developed set is described, including the name, pitch, and WCGM names. These character sets are not supported by CIT; be sure you have read the disclaimer included in the inventory before using them. To get a hard copy of the inventory, issue the command PRINT FROM and the complete data set name shown above.

You are encouraged to use the standard, two-WCGM sets (TN12, CU10, etc.) as much as possible, especially for shorter print jobs such as memos. Loading the larger sets causes considerable delay in the printing process and introduces a significant degree of wear and tear on the 3800. In addition, jobs printed with standard character sets move through the 3800 queue much faster.

Scratch Disk Policy for the IBM 3081

Adapted from UPDATE 5/10/82

Two scratch disk volumes, SCR001 and SCR002, are available on the IBM 3081 for temporary storage of user data sets. Their use is governed by the following policy:

• SCR002 is limited to short-term storage; no data set may remain longer than 24 hours. All data sets, except those being used by a job, will be deleted from SCR002 at 6:00 a.m. daily. Operations will send a message to all users when SCR002 is about to be cleared.

• SCR001 is for temporary dats sets only (those created and deleted during a single job). Data sets not being used by a job may be scratched at any time.

• CIT reserves the right to delete data sets from SCR002 at any time to preserve sufficient space on the volume for all users. That is, if the volume nears saturation, Operations will begin scratching data sets in order of size, the largest being scratched first. If a single user has a large number of data sets whose total size is large, all data sets belonging to that user may be scratched.

• CIT will not issue refunds for data lost from scratch volumes due to enforcement of these policies, or for jobs that fail as a result of such loss.

• Each volume contains about 16,000 tracks. Users are requested not to take more than their share. Although there are no absolute limits at this time, use of more than a few hundred tracks on SCR002 for several hours or more, or use of more than 3000 tracks on SCR001 during a job are considered to be abuses. Abuse of the scratch disks may cause the jobs of other users to fail.

• There is no charge for storage of data on scratch disks.

JCL for allocating temporary data sets on scratch disks can be found in the 5/10/82 UPDATE article.

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