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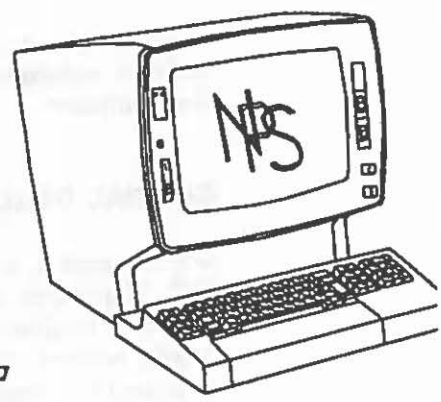
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Computer Center Newsletter



Naval Postgraduate School Monterey, California

August 22, 1986

Volume 18, No. 6

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MICROLAB NEWS	1
INVITATION TO VISIT THE MICROLAB	1
SPECIAL DEAL ON WORDPERFECT	2
NEW FEATURES AT THE LAB	2
LANGUAGES	2
NEW DSL/VS RELEASE ON MVS	2
FILENAME AND FILETYPES OF DISK DATA SETS IN VS FORTRAN	2
VM/CMS TOPICS	3
INTER-NETWORK COMMUNICATION VIA BITNET	3
BITNET REFERENCE	5
DISSPLA NEWS	5
CHANGES RESULTING FROM DISSPLA 10.0	5
DISSPLA METAFILES AND MAGNETIC TAPE	6
MVS TOPICS	7
DATA SET REPORT	7
BACKING UP AN ENTIRE PRIVATE MSS VOLUME	7
STAFF NOTES	7
OPERATIONS INFORMATION	9

MICROLAB NEWS

INVITATION TO VISIT THE MICROLAB

Have you visited the microcomputer lab in Ingersoll 151 lately? We have rearranged the furniture and equipment to make it more convenient for you to use the equipment located there. We have also added a fast IBM PC/AT to the net and another Corona laser printer. If you are thinking of buying a PC for home use, you might want to visit the lab first. You can examine a PC without

having a salesperson looking over your shoulder. If you have a PC and need to transfer files to the mainframe, we have two PCs directly connected to the mainframe which you can use. Also, convenient software has been installed to allow you to connect to VM and transfer files.

If you need help to use the facilities of the lab, Joanne Kallweit has moved to a cubicle in In-151 and is there almost full time to help you use the microcomputers and printers and to access the software. She also has copies of SIMPC for you

to check out and use at home. SIMPC is the standard software we use for communication with the mainframe.

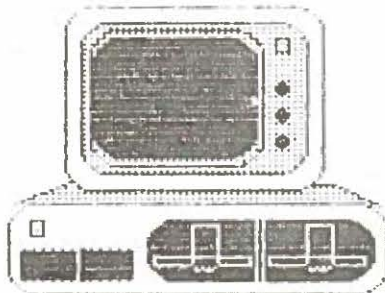
SPECIAL DEAL ON WORDPERFECT

Do you need a word processor for your personal PC? The makers of WordPerfect 4.1 have created a student version of their best-selling word processing product. Student WordPerfect costs \$75, compared to a retail price of \$425 for the standard product. The less expensive version does not include a few business features like mailmerge, but it does have those facilities most needed by students--a full thesaurus, word speller, footnotes, endnotes, and automatic outlining. Brochures are available in In-151. Incidentally, WordPerfect is now second only to Lotus 1-2-3 on the software bestseller list.

NEW FEATURES AT THE LAB

We have added new software to the net. The Library from the WordPerfect Corporation is now available at each user PC. The Microsoft C Compiler is also now available. Software for the laser printer has been upgraded, and there are many new fonts.

Have you seen our new pets? We have two new mice in the lab--one to use with an AT and one to use with a PC. We also have GEM WORDCHART, if you want to create foils for a presentation, and GEM PAINT, if you just want to doodle. Both of these products are much easier to use with a mouse.



LANGUAGES

NEW DSL/VS RELEASE ON MVS

Version 1.1 of DSL is available on the MVS batch operating system. Therefore both CMS and MVS are now running the same version of DSL. The two cataloged procedures affected are DSLVLS and DSLVSG. Programs that previously ran on CMS, but not on MVS, will now run on both.

To direct DSL graphics to the new IBM 3179G terminals (located in In-148) you should code the device option in the GRAPH statement the same as for the IBM 3279, viz., DE = IBM3279.

FILENAMES AND FILETYPES OF DISK DATA SETS IN VS FORTRAN

There have been several questions presented in the Consulting Office recently concerning the interaction between the use of the FILE option of the OPEN statement and the use of FILEDEF to define the filename and filetype of a data set to be processed by a VS Fortran program under CMS. This topic can be divided into four basic situations, each of which will be outlined below. This discussion is confined to DISK data sets under CMS and excludes consideration of units 5, 6, and 7 (terminal I/O and 'punched card' output).

1. No OPEN statement is used and no FILEDEF is issued.

In this situation the unit number, which must be an integer (or integer expression) defines the filetype of the data set. For example

```
WRITE (8,*) A,B,C
```

will produce output on a data set with fn = FILE and ft = FT08F001 on the user's A disk. In general, the unit number, xx, defines the filetype which is of the form FTxxF001. Filename is always FILE. If a different fn, ft, or fm is desired, the user must issue a FILEDEF command before the program is executed.

2. Fortran program uses the FILE option of the OPEN statement and no FILEDEF is issued.

This case is similar to the above in that the FILE parameter defines the *filetype* of the data set to be accessed. As before, the *filename* will be FILE. This result can be confusing since the IBM VS Fortran Language manual tells us that "FILE = fn" and that it refers to the "file name." It is important to realize that under CMS, it really refers to the *filetype*.

For example, if the Fortran program contains

```
OPEN (1,FILE = 'MYFILE')
WRITE (1,*) A,B,C
```

in the absence of a FILEDEF command the output will go to a DISK data set with filename = FILE, filetype = MYFILE, and filemode = A.

3. Fortran program does not use FILE option of OPEN statement and FILEDEF is issued.

This is the commonly used method. It allows the programmer to employ descriptive filenames and filetypes, or to access data sets on temporary or linked disks. When the program contains

```
READ (3,*) A,B,C
```

and the user previously issues

```
FILEDEF 3 DISK MYDATA DATA T
```

the system will seek the data to be read in the data set with fn = MYDATA and ft = DATA on T disk.

4. Fortran program uses FILE option of OPEN and FILEDEF is issued.

This situation is essentially the same as that immediately above, but the FILEDEF must be issued in a slightly different manner. If the Fortran program contains

```
OPEN (2,FILE = 'RANGES')
```

```
READ (2,*) A,B,C
```

the filedef might look like

```
FILEDEF RANGES DISK MYSTUFF INPUT
```

where the 'ddname' token of the filedef must match the FILE parameter of the OPEN statement. Once again the fn, ft, and fm of the data set are arbitrary.

VM/CMS TOPICS

INTER-NETWORK COMMUNICATION VIA BITNET

In the last few issues of the Newsletter we have announced local installation of BITNET and provided information about how to sign up as a user. Documentation is available in In-146. If you need to communicate with your colleagues at other universities, you should see Caroline Miller, In-102C, userid 2221P, to become a BITNET user. In this issue we discuss communication via BITNET to other networks.

Internetwork mail traffic on BITNET is routed to a central interface point (gateway) where formats are checked and, if necessary, changed (via "protocol conversion") to be compatible with the requirements of the destination network, before the message is routed to the destination.

BITNET routing tables recognize valid BITNET nodenames and valid network names. YOU must supply the clues to let BITNET know that the address is on another network, so that the appropriate gateway may be chosen by the routing algorithm. The addressing "clues" are in the form of a suffix, appended to the nodename of the address. One of the functions of the MAILER mail transport server is to identify appropriate gateways to route mail for internetwork delivery.

Internet Addressing Via NAMES File

Sending mail to other networks is as straightforward as sending mail to other BITNET nodes when you have an entry for the recipient in your NAMES file.

Create a NAMES entry for the user on the other network, filling in Nickname, UserID, and Node-name. Be sure you are linked via BITLINK to the support software when you type NAMES <Enter> to create the record, as you will be given a wider field for UserID and Nodename when you are BITLINKed than when you are not. You will need this extra space to accommodate suffixes and fully qualified names.

The portion of the address BEFORE the @-sign is the userID; the nodename *FOLLOWS* the @-sign. You *DO NOT TYPE IN THE @* in your NAMES record. Add the suffix identifying the network at the end of the nodename field, separated by a period (.) from the nodename itself.

DDN Addressing from BITNET

A Defense Data Network (DDN) address consists of a userID and a nodename ("host"), following the same pattern as BITNET addresses. For example:

MILLERCJ@A.ISI.EDU

MILLERCJ is the userID; the @ separates the userID and nodename. The nodename A.ISI.EDU identifies an EDUcational user at the Information Sciences Institute (ISI), machine A.

To send mail to this DDN user from BITNET, you must identify the network to which the mail must be routed. For example, you might do this by adding the suffix ".ARPA" to the address, making it MILLERCJ@A.ISI.EDU.ARPA. MAILER recognizes ARPA as designating the adjoining network ARPANET, of which DDN is a part, and adds the appropriate gateway designation when the mail is sent, so that the file is routed through WISCVM (University of Wiscon-

sin VM system), where it is switched to the DDN network.

Remember, the userID is the portion of the full address *before* the @-sign; the nodename is what comes *after* the @-sign in the address.

Your NAMES file entry for this user will be:

```

====> userID NAMES <====> NAMES FILE EDITING <====
Fill in fields & press a PFkey to display and/or change your NAMES file
  Nickname: CJM  UserID: MILLERCJ
                                Node: A.ISI.EDU.ARPA      Notebook:
                                Name:
                                Phone:
                                Address:
                                . . .

1=Help    2=Add    3=Quit  4=Clear  5=Find  6=Change
7=Previous 8=Next  9=      10=Delete 11=     12=Cursor

====>
MACRO-READ 1 FILE

```

BITNET Addressing from DDN

You can receive mail from a DDN user, as well as send it to DDN. Your BITNET address can be reached from DDN by changing the @-sign to a %-sign and appending .bitnet@wiscvm.arpa. For instance,

1234p@navpgs

becomes

1234p%navpgs.bitnet@wiscvm.arpa

when addressed from a DDN site.

Any BITNET address, when used from DDN, follows the pattern:

userID%nodename.bitnet@wiscvm.arpa

The message is sent on DDN communication lines to the gateway at WISCVM, where protocol

conversion takes place and the file is relayed to BITNET. BITNET brings it to our node and your virtual reader.

BITNET REFERENCE

A copy of the BITNET *Reference Binder* is now available in the Consulting Office, In-146. It contains not only the latest edition of the NPS BITNET *User's Guide*, but also a list of BITNET nodes, information on gateways and other networks, and on the file servers NICSERVE and BITSERVE, from which information can be requested on a variety of network-related subjects. The index of files available from NICSERVE is also included.

This copy will be for reference use only, as several of the files are not available anywhere else. This publication also includes a useful index.

DISSPLA NEWS

CHANGES RESULTING FROM DISSPLA 10.0

The DISSPLA plotting package from ISSCO, Inc., is now running with its latest version, Release 10.0, on both the CMS (timesharing) and MVS (batch) systems. With this update the following changes have occurred:

CMS Changes:

1. METAFILEs

On CMS, the unit number for METAFILEs has been changed from 18 to 20. For use with DISSPOP the METAFILE is unit 19. Users must make sure units 19 and 20 are free for the appropriate METAFILE.

2. GLOBAL Statments

Another change on CMS concerns GLOBAL

statements. The new version of DISSPLA requires more than eight txtlibs at load time when the VS Fortran libraries are included. CMS can use a maximum of 8 at a time. Therefore, a separate exec which circumvents this difficulty has been created for loading and executing a DISSPLA program. It is named LOADDISP EXEC. If you are using your own exec to process DISSPLA programs, we recommend that you invoke LOADDISP within the exec, to load and start. It has two parameters; the first parameter must be the name of the program (TEXT file) to be executed. The second parameter is optional and can be used to add an additional TXTLIB.

If you must write your own exec to load and start, the txtlibs for DISSPLA are now

```
14INTLIB DISLIBVS 92USRLIB DISLIBA DISLIBB
```

Note: The order of the above libraries is important and must be as shown above.

Also because of these txtlib changes any modules that were created under DISSPLA 9.2 must be regenerated with DISSPLA 10.0.

3. Other EXECs

The DISSPLA EXEC has been rewritten to reflect the above changes. All items except the FILEDEFs are now listed as arguments in the call to the DISSPLA EXEC. The filename is the first argument; the number of required temporary cylinders is the second argument. If you have an additional txtlib, use that txtlib name as the third argument.

For example:

```
< EXEC > DISSPLA DMA003 8 MYLIB
```

This will run the program DMA003 FORTRAN, will create 8 cylinders of temporary space and will use the txtlib MYLIB.

MVS Changes:

1. DD Statements

On the MVS side, the metafile unit has been changed from 18 to 22. When switching a program from CMS to MVS, be careful not to use unit 22 for scratch storage or some other purpose, because that will be the unit selected automatically for a metafile.

2. Cataloged Procedures

The Center's standard cataloged procedures contain job control language that uses the new libraries. If you are not using the Center's cataloged procedures, your JCL will need to be changed.

If you have any problems or questions see Patricia Collins in In-163, x2574.

DISSPLA METAFILES AND MAGNETIC TAPE

Recently several users have decided to make copies of DISSPLA metafiles on magnetic tape. This medium can serve as a backup for complicated graphics or as a method of transferring plots to other computer systems using DISSPLA.

It has been discovered that problems may arise in the transfer of large metafiles between tape and 3330V disk, *i.e.*, a CMS A-disk. Such problems result from the long record lengths of metafiles.

The following method easily circumvents this difficulty. Before using the MVSTAPE exec the METAFILE should be packed with the following command, which may be entered from CMS or with an abbreviated syntax from FILEL.

```
COPY <fn> metafile <fm> (PACK
```

Packing the file will change the file to fixed length blocks of 1024 bytes. To reverse the procedure, after the GETMVS command is used to get this file onto the user's disk, the COPY command is used again to unpack the file.

```
COPY <fn> metafile <fm> (UNPACK
```

For those users with large unpacked metafiles

already on tape, a new cataloged procedure, META, is now available. The purpose of the META procedure is to facilitate return of a DISSPLA metafile stored on tape to the user's CMS minidisk when the physical blocksize of the tape file is larger than the receiving device, *i.e.*, the blocksize on tape is 19069 and the maximum blocksize for the disk is 13030.

The META cataloged procedure uses ddname SYSUT1 for the input and ddname SYSUT2 for the output. It re-structures the input (binary) file and produces an output file with a fixed block record format (RECFM) with logical record length (LRECL) and physical blocksize (BLKSIZE) of 80.

The output file (SYSUT2) should be sent to the MVS004 shared volume. Then the GETMVS exec may be used from CMS to place the file onto the user's minidisk. Once the file is on the user's disk (with filetype DECK) the METAFIX exec may be used to return it to a variable length file. A sample job using META is shown below:

```
// (standard job statement)
// EXEC META
// * * * * *
// * Both the SYSUT1 and SYSUT2 DD statements
// * must be customized to the individual job.
// * * * * *
//SYSUT1 DD UNIT=unit,VOL=SER=tapeName,
//  DISP=(OLD,PASS),
//  DCB=(RECFM=VS,BLKSIZE=19069),
//  LABEL=(fn,SL,,IN),DSN=dsname
//SYSUT2 DD UNIT=3350,VOL=SER=MVS004,
//  DISP=(NEW,KEEP,DELETE),
//  DSN=dsname,SPACE=(CYL,(4,4),RLSE),
//  DCB=(BLKSIZE=80,RECFM=FB,LRECL=80)
//
```

The use of metafiles to transport DISSPLA information to other computer systems by either of the above methods cannot be guaranteed. It is suggested that users consult with both the receiving computer center and our user services staff before attempting a transfer between sites.

Refer to the Technical Note MVS-07 for detailed information on use of the MVSTAPE exec and the transfer of files between CMS and magnetic tape.

MVS TOPICS

DATA SET REPORT

Managers of private MSVGPs on the MVS batch system may use a new cataloged procedure, MSVGP, to prepare a summary report similar to the one created by PUBINFO for the public MSVGPs. The MSVGP report lists volume, data set organization, space occupied, date created, and date last used for each data set. It also lists all the volumes in the MSVGP and the free space available on each.

For example, assume that your private MSVGP is called MYVOL. This name appears in two places: after NAME= and as the SYSIN input. The SYSIN input should begin in column 1. Here is the entire sample MSVGP job:

```
//jobname JOB (1234,9999),'MSVGP examp',CLASS=B
//*MAIN SYSTEM=SY2
// EXEC MSVGP,NAME=MYVOL
//INPUT.SYSIN DD *
MYVOL
/*
//
```

MSVGP is an eight-step procedure and uses the statistical package SAS. The use of SAS requires coding the MAIN statement for SYSTEM=SY2. CLASS=B is recommended. Confident MVS users may code MSGCLASS=Z on the JOB statement to suppress the 700 lines of JCL output.

For more information about MSVGP contact Dennis Mar, In-102A, x2672, userid 2001P.

BACKING UP AN ENTIRE PRIVATE MSS VOLUME

If you have a private MSVGP on MVS, all the data sets on each MSS volume will belong to you. DFDSS (Data Facility Data Set Services) is a convenient IBM utility which can backup an entire MSS volume. This method for protecting your MVS data sets is much more convenient than copying them one by one to tape.

With an entire MSS volume backed up on tape, you are protected against two situations. First, the MSS cartridge which contains your MSS volume may suffer physical damage. When the cartridge is replaced, you can use DFDSS to restore your entire volume to your MSVGP. Second, you may have deleted an MSS data set by mistake. DFDSS will allow you to recover that one data set from tape and restore it to the MSS volume.

For more information, see the handout available in the Consulting Office (In-146): *DFDSS: Backup & Recovery Procedures for Private MSVGPs*.

STAFF NOTES

Over the last four months we have said reluctant goodbyes to three members of the Computer Center staff. Steve Lamont (User Services) went south to join the UC San Diego Supercomputer Center. Steve wrote a staggering amount of software for our system. At SDSC, Steve works with a Cray X/MP whose capacity he probably already has exceeded.

Deatrice Walker (secretary/librarian) worked in our front office since February 1985. She transferred to Public Works as an accounting technician.

Theater aficionado Bill Lewis (Operations) leaves us after holding down weekend and evening shifts since 1980. We wish all of them every success in their new endeavors.

So far we have welcomed two new staff members. Deborah Osterberg takes over as secretary/librarian. She previously worked as a park ranger at Minuteman National Park (Concord & Lexington), Kings Canyon, and Yellowstone. She proves that a Civil Service career can include plenty of variety.

Brett Johnson joins the operations staff. He comes to us from a job in computer operations at

Hickam AFB, Hawaii. We feel very fortunate to be able to hire someone with Brett's experience.

Finally, romance has blossomed among the big blue IBM boxes. Congratulations to Terry Haney (Operations) on her marriage to Bob Gentry, our local (and very much appreciated) IBM senior field engineer. Relations between Operations and the IBM engineering staff, which have always been good, should be even closer now!

OPERATIONS INFORMATION

CONSULTING HOURS

Mon - Fri 0900-1130 and 1315-1545 in In-146

Reference materials in the Consulting Office must not be removed from that room without special permission of the Consultant on duty or a Computer Operations Shift Supervisor.

HOURS OF OPERATION

Mon-Fri	0000-2400	Normal Service
Sat	0000-0800	Unattended Service
	0800-2130	Normal Service
	2130-2400	Mini-disk Backup
Sun	0000-0800	Mini-disk Backup
	0800-2400	Normal Service

Normal Service VM and MVS available. Operator on duty.

Unattended VM and MVS available. No operator on duty. Center's high-speed printers secured. Remote printers available.

Mini-Disk Backup MVS Service only. No VM.

Notes: Preventive maintenance is normally performed 0700-1400 hours, first Sunday of each month.

Systems work can preempt this schedule during 0700-1200 on Saturdays. Sufficient warning will be posted in the VM log message.

The Center's two high-speed printers will be secured 30 minutes prior to a change to unattended mode.

Call 646-2713 for recorded system status

Information on Printed Output

The Computer Center has an IBM 3800 non-impact printer and a 1403 impact printer in room IN-140. These printers are available around the clock, 7 days a week, except during unattended periods. (See "HOURS OF OPERATION"). If you want an operator to unload a printer, expect to wait until an operator is available. If you have received instruction from a computer operator, you can remove printout from either printer. If you do, leave separated output on the counter-top, or file it in the bin matching the first letter of the distribution code. Please observe these rules.

- Press the READY button after removing output.
- Make sure output is folding correctly in the output hopper.
- Separate all jobs in the batch of output removed from the printer.

Avoid unnecessary printing. Return output to your terminal for review and/or editing prior to printing. Use the default output class, SYSOUT=A, for general output from MVS. This produces a "Double Page Format" i.e., two output pages per sheet of paper on the 3800 page printer. It is expected that few will need to use the 1403 impact printer.

Budget restrictions and good computing practice dictate that only one final copy of a thesis be produced on any of the Center's printers. If more than one copy is required, use of duplication facilities on campus is recommended. But please note that the NPS printshop will not cut or bind more than one copy.

All trash containers near the Computer Center's main terminal room are checked daily for recyclable materials. All are encouraged to put unwanted printout in any trash container in In-140, In-141, or In-151.

This newsletter appears semiquarterly and is written by members of the staff, W. R. Church Computer Center (Code 0141), Naval Postgraduate School, Monterey, CA 93943. Requests for information or suggestions for articles may be addressed to the User Services Manager, Code 0141 (In-133), x2752 (messages: x2573).

The Center operates an IBM 3033 Attached Processor System (16 Megabytes) loosely coupled with an IBM 3033 Model U (16 Megabytes) and an IBM 4381 Model M1 (8 Megabytes). Interactive computing is provided under VM/SP CMS, and batch-processing under MVS with JES3 Networking.

Distribution: List 3, plus: 350-B3, 3-B4, 10-F3, 3-F4, 1-F6, 1-F7