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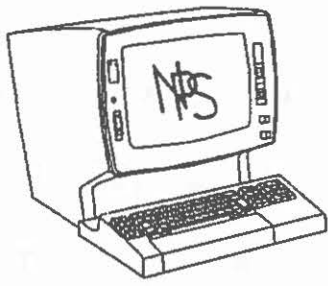
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Computer Center Bulletin



Naval Postgraduate School

February 27, 1991

Monterey, California

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MICRO LAB NEWS

WordPerfect 5.1 (Release 31 December 90) in Micro Lab

A number of refinements, fixes, and improvements have been added to WordPerfect; the ones we think are most likely to be of interest to NPS users are described here.

A macro to Search and Replace a specific font has been added to the MACROS Keyboard Layout. It is stored as Ctrl-F. Basically, the macro will prompt for Confirmation of the Search and Replace, then it will enter into the font menu so you may select the font to be searched for, then it will allow you to select the font to replace. Note: When replacing scaleable fonts, you are allowed to specify the typeface, but not the point size.

Printer Control now displays the filename of the files being printed. If the file is from the screen and unnamed, it will display (Screen) as the filename. Also, when action is required in Control Printer, the status line now displays the message "Press Shift-F7, 4 to resume printing."

The Equation Editor now has the ability to scale any character with the new SCALESYM command.

Previously, when WordPerfect was automatically backing up your file, it said "Please Wait" on the status line. Now it says *Timed backup*.

WordPerfect now supports DrawPerfect WPG images composed of multiple EPS (Encapsulated PostScript) images. Such files can now be printed to a PostScript printer.

WordPerfect will no longer allow you to use Look to look at the temporary files it creates.

There is a new startup option, /N2, which removes the option of working on a second document. (Working on two documents at once takes additional memory.)

Previous problems changing columnar material to tables have been straightened out; the process now works reliably.

Excerpted from WordPerfect Corp. announcements

Thesis Forms on Xerox Workstations

The Xerox desktop publishing workstations at the Computer Center Micro Lab have been set up to easily produce the thesis Cover Sheet and Report Documentation Page. A recent Bulletin article inadvertently gave the impression that this is available only to those using the Xerox system to do an entire thesis. Nothing could be further from the truth. A great many students have found how easy it is to just come into the graphics lab, In-148, and produce these forms in a matter of minutes. When you use the Xerox desktop, you'll see a filedrawer called 10 Day. Put your files in there; they'll be saved for ten days, and will be protected from erasure by yourself or anyone else for that period of time.

Batteries for Z-248 and Other 286 Machines

A recent article in the Bulletin warned that the Z-248 (the PC from the first Desktop buy) needs a battery replacement after two or three years. The PC won't boot up when its battery gets too old. Now we know how departments can get the battery from Ready Supply: it's in the new catalog, under Battery, Lithium. Have one on hand before you need it.

Larry Frazier

VM/CMS NOTES

Mainframe Dial-up Improvements

Dial-up access to VM/CMS has been extended and improved. Remote users with modems can connect to any (all) lines through a single telephone number: 646-2709. Although modems on the mainframe side are capable of running at speeds up to 9600 bps, they are currently restricted to 2400 bps because of limitations of the IBM front-end processor. Full 9600 bps support, from remote modem to mainframe, will be available soon. The modems are Multitech MT932's, supporting the V.32, V.22, WE212A and WE103 protocols.

The old telephone numbers, 646-3025 (300 baud) and 373-1142 (2400 baud), should not be used.

Dennis Mar

Spell Faster

One of the most dramatic results of the change to the new mainframe is the spell checker. Tech Note VM-06 tells how to use it; type

`spell ?`

for a brief introduction. Last year, using the spell checker often required a good deal of patience. Now it's as quick as you'd like.

Larry Frazier

Online VM/CMS Guide

In response to the tremendous reception you all have given to the Online Bulletin (type Bulletin and you are browsing the entire text of all the Computer Center Bulletins of the last three years) (actually, we have no idea whether any of you are using it at all, but some of the Computer Center consultants find it useful) we are providing the text (and tables) of Tech Note VM-01, the Users' Guide to VM/CMS. Better yet, with the default memory allowance on the new mainframe of 3 megs, we can give access to the manual (over 8,000 lines of text) with Xedit (not just Browse). Just type

`vmguide`

Not only can you search for any word or phrase, but you can ask to see all and only those lines containing the phrase of interest. For instance,

`all/fortran`

shows about three screenfuls of lines containing that word. Having found the line containing the context you're interested in, press d3 or u4 to move down 3 or up 4 to make that line your current line and then type

`all`

and the full surrounding text reappears on the screen. By default, upper and lower case is treated the same in VMGuide. See Larry Frazier, x 2671, In-113 with any questions about Bulletin or VMGuide.

Larry Frazier

SOFTWARE IMPROVEMENTS

DISSPLA & DISSPOP

What Version Are You Using?

Not all aspects of DISSPLA usage were switched to version 11.0 at the beginning of this year. Only the DISSPLA exec under VM/CMS was changed to use version 11.0 as the default. The DISSPOP exec is still using version 10.5, as is DISSPLA under MVS. At the break between the winter and spring quarters the Computer Center plans to complete the changeover by releasing a revised DISSPOP exec and updating the JCL in the cataloged procedures on MVS that use DISSPLA.

This quarter, users may access and test the new 11.0 DISSPOP exec (with a metafile created with DISSPLA 11.0) by entering DISSPOP. Metafiles created by cataloged procedures under MVS will not work with DISSPOP at this time, because DISSPLA under MVS is version 10.5 until the changeover occurs.

At that time, any metafiles that were created with version 10.5 of DISSPLA may need to be re-created with DISSPLA 11.0 to be used with the DISSPOP exec.

All DISSPLA users should get their existing programs working with DISSPLA 11.0 as soon as possible. Due to licensing restrictions, we will be unable to keep version 10.5 on the system after the changeover is completed. If you have any problems with using DISSPLA 11.0 please contact Helen Davis (In-112, x2446) or June Favorite (In-110, x3432) as soon as possible.

Device Nomination Calls

With the change to release 11.0 of DISSPLA at the beginning of the year, some of the device calls do not work the same way as they did. Several new device calls have been added to version 11.0. Until the DISSPLA technical note can be updated, please refer to the following list when selecting a device nomination CALL statement to be used from within a Fortran program.

CALL CX41(4107) Replace this statement with:

```
CALL PDEV ('TEKTRONIX_CX4107', ISTATR)
```

Users will notice a definite increase in the speed of plotting to the screen when this new device call is used.

CALL IBM79 Replace this statement with:

```
CALL PDEV ('IBM_3179', ISTATR)
```

CALL COMPRS The CALL COMPRS statement should work the same way it did with DISSPLA 10.5, but if you prefer consistency, you may also use:

```
CALL PDEV ('METAFILE_DISP', ISTATR)
```

This new PDEV statement is versatile. It can also be used to interactively prompt the user at run/execution time for the device to be used.

To try out the new interactive feature, use the following form of the CALL PDEV statement. Be sure to leave a blank space between the single quote marks.

```
CALL PDEV(' ', ISTATR)
```

If you do not know how to respond to the prompts, press the ENTER key after each prompt and a list of responses will be displayed on the screen. Then enter the one you want.

This interactive form can be used to select, among others, the IBM graphics terminals, the Tektronix graphics terminals, or a variety of metafile forms, including CGM metafiles used by software on personal computers, e.g. WordPerfect.

All other device nomination calls should work the same as with DISSPLA 10.5. If you run into any problems with device nomination calls please notify June Favorite (In-110, x3432).

Reserved Filedef Unit Numbers

Refer to the table on the following page for reserved filedef unit numbers for DISSPLA 11.0. Be aware that these are not all the same as the reserved units for DISSPLA 10.5. Refrain from using the reserved units for DISSPLA 11.0 and 10.5. If you have questions concerning reserved unit numbers contact Helen Davis (In-112, x2446).

June Favorite

PLOTD: New and Improved!

The non-IMSL Fortran subroutine PLOTD has been enhanced to allow user specification of the X and Y axis limits.

PLOTD simplifies production of high-quality X-Y plots. The user passes the X and Y arrays to PLOTD. PLOTD, in turn, calls numerous DISSPLA subroutines to perform the actual plotting.

By default, PLOTD automatically picks reasonable X and Y axis limits by examining the range of values to be plotted. The new version of PLOTD allows graphs in which the user specifies the axis limits.

Setting the axis limits with user specified values requires an initial call to PLOTD. The curves to be plotted on these axes are passed in successive calls to PLOTD.

To set the axis limits, define the first two elements of an X and a Y array.

```
X(1) = X axis starting value
X(2) = X axis ending value
Y(1) = Y axis starting value
Y(2) = Y axis ending value
```

The third PLOTD parameter signifies the number of points to be plotted. Set this parameter to zero, and PLOTD recognizes the X and Y arrays as the axis limits.

The fourth PLOTD parameter is a logical variable which indicates the completion of a graph. When passing axis limits, set this parameter to 'false'.

In the following example, the first call to PLOTD sets user-specified axis limits. The second call plots X-values in array TIME and Y-values in array DIST. If the first call to PLOTD were not used, PLOTD would have selected reasonable axis limits from the range of values in TIME and DIST.

```
XDIM(1) = -3.0
XDIM(2) = 13.0
YDIM(1) = 100.0
YDIM(2) = 200.0
N = 0
CALL COMPRS
CALL PLOTD( XDIM, YDIM, N, .FALSE. ,....)
CALL PLOTD( TIME, DIST, MP, .TRUE. ,....)
CALL DONEPL
```

The new PLOTD is available on both CMS and MVS. The enhancement was provided by Stephen Lamont. For further documentation, type in CMS:

LIBSOURCE NONIMSL PLOTD

Dennis Mar

	Unit	Filename
Input Unit	5	*
Output Unit	6	*
DISSPLA Error Unit	6	*
Meta File	18	META DATA A
CGM Binary Input	18	CGMBIN DATA *
CGM Char Input	18	CGMCIN DATA *
CGM Clear Input	18	CGMTIN DATA *
POP1	19	PLTO DATA A
Popfil	19	POPFIL DATA A
POP Directives	20	POPDIR DATA *
Device Information File	21	DVSD DATA *
Virtual Scratch File	23	VSCR TMP A
Scratch File 1	31	INTSCRT1 TEMP A
Scratch File 2	32	INTSCRT2 TEMP A
Scratch File 3	33	INTSCRT3 TEMP A
Graphics device	44	GRAFPROD SITEDATA *
DYNAMICS Save Session	46	SAVSST DATA *
Device Commands	47	DEVCMD DATA *
Workstation Desc	49	D???? WDI *
Reader File	50	UTL00001 DATA A
STD Spool File	51	STD00001 DATA A
Interface Security	52	INTWRK DATA *
Workstation Types	53	WKWSTN DATA *
GKS Workstat Desc	55	G???? WDI *
Writeable Wrkstn Desc	55	G???? WDI *
CGM Binary Output	61	CGMBOUT DATA A
CGM Char Output	61	CGMCOUT DATA A
CGM Clear Output	61	CGMTOUT DATA A
Device Profile	62	DEVPRO DATA *
Font File	85	??????? FONTDATA *
WTHT	86	??????? FONTDATA *
Contour Scratch	89	*

Reserved Unit Numbers for DISSPLA 11.0

NETWORK NEWS

Internet Resource Guide

A copy of the *Internet Resource Guide*, which lists services available to mainframe users via the Defense Data Network (DDN), is now available for in-room use in the Consultants' Office, In-146.

To quote from the Introduction,

Our goal in publishing the Internet Resource Guide is to provide a service which, by increasing the visibility of resources accessible via NSFNET and other parts of the Internet, will expose users to those facilities that will help them do their work better.

Services include computational resources, library catalogs, archives, white pages (directory services), networks, network information centers, and others. A chapter is devoted to each of these areas.

Information for each service includes a point of contact, telephone and electronic mail addresses, directions for access and use, and any restrictions on availability of the service. Most listed services are usable by any valid mainframe user at no charge.

While the *Guide* is available by individual subscription or by anonymous ftp from npsc.nsf.net, the files are bulky and take up quite a bit of disk space. If you are interested in using networking to increase your access to research tools or to collaborate with other members of the research community, stop by In-146 and browse the *Internet Resource Guide*.

Caroline Miller

BATCH SYSTEM NEWS

MVS Usage in 1990

The following is a summary of usage for selected MVS batch processor programs run in calendar year 1990. The MVS accounting package records each instance a program is called in a job step, and the cpu time used.

Some MVS jobs such as SAS are single-step jobs. Others such as VSF2CLG are multi-step jobs. VSF2CLG contains three steps. Each time it is called, the count and cpu totals would be increased for FORTVS2 (VS Fortran 2 compile step), IEWL (linkage editor step), and GO (execution step).

Total Usage

Total usage counts the number of job steps executed and the total time attributed to the steps. This total excludes cpu time used for printing on the 3800 page printer.

	1990 Steps	1990 CPU Hours	1989 Steps
Total	1,019,523	8,307	1,088,655

Program Execution

The following steps perform the program execution phase of many MVS jobs. The GO step executes the user's compiled code. The GO step is common to programs written in Fortran, PL/I, VS COBOL, DSL, Simscript, and others. The linkage editor (IEWL) runs during the LKED step. The LOADER functions like the GO step for procedures which do not require the linkage editor.

	1990 Steps	1990 CPU Hours	1989 Steps
IEWL	100,052	60.7	120,791
GO	93,343	5,013.5	114,095
LOADER	3,490	104.4	9,867

Language Compilers

Much of the PL/I and VS COBOL use comes from administrative and tenant organizations. Fortran H was removed in 1988.

	1990 Steps	1990 CPU Hours	1989 Steps
PL/I	66,948	95.4	68,371
VS Fortran	20,109	23.7	57,308
VS Fortran-2	17,388	35.4	469
VS COBOL	1,225	0.8	1,258
Assembler	751	2.2	652
Pascal VS	11	0.1	35

Statistical Packages

SAS, SPSSX, and BMDP are the well-known general purpose statistical packages. In addition to academic use, SAS is heavily used by the Computer Center's accounting system and by tenant organizations.

	1990 Steps	1990 CPU Hours	1989 Steps
SAS	78,118	1,072.6	86,959
SPSSX	664	2.2	1,271
BMDP	487	1.5	78

Simulation & Specialty Languages

	1990 Steps	1990 CPU Hours	1989 Steps
DSL	123	0.0	3
Simscript	1	0.0	5,547
GPSS	0	0.0	6

Utility Programs

SYNCSORT is a commercial sorting package. TAPE is a tape information program from Princeton University.

	1990 Steps	1990 CPU Hours	1989 Steps
SYNCSORT	61,991	171.4	58,696
TAPE	1,536	2.2	1,345

IBM Utility Programs for Data Sets

These IBM utility programs perform various functions such as allocating, copying, erasing, cataloging, archiving, and listing MVS data sets.

	1990 Steps	1990 CPU Hours	1989 Steps
IEFBR14	109,055	0.5	98,390
IDCAMS	48,577	50.6	46,486
IEBGENER	13,402	10.0	17,366
IEHPROGM	5,617	0.5	5,002
IEBUPDTE	4,885	0.4	3,959
ADDRSSU	1,038	96.8	2,263
IEBCOPY	950	1.3	1,476
IEBPTPCH	825	0.1	824
IEHLIST	621	0.1	622
IEHMOVE	3	0.0	5

Dennis Mar

OTHER ITEMS

Staff News

Dennis Mar has been named acting manager of the User Services Group, following the retirement of Roger Hilleary at the beginning of January. Like Roger, Dennis has a strong background in mathematics, and considerable familiarity with Fortran. Many around NPS have long relied on Dennis' great familiarity with statistics and magnetic tape problems, and many other areas. We wish him all the best as he learns the hard part of the job: bureaucracy and paper work.

Larry Frazier

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

VM/CMS and MVS are available 24 hours a day, 7 days a week. Preventive maintenance is normally performed 0700-1400 hours, first Sunday of each month. Systems work may occasionally be performed between 0700 and 1200 on Saturdays; advance notice is given in the VM/CMS log message.

Call 646-2713 for recorded system status.

MICRO LAB CONSULTING HOURS

1000-1200 and 1330-1630 Monday - Friday

MICRO LAB OPEN HOURS

0900-1630 Monday-Friday

See Micro Lab assistants during consulting hours for combination to access Lab when it is closed.

MVS Job Queue Restrictions

No more than 3 MVS (Batch) jobs per individual may be executing and/or waiting execution. This policy allows each individual a fair share of batch processing capacity, and prevents spooling overload problems. Excess jobs will be cancelled.

Information on Printed Output

The Computer Center has an IBM 3800 non-impact printer and a 3262 impact printer in In-140. These printers are available around the clock, 7 days a week. (See "HOURS OF OPERATION"). If you want a printer unloaded, expect to wait until an operator is available. However, if you have received instruction from a computer operator, you may remove printout from either printer. If you do, please leave separated output on the counter-top, or file it by distribution code. Please observe these rules:

- Press the READY button after removing output.
- See that output is folding neatly in the printer.
- Separate all jobs in the batch of output removed from the printer.

Avoid unnecessary printing. Return output to your terminal for review and editing prior to printing. Use the default output class, SYSOUT=A, for general output from MVS. This produces two output pages per sheet of paper on the 3800 page 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 personal copy.

Please put unwanted printout in any trash container in In-140, In-141, or In-151.

This publication is published as required and is written by members of the staff, W. R. Church Computer Center (Code 51), Naval Postgraduate School, Monterey, CA 93943. Send requests for information or suggestions for articles to the acting User Services Manager, Code 51 (In-102A), 646-2672 (messages: x2573). Bitnet: 2001P@NAVPGS

The Center operates an Arndahl 5990-500 (256 megabytes processor storage, 512 megabytes expanded storage) loosely coupled with an IBM 3033 Model U (16 megabytes) and an IBM 4381 Model P13 (16 megabytes). Interactive computing is provided under VM/HPO CMS, batch-processing under MVS with JES3 networking.

Distribution: List 3, plus: 350-B3, 3-B4, 10-F3, 3-F4, 1-F6, 1-F7, 12-PERSEREC