

UNIVERSITY OF MINNESOTA COMPUTER CENTER  
Deadstart Systems Newsletter

19 October 1981

Vol. 7, No. 20

Send all comments, criticisms and contributions to the editor: T. W. Lanzatella,  
University Computer Center, 2520 Broadway Drive, Lauderdale, MN 55113.  
The University of Minnesota is an equal opportunity educator and employer.

TABLE OF CONTENTS

NOTICE OF CHANGES TO THE SYSTEM . . . . . 119

PROPOSED CHANGES TO THE SYSTEM . . . . . 119

    STANDARDIZATION OF VAX/VMS DISTRIBUTION... - D. Rubenstein . . . . . 119

    CRAY PERMANENT DATASETS - K. C. Matthews . . . . . 120

SYSTEM MAINTENANCE . . . . . 122

    LAST WEEKS SYSTEMS GROUP MEETING - T. W. Lanzatella . . . . . 122

    CALLPRG AND LIBRARY TAPE NEWS - M. Riviere . . . . . 123

    IPC VAX NEWS - M. Riviere . . . . . 123

    CYBER DEADSTART DUMP ANALYSIS - B. E. Blasing . . . . . 124

NOTICE OF CHANGES TO THE SYSTEM

Jeff Woolsey changed the processing of the job card MI option so that MICR is illegal. Jeff also defined three additional input queue file priorities which will be used to signify Cray jobs (see DSN 7,8 p. 46).

Paul Thompson contributed changes to SUBMIT and DSP necessary to install the EXPORT command (see DSN 7,8 p. 46).

Taken together, the two changes installed by Jeff and Paul constitute all of the suggestions in the original Cray Station Installed (Parts I and II) proposals (DSN 7,8 p. 46 and DSN 7,9 p. 58).

Paul also installed his proposed changes to GTR (see DSN 7,17 p. 106 and DSN 7,18 p. 108).

Brad Blasing installed his proposed changes to USERS/DSD (see DSN 7,19 p. 115).

PROPOSED CHANGES TO THE SYSTEM

Standardization of VAX/VMS Distribution Files for Use with the VAX/VMS Mail Utility Program - by D. Rubenstein

Introduction

The VAX/VMS system includes a mail utility program that has the capability of sending a single mail message to a number of different users. This is accomplished by directing the mail utility to read a text file containing

the names of persons to send mail to, one name per line. This file must have a file extension of ".dis", thus the term "distribution" file. This facility is documented within the mail utility program.

### Proposal

I propose that a number of different distribution files be created and maintained on a directory called [mail]. One person (I will volunteer) will be responsible for maintaining these files. They will be made read only for group and system users, and not available to world users. These files will represent the major software products available on the system. Mail will be sent to all the persons on a certain distribution file by the person who is responsible for the software product in question. Persons interested in being placed on one (or several) distribution lists will advise the distribution list coordinator who will place them on (or delete them from) the various distribution lists. In this way, VMS users can be informed of changes in software products, and/or be informed of software bugs.

I propose that the distribution files be organized initially as follows:

<u>Name of Distribution File</u>	<u>Purpose</u>
[mail] staff.dis	gen. info. for staff members
[mail] junk.dis	junk messages like announcing social events
[mail] text.dis	information about any of the text processing products
[mail] graphics.dis	information about any of the graphics products
[mail] stat.dis	information about any of the statistical processors (like SPSS, etc.)
[mail] pascal.dis	information about the Pascal language processor
[mail] cobol.dis	information about the Cobol language processor
[mail] asm.dis	information about VMS assembler
[mail] fortran.dis	information about the FORTRAN language processor
[mail] prose.dis	information about Prose processor

Additional distribution lists of course can be added. Specific distribution lists about the various graphics packages and text processors would be of interest, too.

//////////

CRAY Permanent Datasets - by K. C. Matthews

I would like to make a small change to AUDIT and PDSDUMP on the COS system. But to explain the change, a few paragraphs about COS permanent datasets are necessary.

First you should know that COS has something called an account number and something else called a user number. These two are not the same. The account number and its password must be specified on the account statement right after the job statement in a job.

Example: ACCOUNT,AC=YZE6000,PW=XYZ.

The user number is an arbitrary string of from 1 to 15 characters that may be specified on the COS job statement.

Example: JOB,T=10,US=FAKEUSERNUMBER.

At UCC, the US field is currently used by the station to hold information about the Cyber job which created the CRAY job.

Now what does this have to do with permanent datasets. Almost nothing. Permanent files are saved in the COS system by a PDN (Permanent Dataset Name) and an (optional) ID. The following Cray job will copy one file from dataset \$IN (the default input file) and save it as a permanent dataset SAM.

```
JOB,T=10,US=EXAMPLE1.  
ACCOUNT,AC=YZE6000,PW=ABC.  
COPYF,I=$IN,O=SAM.  
SAVE,DN=SAM,ID=KCM.
```

Now there exists a permanent dataset named SAM with the ID of KCM. This is all anyone needs to access the dataset. (I could have specified Read, Write, and Maintenance passwords). Any user with any valid account number and any user number can access this dataset with the statement:

```
ACCESS,DN=SAM,ID=KCM.
```

Thus, permanent datasets are not stored in any word of a catalog or directory by account number or by user number. But both the account number and the user number of the job which created the dataset are remembered by COS. They are stored in the Dataset Catalog entry for the permanent dataset.

Now there exists two utilities for looking at permanent files on COS. One is AUDIT, which is like the NOS CATLIST. The other is PDSDUMP which is like DUMPPF or PFDUMP (and not very much like ARCHIVE). These two routines look at the user number field in the Dataset Catalog. Only permanent datasets whose user number in the catalog matches the user number of the job will be listed by AUDIT or will be dumped by PDSDUMP. (There are certain exceptions to this rule which won't be discussed here). Thus, the user number is used as a bookkeeping device by COS. But a non-matching US field will never prevent permanent file manipulations. The account number in the permanent dataset catalog is ignored by both AUDIT and PDSDUMP.

Now to my proposal. When (and if) we charge for CRAY permanent datasets, the charge will be by account number. I propose to make AUDIT and PDSDUMP match the account number rather than the user number. Then, when account

YZE6000 does an AUDIT, only datasets created by YZE6000 will be listed. Again, this will not prevent access to files created by other accounts. It will only make finding out about them a little harder. There will still be a way for system people to find out about all permanent datasets.

That's all there is to this proposal, but a lot of other questions immediately come to mind. First, why not restrict access to permanent datasets by account number also?

That is, only allow YZE6000 to access files created by YZE6000. This is the default case on the NOS system. I don't think we should make such a change yet. If we did, we would immediately have to create a sort of public permanent dataset which could be accessed by more than one user number. This involves a change in the COS system itself, whereas the proposed change affects only AUDIT and PDSDUMP. Something like this may eventually be needed, but I don't know a good way yet.

We may also need an account number like LIBRARY where users may find some datasets which anyone may use, and whose presence we wish to advertise. When this comes to pass, a parameter will have to be added to AUDIT to list these files also.

Finally, note that this proposal should be regarded as a convenience and as a way to prevent the trivial examination of all permanent datasets. Even with this change, the COS system will easily give up its secrets to the most elementary mugging practitioners. We must regard the COS permanent dataset system, like COS itself, as inherently insecure. In fact, sites exist which do not allow users to create permanent datasets because of the security problems. I don't think this question has been decided yet at UCC.

#### SYSTEM MAINTENANCE: People and Procedures

Brad Blasing's proposal to imbue USERS/DSD with the ability to read and perform based on DSDI dump tapes was approved (see DSN 7,19 p. 115).

The 6LPI vs. 8LPI debate resumed after Mary Boyd displayed a couple examples of 8LPI text. With little fanfare, we all agreed that 8LPI was not very readable and the debate was ended there.

Don Mears reported on the proceedings of the Cray Users Group meeting in Germany. He lost his notes, but, as usual, his memory is quite vivid.

After discussing the current state of affairs at Sheperd lab, we decided that the package EUNICE should be pulled out for several reasons.

- 1) The package uses a tremendous amount of resources.
- 2) The package seems to be unreliable.

We will stop publicizing the package but we will have it around in case it is needed in order to move programs off of the PDP-11/45.

Someone inquired as to the status of CID, the Cyber Interactive Debugging package. TWL said that LAL and him had decided recently that we didn't need the package. This drew jeers and shouts from the gallery as several individuals disagreed with that decision. TWL will take care of ordering CID.

//////////

#### Callprg and Library Tape News - by M. Riviere

On October 27, Kevin McMahon will be making extensive modifications and additions to the Cybers 74 and 730 Callprg index. Kevin is re-assigning index entries of his group products in order to reflect in the index structure the product's ownership. He is assigning the HTEKLIB, TEDLIB and UTEKLIB libraries to Bob Reents, and the CALLOMP and PLOTPAC libraries to himself.

In addition, Kevin is inserting an index entry for a future version of PLOT31, adding the MNCORE library and modifying VIEW. The addition of MNCORE and the modification of VIEW are part of a larger installation of graphic files postprocessors packages. These postprocessors are to be used to transfer graphic files between the Cybers and different types of terminals. Kevin is offering all these processors now as future type packages. He will make a decision in the future about the permanent installation of these packages as current ones (FETCH vs. control statement callables). These packages are VAJ, VAPPLE, VCALC, VCRT, VDEC, VDEC3, VDIAB, VDICO, VPRINT, VPRDOT, VTEK, VTERAK, VTTY, VVARI, VVT100 and VXEROX. Most of these packages names have embeded the terminal type for which they are designed. A final addition of Kevin to the Callprg index is ARTDOTS, a fetch type graphics program whose documentation will be available soon.

The next set of Callprg index and Library Tape modifications will be taking place on November 17. The deadline to submit requests for that date is November 5 by noon.

//////////

#### IPC VAX News - by M. Riviere

On October 15th, we had a meeting to discuss IPC VAX products installation. Attending the meeting was: S. Reisman, L. Merims, D. Bianchi, J. Mulhern, D. Rubenstein, S. Levy, S. Yen, R. Holoien, R. Marcus, Kevin McMahon, Joel Neisen, P. Jarvis and myself.

I presented an initial outline describing how we could be installing software and documentation in such a way that although the installation procedures will comply with the standards of offering only properly maintained and documented products to users, they would also allow a certain degree of flexibility for addition and maintenance of some manuals, on-line information and packages. We did not reach a final agreement, but new proposals will be presented based on objections and additions to my original

thoughts. The proposals should be made in writing and distributed before the next meeting at least among the people who were present at the last one. We hope to make a definite decision after the next meeting. Anyone who wishes a copy of the initial proposal as well as the new ones should contact me.

At this same meeting, we discussed briefly the removal of the EUNICE subsystem, as it was decided at the last System's Group meeting. We considered the possibility of keeping EUNICE (versus the installation of a new C compiler) to be used by UCC staff only for the conversion of PDP11 production packages. We did not disagree about the fact that we are not going to have a production UNIX system under VMS, but we considered that in the future, we may still offer a limited UNIX environment to users for minor tasks.

The conversion of the PDP11 programs will be started in two directions: EUNICE and MECC's C compiler and see after some work is done in that field which one of these suit us best, if at all. We hope to have some results in a week or ten days.

We are planning another meeting on Friday, October 23, from 10:00 a.m. to 12:00 p.m. in the Experimental Engineering Conference Room. Besides mentioning here, I am using the System's Group meeting notice distribution list for the meeting announcements. If you are not included on that list, and interested in our meetings please contact me.

//////////

Cyber Deadstart Dump Analysis - from 10/2 to 10/18 - by B. E. Blasing

C172 - Cyber 730

Wed., 10/7, 23:44	DD2012
lTA hung trying to kill a IAF origin job which itself had hung. A bug in lAJ was found wherein lAJ goes into a loop when an EXCST of the control statement "STIME" is done. This has been fixed.	
Thur., 10/8, 09:40	DD2013
Thur., 10/8, 13:48	DD2014
Thur., 10/8 15:52	No Dump
Tue., 10/13, 16:06	DD2005
Tue., 10/13, 21:14	DD2006
Tue., 10/13, 23:15	DD2007
Wed., 10/14, 11:44	No Dump
Wed., 10/14, 12:24	DD2010
Wed., 10/14, 15:58	DD2011

Two problems plagued us with the 531 version of IAF causing us to return to the old version of IAF several times. The first was a mode exit of IAF caused by hitting too many carriage returns at login time. This was a CDC error and has been fixed. The second is a lTO hang when lTO gets passed a pot full of junk from IAF. The exact origin has not been found. DWM has a version of IAF that neutralizes the problem, however.

Tue., 10/13, 13:02 No Dump  
DQ21 (an 885 direct-access overflow device) went not-ready and refused to come ready again. The CE's were unable to persuade it otherwise at the time so it was reloaded onto a spare 885 spindle.

Thur., 10/15, 11:30 No Dump  
The scopes blanked when CSD (the Cray station driver) hung on a channel and I attempted to deadstart it. Deadstarting individual PPUs runs about a 5% risk of blanking the scopes. In this case, a deadstart would have been needed anyway.

C74 - Cyber 74

Mon., 10/12, 11:30 DD2002  
Memory bank 14, stack 2 failed. The CE's fixed it in 15 minutes.

Tue., 10/13, 13:30 DD2004  
DQ17 (known as DQ21 on the 730) broke causing this system to hang up also. A level-3 was successful.

MERITSS - Cyber 172

Sun., 10/18, 19:06 No Dump  
DN43 broke. The pack was moved to the spare drive and the system was brought back up.