



# DECUS U.S. CHAPTER SIGs NEWSLETTERS

<b>DATATRIEVE/4GL SIG</b> .....	<b>DTR</b>
<b>OFFICE AUTOMATION SIG</b> .....	<b>OA</b>
<b>PERSONAL COMPUTER SIG</b> .....	<b>PC</b>
ARTIFICIAL INTELLIGENCE SIG .....	AI
BUSINESS APPLICATIONS SIG .....	BA
DAARC SIG .....	DAR
DATA MANAGEMENT SIG .....	DMS
<b>EDUSIG</b> .....	<b>EDU</b>
<b>GRAPHICS SIG</b> .....	<b>GRA</b>
HARDWARE MICRO SIG .....	HMS
<b>IAS SIG</b> .....	<b>IAS</b>
<b>LANGUAGES AND TOOLS SIG</b> .....	<b>L&amp;T</b>
LARGE SYSTEMS SIG .....	LS
<b>MUMPS SIG</b> .....	<b>MMP</b>
<b>NETWORKS SIG</b> .....	<b>NTW</b>
RSTS SIG .....	RST
RSX SIG .....	RSX
<b>RT SIG</b> .....	<b>RT</b>
SITE MANAGEMENT & TRAINING SIG .....	SIT
UNISIG .....	UNI
<b>VAX SYSTEMS SIG</b> .....	<b>VAX</b>
<b>LIBRARY INFORMATION SECTION</b> .....	<b>LIB</b>
<b>“HOW TO” SUBMIT AN ARTICLE . . . GROUP FORMS</b> .....	<b>HOW</b>
<b>SIG INFORMATION SECTION</b> .....	<b>SIC</b>
<b>QUESTIONNAIRE SECTION</b> .....	<b>QU</b>



# GENERAL TABLE OF CONTENTS

<u>SECTIONS</u>	<u>PAGE NO.</u>
<b>DATATRIEVE/4GL SIG</b>	
.Ask the Wombat Wizard . . . . .	DTR-2
.Spring 1988 Product Improvement Request . . . . .	DTR-7
.Ask the WOMBAT Wizard Submission Form . . . . .	QU-1
.DATATRIEVE/4GL SIG PIR Submission Form . . . . .	QU-3
.DATATRIEVE/4GL SIG Spring 1988 PIR Ballot . . . . .	QU-5
.Submitting Articles to Hard News . . . . .	QU-7
<b>OFFICE AUTOMATION SIG</b>	
.From the Editor. . . . .	OA-1
.More on Multiple Read for New Mail . . . . .	OA-2
.System Improvement Request Responses . . . . .	OA-3
.Time to Vote! . . . . .	OA-7
.OA SIG System Improvement Request Ballot . . . . .	QU-19
<b>PERSONAL COMPUTER SIG</b>	
.PRO Section . . . . .	PC-1
.General Section . . . . .	PC-9
.Workstations Section . . . . .	PC-13
.MacIntosh Section . . . . .	PC-15
<b>EDUSIG</b>	
.Cincinnati Session Input Desired . . . . .	EDU-1
.Privacy, Security and Ethics References . . . . .	EDU-2
<b>GRAPHICS SIG</b>	
.From the Editor. . . . .	GRA-1
.Snippets from Anaheim Notes . . . . .	GRA-1
.JTC/SC24 (Computer Graphics) Plenary Berlin 1-3 December 1987 . . . . .	GRA-2
<b>DEVIAS SIG</b>	
.Contribution Guidelines. . . . .	IAS-1
.From the Editor's Keyboard . . . . .	IAS-1
.IAS SIG FY89 Activity Plan . . . . .	IAS-2
.Ten Years Ago This Month . . . . .	IAS-4
.The Program of the Month Club . . . . .	IAS-5
.IAS WHIMS . . . . .	QU-11
<b>L&amp;T SIG</b>	
.Editor's Notes . . . . .	L&T-2
.Letters . . . . .	L&T-3
.L&T SIG Steering Committee Minutes. . . . .	L&T-4
.L&T SIG Cobol Working Group . . . . .	L&T-7
.Report of the PL/1 Working Group . . . . .	L&T-17
.Report of the Scan Working Group . . . . .	L&T-19
.L&T Clinic Report for Anaheim '87. . . . .	L&T-23
.Report of ANSI X3J2 (BASIC) Meetings. . . . .	L&T-26
.Trip Report for ANSI Pascal Standards Committee . . . . .	L&T-27
.Languages and Tools SIG Masters Directory. . . . .	L&T-30
.L&T SIG Masters Application . . . . .	QU-13
.L&T Wishlist Questionnaire . . . . .	QU-15
<b>MUMPS SIG</b>	
.Global Access . . . . .	MMP-1
<b>NETWORKS SIG</b>	
.Letter from the Editor . . . . .	NTW-1

.DFS,DNS & DQS. . . . .	NTW-1
.Converting from IBM to VAX . . . . .	NTW-2
.IBM PC's and Network Integration Kits . . . . .	NTW-6
.Coming Next Month!!! . . . . .	NTW-10
.DATAGRAM . . . . .	QU-17

**RT SIG**

.From the Editor. . . . .	RT-1
.RT-11 Library Programs . . . . .	RT-2
.Desktop Publishing . . . . .	RT-3
.RT-11 Wish List survey Analysis (part 1). . . . .	RT-5
.Handlers in XM. . . . .	RT-9
.The Flit Gun - bugs and fixes . . . . .	RT-20
.RT-11 Wish List Survey . . . . .	QU-21

**VAX SIG**

.Editor's Workfile . . . . .	VAX-3
.Another Classic Moment in Support . . . . .	VAX-3
.Far Out VAX/VMS Futures. . . . .	VAX-5
.LUG News . . . . .	VAX-7
.IOCASE: An I/O Function Code Dispatch Macro. . . . .	VAX-8
.Network Security Working Group Formed . . . . .	VAX-12
.Digital Responds to the Fall 1987 SIR Ballot . . . . .	VAX-14
.A Daily Maintenance Procedure . . . . .	VAX-23
.VAX/VMS Security . . . . .	VAX-27
.INPUT/OUTPUT . . . . .	VAX-29
.System Improvement Request Submission Form . . . . .	QU-23
.VAX Systems SIG Spring 1988 SIR Ballot . . . . .	QU-25

**LIBRARY**

.DECUS Program Library Catalog Changes . . . . .	LIB-1
.New Library Programs Available . . . . .	LIB-1
.New UNIX Software . . . . .	LIB-4

**HOW TO SUBMIT TO A SPECIFIC SECTION OF THE NEWSLETTER**

.Submitting Articles to Hard News . . . . .	HOW-1
.How to Submit Articles to the RSTS Newsletter. . . . .	HOW-2
.DECUS U.S. Chapter Subscription Service Newsletter Order Form. . . . .	HOW-3
.DECUS U.S. Chapter Application for Membership . . . . .	HOW-5

**SIG INFORMATION SECTION**

.Special Interest Committee Lists . . . . .	SIC-1
---	-------

**QUESTIONNAIRE SECION**

.Ask the WOMBAT Wizard Submission Form . . . . .	QU-1
.DATATRIEVE/4GL SIG PIR Submission Form . . . . .	QU-3
.DATATRIEVE/4GL Spring 1988 PIR Ballot. . . . .	QU-5
.Submitting Articles to Hard News . . . . .	QU-7
.HMS SIG Submission Form — A SIG Information Interchange . . . . .	QU-9
.IAS WHIMS . . . . .	QU-11
.L&T Masters Application . . . . .	QU-13
.L&T Wishlist Questionnaire . . . . .	QU-15
.DATAGRAM . . . . .	QU-17
.OA SIG System Improvement Request Ballot . . . . .	QU-19
.RT-11 Wish List Survey . . . . .	QU-21
.System Improvement Request Submission Form . . . . .	QU-23
.VAX System SIG Spring 1988 SIR Ballot . . . . .	QU-25

The Wombat

# EXAMINER

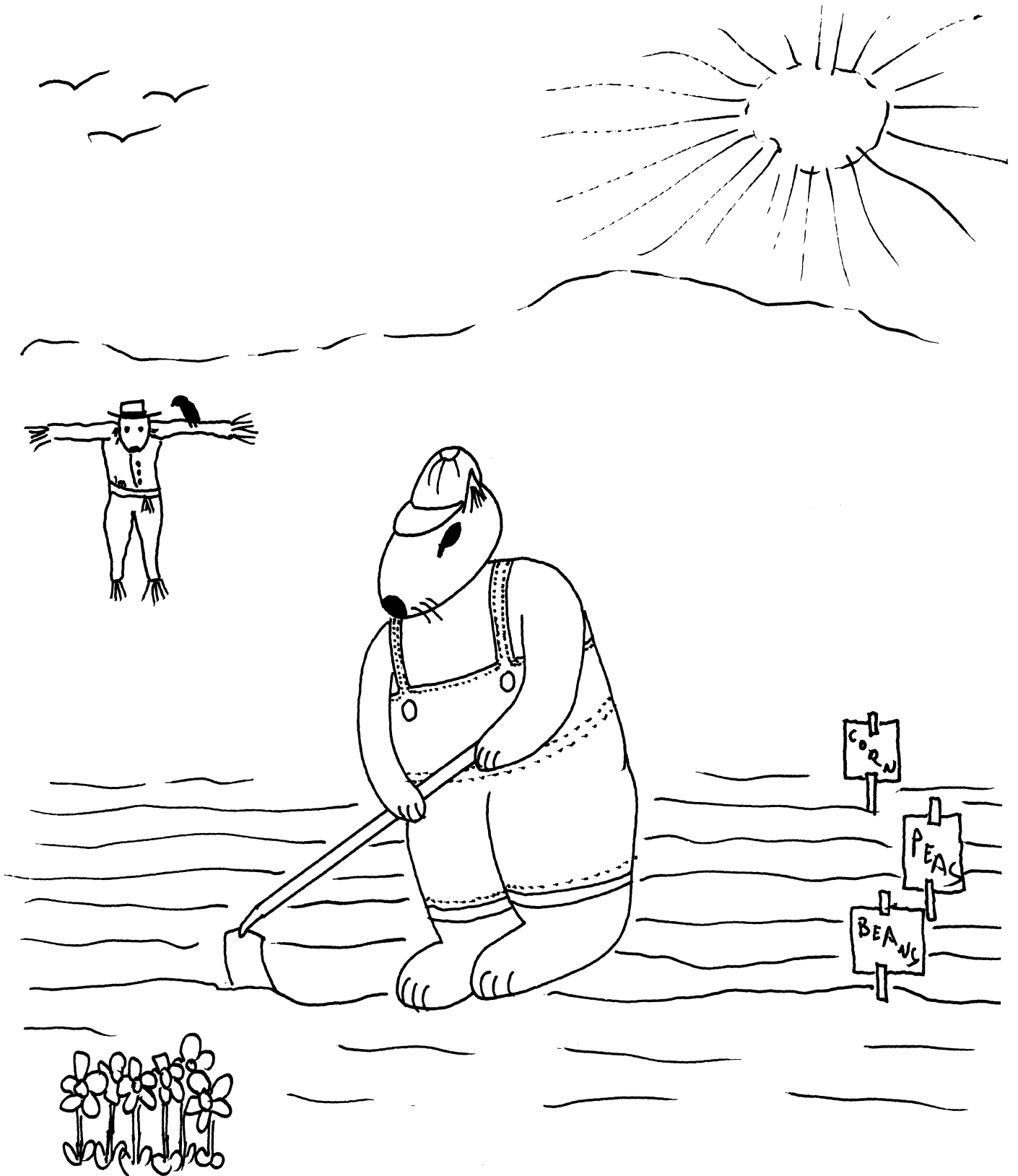
and 4GL

# Dispatch

*"Increases the Circulation of Anyone in America"*

Volume 9 Number 7

TYPE



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## Contributions

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Submissions to this newsletter are constantly sought. A submission can be an article, a letter to the Wombat Wizard, a technical tip, or anything of interest to people using or considering the use of Datatrieve or any 4GL product. Submissions on magnetic media are preferred but almost any type will be considered.

Contributions for the newsletter can be sent to either of the following addresses:

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## Table of Contents

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DECUS U.S. Chapter SIG Newsletters, Volume 3, No. 7, Mar. 1988  
Wombat Examiner and 4GL Dispatch, Volume 9, No. 7

DTR-2	-	Ask the Wombat Wizard
DTR-7	-	Spring 1988 Product Improvement Request

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## Ask the Wombat Wizard

Joe Gallagher, PH.D., 4GL Solutions, Kansas City, MO

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Dear Wombat Wizard,

At my company, some of our reports required that the page number be centered at the bottom of each page. In other reports, the report is sorted by department and each department needs to have their part of the report numbered beginning at page 1. It would be real nice if the pages were numbered 1 of N, 2 of N, . . . , to N of N. Still a third kind of report is done on a preprinted form that requires some group totals on line 49 of a 51 line form which is 8.5 inches long.

I can't seem to get any of these working in the DATATRIEVE Report Writer. Help!

Signed

Defeated by page numbers

Dear Defeated:

The first of your problems is not too hard, but the second and third are real challenges! The Wombat Wizard had to scratch his head with his left hind paw to get the second one, but here goes.

### Page Numbers Centered at the Bottom of the Page.

All you wombat breeders who are fanatical about reading your DATATRIEVE documentation will already know that a reference to RUNNING COUNT in an AT BOTTOM OF PAGE will give the page number. (See the VAX DATATRIEVE Guide to Writing Reports, page 6-8). For a domain FOO, the report writer statements might look like

```
ready foo                                ! 1
report foo with . . . sorted by . . .    ! 2
  set . . .                               ! 3
  set no number                           ! 4
  at top of . . . print . . .            ! 5
  print . . .                             ! 6
  AT BOTTOM OF PAGE PRINT SKIP, COL 35,   ! 7
  RUNNING COUNT(-) USING Z9              ! 8
end-report                                ! 9
```

### Page Numbers Restarted at 1 for Each Section; Reported as M of N.

There are really two parts to this challenge: the first is to figure out how many pages will be needed for each section of the report, and the second is to get the page numbers to restart at 1 for each new department.

To see how one might determine the number of pages that it takes to report a group, consider a domain FOO with a field GROUP. GROUP will correspond to the DEPARTMENT.

```
define record FOO-RECORD using           ! 10
01 FOO-REC.                               ! 11
  03 . . .                                 ! 12
  03 GROUP PIC X(n).                      ! 13
  . . . . .                              ! 14
```

```

; | 15
declare lines-group computed by count of foo with (group = a.group). | 16
declare pages-group computed by fn$floor((lines-group/54) + 1 | 17
  edit-string is zz9 | 18
  query-header is (-) . | 19

ready foo | 20
report a in foo sorted by group | 21
  at top of group print new_section, group | 22
  print . . . ! print detail line | 23
  at bottom of page print col 35, running count(-) using zz9, | 24
    space 1, "of", space 1, pages-group | 25
end_report | 26

```

The COMPUTED BY variable LINES\_GROUP (at line 16) uses the context variable A to determine the number of detail records in current. However, it does so quite slowly. PAGES-GROUP (at line 17) calculates the number of pages that it takes to report these detail lines assuming that there are 54 header and detail lines. More will be said later about where the 54 come from and how it is calculated. The NEW-SECTION causes the page number (printed as part of the report header) to be reset to 1 at the break in each group. However, the RUNNING COUNT in the AT BOTTOM OF PAGE (at line 24) is NOT reset. So the correct page number is NOT printed at the bottom of each page even though it correctly determines the number of pages in each section of the report.

The practical part of the problem of determining the number of pages in each section of the report is that it takes too long to calculate PAGES-GROUP; in a large data set this could take many minutes or even hours! A better (more practical) way is to calculate the number of detail lines (and thus the number of pages) is to determine the number in each group before beginning the report (thus trading some disk space for better reporting performance).

Create a new domain to store the information about the number of detail records in each group...

```

define domain groupcount using groupcount_record on gc.dat; | 27

define record groupcount_record using optimize | 28
01 groupcount_rec. | 29
  03 group pic x(n). | 30
  03 gcount usage is integer. | 31
; | 32

```

Then, calculate the number of lines in each part of the report by:

```

DTR> ready foo | 33
DTR> declare counter usage is integer. | 34
DTR> declare tg1 pic x(n). | 35
DTR> declare tg2 pic x(n). | 36
DTR> declare first-time-flag pic x | 37
DTR> first-time-flag = "Y" | 38
DTR> tg1 = " " | 39
DTR> tg2 = " " | 40
DTR> ready groupcount write | 41
DTR> for foo sorted by group begin | 42
CON>   tg2 = group | 43
CON>   if (tg2 ne tg1) then begin | 44
CON>     if (first-time-flag eq "Y") then begin | 45
CON>       first-time-flag = "N" | 46
CON>     end else begin | 47
CON>       store groupcount using begin | 48

```



```

CON>         group = tg1                ! 49
CON>         gcount = counter           ! 50
CON>         end                         ! 51
CON>         end                         ! 52
CON>         counter = 0                 ! 53
CON>         end                         ! 54
CON>         counter = counter + 1      ! 55
CON>         tg1 = tg2                  ! 56
CON>         end                         ! 57
DTR> print groupcount                   ! 58

GROUP GCOUNT                           ! 59

  A      19                             ! 60
  B      60                             ! 61
  D      24                             ! 62
  G     112                             ! 63

DTR> declare p computed by fn$floor(gcount/54) + 1 . ! 64
DTR> tg1 = " "                          ! 65
DTR> tg2 = " "                          ! 66
DTR> find groupcount                    ! 67
DTR> :joe                               ! 68

```

where the procedure JOE is:

```

define procedure joe                     ! 69
set abort                               ! 70
select next                             ! 71
tg2 = group                             ! 72
if (tg2 eq tg1) then abort              ! 73
report foo with foo.group = groupcount.group ! 74
set report_name = "REPORT NAME"        ! 75
set no date                             ! 76
at top of group print group             ! 77
print last_name, first_name, ss_number, badge_number ! 78
at bottom of page print col 35, running count(-) using zz9, space 0, ! 79
  " OF ", space 0, p(-) using zz9      ! 80
end report                              ! 81
tg1 = tg2                               ! 82
:joe                                    ! 83
end-procedure                           ! 84

```

This gives the report:

<FF>

REPORT NAME

23-Dec-1987

GROUP	LAST NAME	FIRST NAME	SS NUMBER	BADGE NUMBER
A				
	Kop....	Walter	062-96-7880	02143
	Thr...	B	509-96-9169	00124
	. . .			
	McM.....	Earlene H	585-95-3319	02589
	Gor...	Kim	492-69-3315	01210
		1 of 1		

<FF>

REPORT NAME

23-Dec-1987

GROUP	LAST NAME	FIRST NAME	SS NUMBER	BADGE NUMBER
B				
	McG...	Phyllis	498-79-6231	01177
	Rei...	Judith	995-52-7547	01158
	. . .			
	Car....	Douglas G.	519-82-1899	02654
		1 of 2		

<FF>

. . . ! and many more pages

Record number out of range for collection.

Notice that there is an error message when the SELECT NEXT (at line 71) runs out of records in the collection of GROUPCOUNT records created by the FIND (at line 67).

All you novice Wombat Hunters may say that this is a strange report procedure which "calls itself". Well, this is know a pseudo-recursion. And it is the only way to get the page numbers at the bottom of the page (one printed with an AT BOTTOM OF PAGE PRINT RUNNING COUNT ...) to restart at 1 for each group. If we could use page numbers as part of the report header (in the usual form "Page N" on the right hand end of the second line of the report header instead of the form "M of N"), then we could use reports like:

```
ready groupcount                                ! 85
ready foo                                        ! 86
for groupcount begin                            ! 87
  report foo with foo.group = groupcount.group begin ! 88
  set report-name = " . . . "                   ! 89
  at top of group print new-section, group      ! 90
  print . . .                                   ! 91
```

```

. . . ! 92
end-report ! 93
end ! 94

```

or

```

ready groupcount ! 95
ready foo ! 96
report groupcount cross foo over group sorted by group ! 97
set report-name = " . . . " ! 98
at top of group print new-section, group ! 99
print . . . !100
. . . !101
end-report !102

```

So the page number in the report header can be reset by the NEW-SECTION (at lines 90 or 99), but an AT BOTTOM OF PAGE PRINT RUNNING COUNT (at lines 92 or 101) cannot!

### Summary Report Lines on a Specific Line.

There is no variable in DATATRIEVE which computes the current line number in the report writer. One can set the length of the page (header plus detail lines) with the

SET LINES-PAGE = NN

statement. The default number of lines per page is 60. Standard (U. S.) computer paper is 11 inches high; and 6 lines per inch is the standard vertical pitch selection. DATATRIEVE assumes that there will be 6 lines of vertical margin (3 line or one half inch at the top margin and the same at the bottom of the page). That is,  $6 * 11 - 6 = 60$  lines for printing. The report header, unless it is suppressed with a SET NO REPORT-HEADER, consists of 2 blank lines between the report header and the column headers and from 1 to n lines of header text. The number of lines of header text is the maximum of the number of lines of the report name and the sum of date and page number lines; but it is at least 1. The column header, unless it is suppressed with a SET NO COLUMN-HEADER, consists of one blank line and one or more lines of column header text. For example, with a one line title, with both date and page number, and one line of column header text, the total number of lines in all the headers is  $4 + 3 = 7$ . Thus, the number of available header and detail lines is  $60 - 7 = 53$ . If there is no page number (and there is a one line report-header), then the header and detail lines total 54. This is where the 54 comes from (at line 17 above). Thus, there will be either 53 or 54 header and detail lines available on a standard sized page.

For a preprinted report that is 8.5 inches high, there would be possible 51 lines. In order to print on almost all of them, you will have to trick DATATRIEVE and VMS into thinking there are more lines available. To print near the bottom of such a form, you will need to set the hardware length of form with the thumb wheel switch in a LP25, LP26, or LP27 printer or set the form length to 51 lines in a programmable print with an escape sequence like <ESC>[51t. Now the software length of form (with the SET LINE-PAGE) is set differently. Since you didn't specify how big the report header was, nor how many detail lines you need to print, I'll make up some typical examples. Suppose the header section is 17 lines and you need to print 30 detail lines. That is, the first detail line is printed on line 18 of the form and the last detail line is printed on line 47 for a total of 30 detail. The summary line would be printed on line 49 and line 48 would be blank. The LINES-PAGE should then be set at the total of the header lines and detail lines  $17 + 30 = 47$ .

Then the report would look like:

```

ready foo !103
declare lf_string pic x(30). !104
lf_string = "<LF><LF><LF><LF><LF><LF> . . . <LF><LF>" ! 30 times !105
declare jumpdown computed by !106

```

```

    fn$str_extract(lf_string, 1, 30 - fn$mod(count,30)).           !107
report foo sorted by group                                       !108
    set lines_page = 47                                           !109
    at top of group print new_section      ! restart the page numbers !110
    at top of page print report_header,    !111
        . . . , skip n                ! lines and skips totaling 17 lines !112
    print . . .                        ! the detail lines           !113
    at bottom of group print jumpdown(-), skip,                   !114
        col n, STATISTICAL_SUMMARY_VARIABLE(-)                   !115
end-report                                                         !116

```

The variable LF\_STRING (at line 105) consists of 30 line feed control characters; these characters can be created with an editor (but not directly as input into DATATRIEVE). The COMPUTED BY variable JUMPDOWN has exactly the right number of line feeds to jump down to the last line of the report - line 47 in this case. Thus, the statistical summary variables are printed at the bottom of a group on exactly the right line on the preprinted form!

With these hints on paging, I hope you will no longer be defeated by the Report Writer and you will be winner at your company with DATATRIEVE.

Signed

The Wombat Wizard

## Product Improvement Requests

Give your feed-back to Digital so that products can be improved to better meet your needs. A ballot is found in the Questionnaire section at the end of the newsletter. For your ballot to be counted, it must reach Chris Wool on or before April 18, 1988. His address appears on the ballot. **YOUR VOTE COUNTS!**

### \* \* \* INSTRUCTIONS \* \* \*

For RALLY and VAX-DATATRIEVE, there are a sufficient number of requests that a "point allocation" scheme will be used. For RALLY and VAX-DATATRIEVE, you have a total of 50 points for each product with which to vote. You may allocate points either positively (in favor of a proposal) or negatively (against a proposal). The number of points you allocate to a particular PIR indicates how strongly you feel about it. In order to assure a wide range of choices, however, you may not allocate more than 10 points (positive or negative) to any one PIR and the absolute value of the total may not exceed 50 points of each of RALLY and VAX-DATATRIEVE.

For DATATRIEVE-11, DECReporter, and TEAMDATA, there are too few PIR's to use a "point" system. Indicate your preference for each PIR for DATATRIEVE-11, DECReporter, and TEAMDATA by the following: (+) indicates you are in favor of a proposal; (-) indicates you are NOT in favor of a proposal; and (0) indicates you have no opinion about a proposal.

Note that you must be a DECUS member to vote (we require your DECUS membership number on the ballot) but you do not have to be active in the DTR/4GL SIG to vote - anyone using any 4GL product is encouraged to participate in the PIR process. Get your votes in by April 18, 1988. Get your friends to vote! Digital development groups will respond at the DTR/4GL Closing Session in Cincinnati. Also look for their

written responses in the July or August issue of the Newsletter.

## **RALLY**

### **PIR: S88-1**

**Abstract:** Allow the ADL-based "TO\_CHAR" function to utilize number formats, just like it allows date formats.

**Description:** We need to have a way of controlling how RALLY translates a number-to-character conversion using the "TO\_CHAR" ADL function. Currently, it just left justifies, with trailing blanks. If we wish to pack leading and/or trailing zeroes, we must use a bizarre algorithm to do it. Why not allow number formats (which RALLY allows you to do, just like date formats) to be specified?

### **PIR: S88-2**

**Abstract:** When creating a Form/Report DSD field, allow for reference of Format Group(s) associated the SDS group(s).

**Discussion:** Right now, to create a DSD Field and put it in a Format Group, you have to create it in it's DSD group, edit the group and remove it from the output order, put it in the output of the Format Group, and re-mark it's coordinates. Whew!! It would be nice to, when you specify the Group the Field is associated with (at create time), list the Format Groups associated with DSD Groups, along with the DSD Groups. If you specify a Format Group, RALLY should be smart enough to recognize the DSD Group it belongs to, and reference the appropriate DSD Fields. Thus, location is no longer a problem.

### **PIR: S88-3**

**Abstract:** Allow for "Required" Fields to be turned on when in Query Mode.

**Discussion:** A RALLY Form allows for certain Field attributes to be on/off when the Form is in Query (QBE) state. The "Required" aspect of the Field is only active in Browse/Update/Delete (BUD) mode. It would be nice to have the option of tagging a Field as "Required" for Query purposes.

### **PIR: S88-4**

**Abstract:** RALLY should support read/write access to non-Rdb data. Specifically indexed RMS files.

**Discussion:** Many applications do not need the overhead/complication associated with relational data base systems. Forcing potential RALLY buyers to first commit to relational technology (and cost) may gain you a few Rdb sales, but will lose you more RALLY sales.

### **PIR: S88-5**

**Abstract:** RALLY needs more flexible and dynamic DSDs for Rdb RSE's.

**Discussion:** In defining a DSD, the restrictions on the RSE are non dynamic fields. One needs to perform such things as

FOR date > (YESTERDAY - 1)

Such a variable expressions in non-exact match is not supported. This limits application performance.

## **VAX-DATATRIEVE**

### **PIR: S88-6**

**Abstract:** Support segmented keys in RMS files.

**Discussion:** There are conditions when a segmented key is the most efficient way to index a field. Even though some third generation languages do not support segmented key, DATATRIEVE should use all the capabilities of RMS with respect to segmented keys.

**PIR: S88-7**

**Abstract:** Enhance DATATRIEVE to handle DELTA DATES.

**Discussion:** DELTA DATES are used extensively in DCL. DATATRIEVE should have functions and capabilities to deal with dates and times in relative form. It would be desirable to TOTAL/DISPLAY DELTA DATES without having to write your own functions.

**PIR: S88-8**

**Abstract:** Provide a way to read a CDD object while editing a CDD object.

**Discussion:** While editing one CDD object, it is very often necessary to see (read only) another CDD object. One needs to be able to get another domain, record, or procedure definition into a secondary editor buffer.

**PIR: S88-9**

**Abstract:** Allow normal order of statement execution for indirect command files in procedures. One should be able to execute command procedure files (which contain no commands, but only statements) within DTR procedures and have the statements within the command procedure execute in "normal" order.

**Discussion:** It would be nice for a DATATRIEVE procedure to be able to write DTR source code and then execute it. Under the current "optimized" way, the @ file is included up front (or at the end), instead of when it is encountered in the procedure file.

**PIR: S88-10**

**Abstract:** Provide ability to specify COMPUTED BY fields within a view definition.

**PIR: S88-11**

**Abstract:** Enhance the DATATRIEVE Report Writer by adding a LINE-COUNT built-in key word.

**Discussion:** LINE-COUNT would contain the current line number within the report writer. It would enable a work-around to the issue of AT BOTTOM OF PAGE PRINT... not really being at the bottom of the page but just after the last detail line.

**PIR: S88-12**

**Abstract:** Enhance DATATRIEVE to call an editor (TPU in particular) to edit the contents of a field.

**Discussion:** Begin able to edit a field (with a real editor) is particularly useful for long character string fields, which now must be re-entered completely to change. An appropriate error message should be generated if the new edited data is longer than the field. For example: Field will be truncated to 200 characters -do you wish to continue (Y) or re-edit (N)? The suggested syntax is MODIFY/EDIT or FN\$EDIT (field).

**PIR: S88-13**

**Abstract:** Allow the storage of DBMS junction records via DTR procedures.

**Discussion:** Attempts to store DBMS junction records using DTR procedures fails with a message usually stating that the junction record is not within the schema although the record is in the schema and attempts to address previously stored occurrences of the record run into no problems using DTR.

**PIR: S88-14**

**Abstract:** Enhance the READY command to include a RETRY clause.

**Discussion:** When multiple users of a data base are attempting to get a unique number (next available number), additional capabilities are need to make sure that access is properly arbitrated. A suggested syntax is

**READY DOMAIN WRITE USING RETRY 5 TIMES WAIT 0:00:05**

**PIR: S88-15**

**Abstract:** Guide mode should have an option not to clear the screen (e.g., to work anywhere on the screen).

**Discussion:** Such a capability would permit more than one command and results on the screen at a time.

**PIR: S88-16**

**Abstract:** DATATRIEVE should have an "intelligent", more English-like front end that does not require such a restrictive (stilted) syntax to work.

**Discussion:** DTR keywords and syntax are hard for beginners to remember, especially when they are infrequent users. DTR should be friendlier, and accept more variations.

**PIR: S88-17**

**Abstract:** Enhance DATATRIEVE to support wild card searches in the CDD. For example, allow "SHOW YA\*" or "SHOW YACH%%" or even "EDIT YACH\*".

**PIR: S88-18**

**Abstract:** Enhance the report writer with an option to print fields side-by-side, separated by only one space ("dense" mode).

**Discussion:** The report writer inserts extra spaces between fields to make the output "pretty" and evenly spaced across the page. This means that listings which will fit within 132 columns in a print statement will not always work in report writer.

**PIR: S88-19**

**Abstract:** Enhance DATATRIEVE to allow multiple responses to a single prompt.

**Discussion:** In an interactive session it's possible to create a record selection expression with search criteria for one field, such as:

FIND FOO WITH FIELD A = X, Y, Z

DATATRIEVE should be able to prompt for, and enter X, Y and Z in response to the prompt. A syntax with a triple asterix could be used to enter a list of values. Example:

FIND FOO WITH FIELD A = \*\*\*."up to three values"

Enter up to three values: X, Y, Z

**PIR: S88-20**

**Abstract:** Enhance DATATRIEVE to include the ability to trap DATATRIEVE, CDD or other VMS errors in a procedure and then do exception processing.

**Discussion:** DATATRIEVE should be able to trap errors similarly to those that DCL commands "ON ERROR.." or "ON WARNING.." are able to trap.

**PIR: S88-21**

**Abstract:** Enhance the DATATRIEVE/FMS interface to access supervisor mode.

**Discussion:** DATATRIEVE should have the ability to SET/CLEAN FMS supervisor mode. This would let the same form be used for several different purposes.

**PIR: S88-22**

**Abstract:** Enhance DATATRIEVE to show why a store failure occurs.

**Discussion:** When storing data in indexed files with non-dup keys, a failure is indicated by "can't store duplicate key". It would help to know what domain, file, or field is the culprit (reason for the failure).

**PIR: S88-23**

**Abstract:** DTR graphics should support Tektronix 4014 CRT's and HP-GL compatible plotters (eg. DEC LVP16, HP7475, etc).

**PIR: S88-24**

**Abstract:** DATATRIEVE should support a more generalized construction of record selection expressions. Users should be able to enter a field name into a file, logical, or prompt and have DTR evaluate that field name for selection criteria.

**Discussion:** Possible implementations might look like:

```
fn$create_log("MY_RSE", 'LOA gt *."minimum lenth-over-all"')  
find yachts with MY_RSE
```

or

```
find yachts with ***."field name" = *."variable value"
```

or

```
find yachts with GENERIC-FIELD = GENERIC-VALUE
```

where GENERIC-FIELD and GENERIC-VALUE come from another domain.

**PIR: S88-25**

**Abstract:** DATATRIEVE needs to be able to handle both signed and unsigned variables in order to be compatible with DBMS.

**PIR: S88-26**

**Abstract:** Enhance the way in which DATATRIEVE evaluates the logical DTR\$STARTUP to include the checking (and evaluation) in system, group, and process logical name tables or search lists.

**Discussion:** The system manager should be able to create a system wide DATATRIEVE startup command file which would be executed before any process specific startup files where executed. (This is in direct response to the locking bug in DTR V4.1).

**PIR: S88-27**

**Abstract:** Add a function to allow attaching to a process or sub-process.

**Discussion:** Many of Digital's utilities that support an internal SPAWN command also have ATTACH command to let one jump between processes without incurring the overhead of SPAWNING and LOGging OUT each time. It would be nice to have something like FN\$ATTACH(process-name). Of course, one can ^Y out of DTR and do the ATTACH from DCL, then return to the initial process and use CONTINUE, but that's a kludge fraught with danger. One could use FN\$DCL to attach, but that also creates a subprocess.

**PIR: S88-28**

**Abstract:** Add a function to DATATRIEVE to calculate the MEDIAN of a value expression of a record stream.

**Discussion:** This function should work like MIN, MAX, etc. and allow the user to specify a value expression and an rse, or just a value expression. A proposed syntax would be:

```
MEDIAN value-expression [OF rse]
```

The value returned would be the standard mathematical median. MISSING values should be ignored, as with the other statistical functions.

**PIR: S88-29**

**Abstract:** Implement a more generalized scheme for the prompt for input. That is, allow the prompt string to be constructed from the concatenation of multiple strings.

For example:



```

declare day usage is date.
  day = "yesterday"
declare lot-number pic 9(4).
lot-number = *."first lot number processed on "| -
  format day using W(9)
Enter first lot number processed on Thursday:

```

**PIR: S88-30**

**Abstract:** Implement a more generalized scheme for establishing the textual SET variables in the Report Writer especially SET REPORT-NAME, but SET DATE, and SET NUMBER should also be included.

**Discussion:** Prespecified quoted strings or prompted input are not general enough to handle some very useful situations. For example:

```

declare starting-date usage is date.
  declare ending-date usage is date.
  starting-date = *."starting date"
  ending-date = *."ending date"
  ready foo
  report foo with foo-date bt starting-date and ending-date
  set report-name = "Foo Report"/""| -
  format starting-date using M(9)bdd,byyyy |" to "| -
  format ending-date using M(9)bdd,byyyy
  . . .

```

**PIR: SS8-31**

**Abstract:** Establish a new variable in the report writer which is the page number. Suggest PAGENUMBER.

**Discussion:** This variable would have the value that is the same as the internal variable which is printed at the top right-hand corner of the report (that is, it is re-set with a NEW-SECTION). This would allow the page number to be printed any where on the report page.

**PIR: S88-32**

**Abstract:** Implement a plot in DATATRIEVE which can use the time part of a date-time variable.

**Discussion:** It should adaptively determine if the X-axis should be in days, hours, minutes, or seconds and label the axis appropriately. Suggest the name DATETIME\_Y with the same syntax as DATEY\_Y

**PIR: S88-33**

**Abstract:** Implement a screen management system internal to DATATRIEVE which uses calls to the SMG library and replaces FMS and TDMS.

**Discussion:** An SMG-based screen management facility should be able to support scrolled regions, multiple "windows" per domain, and multiple domains on a screen.

**TEAMDATA**

**PIR: S88-34**

**Abstract:** Share Rdb selection criteria between RALLY and TEAMDATA.

**Discussion:** Through RALLY, one should be able to define selection criteria for Rdb Records to paint Form Reports. One would like to graph the same Rdb selection with TEAMDATA. One would like to define a selection (such as a SQL select) that can be shared by both RALLY and Rdb. It is difficult to keep the selection criteria the same.

**PIR: S88-35**

**Abstract:** TEAMDATA should have a facility for easily showing fewer columns.

**Discussion:** One should be able to display only certain columns - a pop-up menu of available fields, like the way show fewer (for rows) works, should be incorporated for "show fewer columns."

**DATATRIEVE-11**

**PIR: S88-36**

**Abstract:** Enhance all version of DATATRIEVE-11 to use a logical which controls the default open mode for read commands. Let this logical be evaluated each time DATATRIEVE-11 is started so that the user can control the default to be READY ... SHARED READ rather than READY ... EXCLUSIVE READ.

**PIR: S88-37**

**Abstract:** Change DATATRIEVE-11 so the callable DATATRIEVE may be used without DECnet being installed.

**Discussion:** Requiring that DECnet be installed is absurd! (and too expensive).

**PIR: S88-38**

**Abstract:** Change DATATRIEVE-11 to search for and manage the startup file, QUERY.INI, in a more generalized way.

**Discussion:** It would be nice to have DTR-11 search for QUERY.INI in a user's account first and if not found, search system library account (DTR\$ as example) for system-wide initialization file.

**DECReporter**

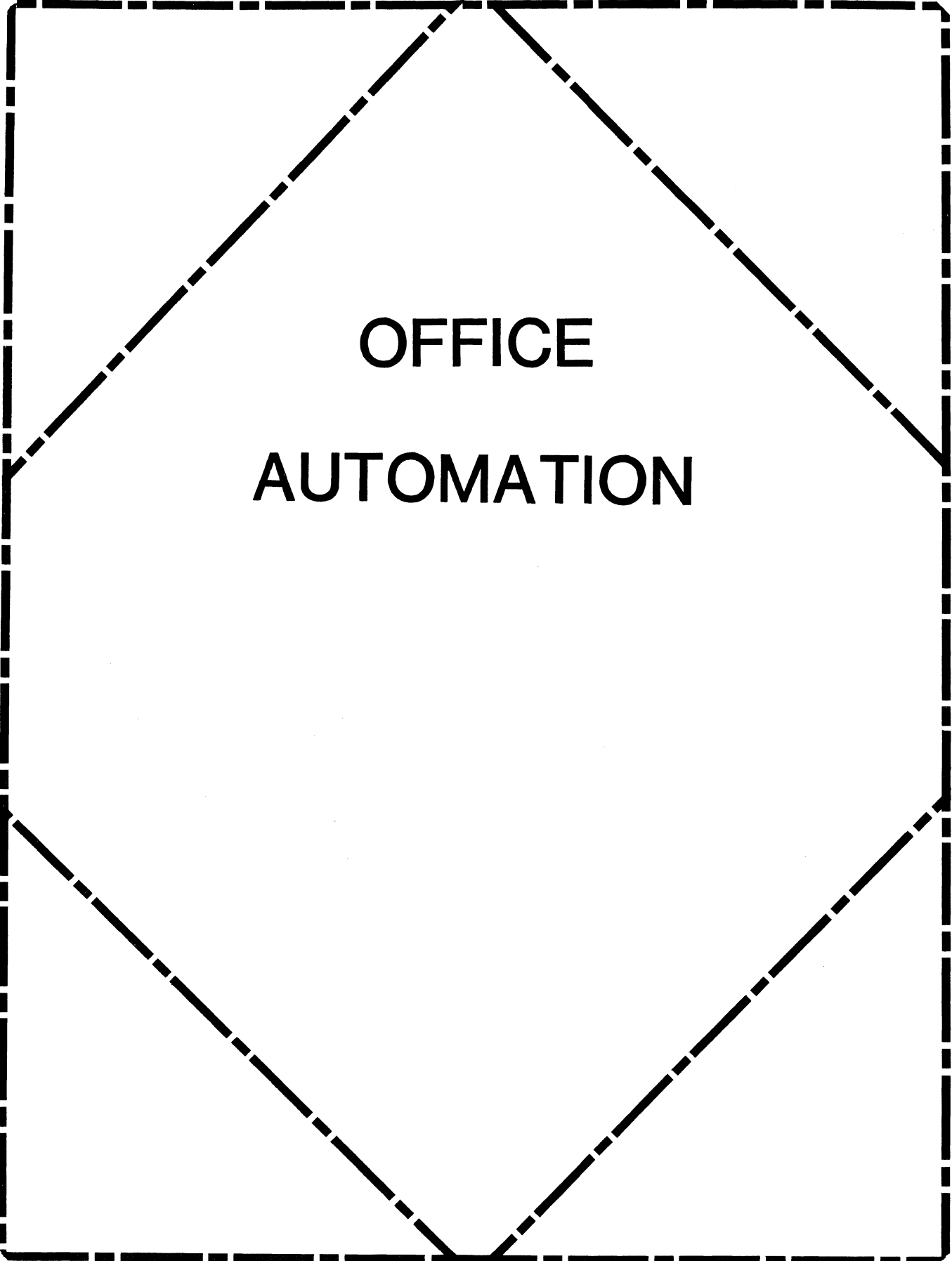
**PIR: S88-39**

**Abstract:** Enhance DECReporter to provide the ability to extract data from one dictionary node while saving the report specifications in another.

**Discussion:** Suggest the use of logical names, eg., REPORT\$SOURCE\_DICTIONARY and REPORT\$DESTINATION\_DICTIONARY. The former would point to dictionary node containing domain definitions while the latter points to the location of saved report definitions.

**PIR: S88-40**

**Abstract:** DECReporter needs to have the same capability as DATATRIEVE to do a print FIELD-NAME via TABLE-NAME.



**OFFICE  
AUTOMATION**

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## IN THIS ISSUE...

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<b>From The Editor</b> . . . . .	<b>OA - 1</b>
• <i>Therese LeBlanc, T.M. LeBlanc &amp; Assoc.</i>	
<b>More on Multiple Read for New Mail</b> . . . . .	<b>OA - 2</b>
• <i>Trace Roth, O.H. Materials Corp.</i>	
<b>System Improvement Request Responses</b> . . . . .	<b>OA - 3</b>
• <i>Robert Malay, Digital Equipment Corp.</i>	
<b>Time to Vote!</b> . . . . .	<b>OA - 7</b>
• <i>E. Catherine Ditamore, ARA Services, Inc.</i>	

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## FROM THE EDITOR...

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We have an addition to last month's technical article on Multiple Read for New Mail Messages by Trace Roth. Watch for another great article by Trace in next month's issue.

The new SIR list is here!!! We begin with the responses from Digital on your top 30 items (based on SIR votes received). Then, we have the newest list of SIR's to be voted on. Please use the SIR Ballot located in the back of this issue to review the list and send us your vote.

Don't forget about the SIG TAPE CONTEST! If you need information on how to submit your program(s) for the SIG TAPE CONTEST, please refer to the January, 1988 issue of our newsletter.

Thank you for all the great articles, please feel free to submit items at any time by sending them to me at the address listed below.

Regards,

*Therese LeBlanc*  
OA Newsletter Editor

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## MORE ON MULTIPLE READ FOR NEW MAIL

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In my article in last month's newsletter, I forgot to note changes to forms TMTDDE and TMTD PRINT in my article last month called "Multiple Read for New Mail Messages".

Here are the name data changes for the TMTDDE and TMTD PRINT forms in OAFORM. The changes made to these forms in this portion of the name data are the same.

::.TYPE;;

```
MENU /CHOICE=CHOICE/PRE='.IF #CAL_SET_DATE NES "" THEN GET $TD_DATE_SAVE =
#CAL_SET_DATE\IF $TD_DATE_SAVE NES "" AND $TD_DATE_SAVE NES
O$TM_DATE THEN CAL SET DATE $TD_DATE_SAVE'/CLEAR/DATE=DATE/USER=USER/
MAIL=
MAIL/MORE='TMTD,TMTD_MORE,TM'/GET=CDATE,O$TM_DATE;DAY,O$DAY;CUSER,O$TM_
OWNER;MEETIN,O$MEETING_COUNT_DISPLAY;SELECT1,$AM_SELECT1;SELECT2,$AM_SELECT2
CDAY,O$TM_DAY/HARD="Display Events for To-Do List"/TITLE=TITLE
/POST='GET #CAL_SET_Date = ""'
```

::C;;

```
DO TMCRETD\GET $TD_DATE_SAVE=O$TM_DATE\GET
$TD_NUMBER_SAVE=$AM_SELECT1\GET
$TD_SEL2_SAVE=$AM_SELECT2\GET #TODOFLAG=0
```

::D;;

```
.IF $AM_SELECT1 EQS "" THEN DISPLAY There is no item to delete\\FORCE ELSE
FORM TODOENT/MODE=DELETE/ONE_ENTRY/START=""T','TO DO LIST',$AM_SELECT1'\
IFEXIT\GET $AM_SELECT1=""\DISPLAY List item deleted\get $TD_DATE_SAVE=O$TM_
DATE\GET $TD_NUMBER_SAVE=$AM_SELECT1\GET $TD_SEL2_SAVE=$AM_SELECT2
\GET #TODOFLAG=0
```

::E;;

```
.IF $AM_SELECT1 EQS "" THEN DISPLAY There is no item to edit\\FORCE ELSE FORM
TODOENT /MODE=CHANGE/START=""T','TO DO LIST',$AM_SELECT1'/ONE_ENTRY\GET
$TD_DATE_SAVE=O$TM_DATE\GET $TD_NUMBER_SAVE=$AM_SELECT1\GET
$TD_SEL2_SAVE=
$AM_SELECT2\GET #TODOFLAG=0
```

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## FALL DECUS 1987

### OA SYSTEM IMPROVEMENT REQUEST RESPONSES

Robert Malay, Digital Equipment Corp.

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#### Rank #1

287038 *Allow for multi-level indents. Currently, only one line can be indented with the word wrap tab (W)*

GOOD SUGGESTION. WE RECOGNIZE THIS AS AN IMPORTANT REQUIREMENT AND ARE STUDYING WHAT IT WOULD TAKE TO IMPLEMENT.

#### Rank #2

387023 *The status line should reflect the correct line spacing when using double or line-and-a-half spacing.*

WE RECOGNIZE THE IMPORTANCE OF THIS REQUIREMENT AND ARE SERIOUSLY CONSIDERING IT FOR INCLUSION IN A FUTURE RELEASE.

#### Rank #3

487003 *Allow multiple users to log into and work in the same ALL-IN-1 account (same Username), concurrently, while maintaining the integrity of the data files.*

THIS CAN BE DONE AT PRESENT BUT THE PROCESS DOES NOT GUARANTEE THE INTEGRITY OF THE DATA FILES. IT IS ON OUR FUTURE REQUIREMENTS LIST BUT IS UNLIKELY TO BE INCLUDED IN THE NEXT RELEASE.

#### Rank #4

387015 *When Filing an Attachment, if there is only one attachment, don't prompt for which attachment should be filed.*

IT IS ON OUR FUTURE REQUIREMENTS LIST BUT IS UNLIKELY TO BE INCLUDED IN THE NEXT RELEASE.

#### Rank #5

387018 *Allow Mailing of an entire Folder, and then filing of that folder without reading through every document in the folder.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

#### Rank #6

487005 *When viewing the display of an Index request, allow the user to scroll backward as well as forward.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

#### Rank #7

287025 *Provided the ability to make duplicate/recurring calendar entries, i.e. Meetings, Appointments, Reminders, Actions Items, and To Do Lists. A single screen should be used to make the duplicate/recurring entries.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #8

487012 *The Return Receipt function should not create a document in the reader's OUTBOX folder.*

THIS IS ON OUR FUTURE REQUIREMENTS LIST BUT IS UNLIKELY TO BE INCLUDED IN THE NEXT RELEASE.

Rank #9

287013 *Provide the capability to READ, MODIFY, and CREATE/WRITE text DSAB's that are compatible with ALL-IN-1 DSAB's; this would allow for the complete manipulation of documents. This facility should be documented in the APR manuals.*

THIS FUNCTIONALITY IS AVAILABLE THROUGH SOFTWARE SERVICES. CONSULT YOUR LOCAL OFFICE FOR DETAILS.

Rank #10

387009 *Improve the facilities for managing mail distribution across a multi-node network, e.g. users shouldn't have to know what node another user is on.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #11

185004 *Provide the ALL-IN-1 system manager with the ability to manipulate mail messages.*

WE ARE NOT SURE WHAT IS MEANT BY THIS. COULD YOU PLEASE CLARIFY.

Rank #12

385042 *Recognize the ALL-IN-1 script facility or language as a language and support it as a language, with the language standards. Also, provide a TPU interface so that we can get past the SYNTAX and get to the application building.*

WE ARE CONSIDERING THE FIRST PART FOR INCLUSION IN A FUTURE RELEASE. A TPU INTERFACE IS AVAILABLE FROM SOFTWARE SERVICES. PLEASE CONTACT YOUR LOCAL OFFICE FOR DETAILS.

Rank #13

387010 *Provide an easy way to change an ALL-IN-1 username.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #14

487022 *The meeting scheduler should have the option of being included as a meeting attendee. This will allow the secretaries to schedule meetings from their own account, rather than from their managers' account.*

THIS IS ON OUR FUTURE REQUIREMENTS LIST BUT IS UNLIKELY TO BE INCLUDED IN THE NEXT RELEASE.

Rank #15

487031 *Display the ruler at the top of the screen all of the time.*

WE HAVE RECEIVED SEVERAL REQUESTS FOR THIS FUNCTIONALITY AND ARE STUDYING THE IMPLICATIONS OF PROVIDING IT.

Rank #16

485014 *Add an option to allow a user to get a list of the sender and all addressees at the MAIL ANSWER prompt.*

THIS IS NOT AN OPTION THAT WE WILL SPECIFICALLY INCLUDE IN THE IMMEDIATE FUTURE. HOWEVER IT IS POSSIBLE TO VIEW ALL ADDRESSEES USING THE SHOW HEADER OPTION. IT IS ALSO POSSIBLE TO CUSTOMIZE THE SYSTEM TO PROVIDE THIS AUTOMATICALLY WHEN ANSWERING MAIL MESSAGES.

Rank #17

485009 *An option is needed to present expansion of distribution list or not, as subscribers are handled, since lists of names in excess of 20 are cumbersome.*

THIS FUNCTIONALITY IS CURRENTLY AVAILABLE THROUGH SOFTWARE SERVICES. CONSULT YOUR LOCAL OFFICE FOR DETAILS. WE ARE CONSIDERING INCLUDING IT IN A FUTURE VERSION.

Rank #18

187022 *Save the default print settings in Electronic Mail messages, rather than forcing the user to set them each time.*

CARRYING FORWARD PRINT SETTINGS WITH A DOCUMENT COULD LEAD TO PROBLEMS SINCE THE SYSTEM COULD NEVER KNOW WHAT PRINTERS THE MESSAGE RECIPIENTS HAVE. PRINT SETTINGS ARE PECULIAR TO A USER AND NOT NECESSARILY TO A MESSAGE.

Rank #19

487019 *The cursor movement keys should be enhanced to allow the right arrow key to move forward one day and the left arrow key to move backward one day.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #20

487024 *Add a time field to Reminders so that the user can be prompted while logged on rather than only at the beginning of the session.*

THIS IS ON OUR FUTURE REQUIREMENTS LIST BUT IS UNLIKELY TO BE INCLUDED IN THE NEXT RELEASE.

Rank #21

187009 *Provide additional script functions for string manipulation, similar to DCL Lexical Functions, except without having to use DCL.*

THIS ITEM WILL BE CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #22

187012 *Provide a menu option: Print INBOX.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #23

385014 *Provide additional development tools to aid in development of ALL-IN-1 applications, such as cross-reference utilities.*

THIS ITEM WILL BE CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.



Rank #24

187028 *The ALL-IN-1/Message Router interface should be better integrated and easier for the System Manager to utilize.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE. WE ARE ALWAYS LOOKING AT WAYS OF IMPROVING OUR INTERFACE AND SPECIFIC SUGGESTIONS ARE VERY WELCOME.

Rank #25

387004 *Provide a message indicating the Spell Checker has finished.*

WE ARE LOOKING AT INCLUDING THIS FUNCTIONALITY AT A FUTURE RELEASE.

Rank #26

187005 *The contents of a document should be consistent, regardless of its origin. A document created in Electronic Messaging appears to contain both header and text; therefore, when such a document is transferred, both the header and text should be transferred. The fact that only the text is transferred is very difficult to explain to an ALL-IN-1 user.*

THIS IS ON OUR FUTURE REQUIREMENTS LIST AND WILL BE CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #27

287016 *Provide the ability to see which Electronic Messages you have sent that have been READ, without having to use Read Receipts. This function would be similar to the Message Search (MS) function from ALL-IN-1 Version 1.3.*

THIS ITEM IS HIGH ON OUR PRIORITY LIST OF DESIRABLE FUNCTIONALITY AND WILL BE SERIOUSLY CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

Rank #28

487055 *Enhance the Gold Get option to allow specification of pages within a document or all of the document*

A NEW BOOK THAT DIGITAL IS PUTTING OUT CALLED WPS-PLUS EXPRESS GIVES A NEAT TRICK ON HOW TO DO THIS AND WE ARE ALSO CONSIDERING THIS ENHANCEMENT FOR INCLUSION IN A FUTURE RELEASE.

Rank #29

487033 *In the two dimensional editor, provide the ability to draw diagonal lines.*

THE TDE SUPPORTS THE VT100 LINE DRAWING SET WHICH DOESN'T SUPPORT DIAGONAL LINES. YOU WOULD NEED TO GO TO A BIT-MAPPED TERMINAL FOR THIS FUNCTIONALITY. (THERE ARE CHARACTERS IN THE TCS THAT MIGHT IMPROVE CAPABILITY HERE, THOUGH NOT PERFECTLY.)

Rank #30

387008 *There should be a User Profile option to provide for Auto Delete of Return Receipts.*

THIS IS ON OUR FUTURE REQUIREMENTS LIST AND WILL BE CONSIDERED FOR INCLUSION IN A FUTURE RELEASE.

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## TIME TO VOTE !

E. Catherine Ditamore, ARA Services, Inc.

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Once again, it's time to vote on the SIR's! The System Improvement Request (SIR) Process provides us, Digital users, with a mechanism to help guide the development of Digital's Office Automation (OA) products. SIR's are submitted by you and then prioritized through a tally of your votes on the SIR's. It is this prioritized list that Digital will review in order to prepare their response, which will be given at the OA Wish List Session in Cincinnati. For those of you not attending the symposium, you'll find the response printed in the OA SIG Newsletter after symposium.

In order to give Digital an adequate amount of time to form their response, you need to vote TODAY! Any ballots received after MARCH 28 cannot be counted. You'll find the ballot in the "tear-out" section at the end of the newsletter.

The list of SIR's was compiled from three sources: completed SIR forms (like the one in the "tear-out" section at the end of the Newsletter); wishes submitted at the OA Wish List session during symposium; and, SIR's to which Digital has not yet made response but which received votes during a prior ballot.

The SIR's are grouped below by category, to simplify your review. You have 100 points to allocate among the SIR's on the ballot, although you may not give any one SIR more than 10 points. You may assign the point values in either a positive or negative sense: a high positive value would strongly encourage change, and a low negative value would discourage the change. For example, if the positive points total 80 and the negative points total 20, the allowed 100 points have been fully utilized. Remember, only one ballot per DECUS member will be accepted!

### ALL-IN-1: GENERAL ENHANCEMENTS AND CAPABILITIES

- 185002 Provide the capability for system-wide nicknames.
- 185025 Provide better integration of ALL-IN-1 with the following products: DECslide, DECgraph, and DECalc.
- 185029 Provide a conversion utility telling you what's been changed in your current ALL-IN-1 system.
- 385013 Provide improved security and protection features for ALL-IN-1, something on the order of allowing users to see the menus and the selections on them, but not be able to execute the individual functions unless they have been authorized to do so.
- 485058 Document header formats should be identical for ALL-IN-1, PCs, and DECmates so that a document transfer will retain keywords, subject, author, etc.
- 486013 ALL-IN-1 should support the IBM PC/XT/AT printer port; i.e. the user should be able to select PORT IBM like PORT LA50 can be selected.
- 187003 Provide updates to the ALL-IN-1 documentation kits from version to version. rather than complete new documentation kits.
- 187007 Provide ALL-IN-1 Error Message Documentation on DSIN.
- 387001 Have the print formatter recognize and correctly interpret the special print characteristics embedded in COBOL/FORTRAN generated print files.
- 387005 Expand the length of the Nickname Management name field so that it can be used to assist in accessing public networks.
- 387006 Provide TPU support.

- 487001 Allow the user to "blank out" the ALL-IN-1 screen via one or two keystrokes.
- 487002 Digital should establish a corporate philosophy that all software will require the same keystrokes to perform similar functions, and establish and publish a User Interface Standard.
- 188001 When transferring a User, the PERSONAL.LGP (used by Spell Check) should also be transferred.
- 188002 Provide the ability to edit the Spell Check dictionary. Personal dictionaries should not include the company name and company specific terms; they should reside in the main dictionary. Also, it would be desirable to remove some words from the dictionary.
- 188003 Enhance Personal Dictionary support to provide an automated "fix" facility for correcting corrupted or "broken" files or dictionaries.
- 188004 Provide a supplemental dictionary that contains medical terms.
- 188005 When programs that were obtained from the ASSETS library are updated for compatibility with new All-In-1 versions, they should be made available at no charge to companies where they are installed.
- 188006 Implement a corporate wide policy regarding pricing of ASSETS library programs. There is a significantly wide spread in pricing across the United States.
- 188007 Allow the user to control which "system" printer PAPER MAIL is to be printed on and/or allow the user to specify that PAPER MAIL is to be printed to the "bit bucket".
- 188008 When using the GOLD-A function for printing, allow the selection of multiple non-consecutive pages, e.g. pages 3, 6, and 9.
- 188009 Allow users to control their print jobs when they are queued to a shared printer, similar to the DECmate facility STOP Printer that is used for a dedicated printer.
- 188010 Provide direct support of Postscript from All-In-1 and WPS-Plus without having to go through a translator.
- 188011 When printing documents that are wider than the printer will accommodate, the document should be automatically broken into segments with each segment printing in full before the next segment prints so that the user can easily reassemble it.
- 188012 Provide the same LN03 capabilities on All-In-1/WPS-Plus as on the DECmate.
- 188013 Provide a higher grouping of documents than folders, similar to the DRAWER facility on WPS-Plus/DOS.
- 188014 Allow the sharing of All-In-1 files, folders and file cabinets in Read, Write and Append mode as part of the standard All-In-1 product.
- 188015 Allow users to Read a shared document without having to make a copy of it and without the System Manager having to establish different VMS file protections or ACLs.
- 188016 Provide File Cabinet Access Management, similar to Calendar Access Management. The authorized user would need the ability to review the documents in another's file cabinet, unless they are marked as confidential.
- 188017 Provide a method to execute List Processing in batch mode in order to minimize the impact on system performance.
- 188018 Provide a convenient way of handling foreign (non-All-In-1) documents at the receiving end after they have been mailed.
- 188019 Provide the capability for system-wide UDPs.
- 188020 Provide a "distributed" All-In-1. This system would include an IBM-Generator kit so that All-In-1 and any company-developed All-In-1 customization could be down-loaded into an IBM PC/AT or IBM PS/2. A great deal of the functionality (more than just Word Processing) would reside on the PC; it would be transparent to the user as to which functions executed on the PC and which required access to the VAX.

- 188021 Make a major program announcement as to the relationship between DECWindows and All-In-1.
- 288001 When creating a document or changing a document title, any word in the title should be entered as a keyword for that document.
- 288002 Validate the Username when it is entered in the Nickname Management Subsystem, rather than letting validation occur when the nickname is used.
- 288003 Provide an option that allows the user to turn off (or on) terminal output while a UDP is processing.
- 288004 Provide a menu option for mailing UDPs and for filing UDPs received via the Electronic Mail Subsystem.

### ALL-IN-1: SYSTEM AND SYSTEM MANAGER FUNCTIONS

- 485016 Provide a function (OA\$SYM-DELETE) to delete symbols from the permanent symbol table.
- 486008 Provide the ability to run ALL-IN-1 user main processes at a higher priority (than other users), while any ALL-IN-1 user sub-processes would run at the normal (default) priority.
- 187008 Provide an ALL-IN-1 Guide to Development for new ALL-IN-1'ers.
- 287001 Provide a script function that is equivalent to a PASCAL "case" statement.
- 287014 Provide technical ALL-IN-1 Training, *ANYWHERE* (Ed. Services, DECUS, etc.)! It should consist of Introduction to Scripts, Intermediate Scripts, Advanced Scripts, etc.
- 387007 Provide a statistical analysis that would allow the system manager to monitor ALL-IN-1 user activity.
- 387011 For sites running non-homogeneous clusters, provide a facility (for use by the ALL-IN-1 manager) that allows mail messages that have been delivered to the wrong node to be redirected.
- 387012 Allow the Carpenter facility to run on a subset of the ALL-IN-1 system, e.g. on a crashed disk, so that the system can be restored quickly, rather than taking the many hours required to rebuild the entire system.
- 387013 When deleting an ALL-IN-1 user, the entries in PENDING.DAT and MEETING.DAT should also be deleted.
- 487006 Provide menu-driven system administration functions (such as backup, queue management, etc.) for non-technical VAX environments, similar to A-Z Systems.
- 487007 Provide a tape backup and restore facility for all documents in *one* ALL-IN-1 folder.
- 188022 Enhance the FVR System Management function to operate off a selection list.
- 188023 Document, explain, and include the All-In-1 install procedure in the distribution kit of any other layered product interfacing with All-In-1, i.e. VAXNotes.
- 188024 Provide procedures outside of All-In-1 that will convert WPS-Plus documents to ASCII text files. Currently, a system logical will do this for documents handled by the Message Router, but it converts the document to text regardless of whether or not the destination node/user is running All-In-1; there needs to be better method than a system logical. A callable procedure that allows the system manager to customize the system to do the conversion outside All-In-1 before it reaches the Message Router would be an acceptable work-around.
- 188025 Provide a System Management function that allows purging of Mail Box folders for all users, i.e. file it or lose it.
- 188026 Include an All-In-1/WPS-Plus LOGIN.COM file in each VMS kit (major or minor release) that will reflect the changes necessary for compatibility with the new VMS version.

- 188027 Provide a re-build procedure that will convert WPS-Plus documents from the inefficient state they reach after heavy editing back into an efficient state. This procedure should operate off a selection list so that it can be specific to a document, all documents in a folder(s) or file cabinet, all documents for selected users, or all documents on the system.
- 188028 Provide a Customization Management facility that accommodates customization to the All-In-1 system without changing users' OAINI.COM or USER.FLB and without having to add multiple form library names to the users' profile.
- 188029 When using All-In-1 to develop applications requiring file access, only one user can access the file at a time. All-In-1 should handle record locking, as it did in V1.x.
- 288005 Provide the ALL-IN-1 system manager with the ability to manipulate mail messages: to delete all messages (read or unread) for any user (without having to read them first), to delete an unread message if the recipients have not yet read it, and to delete a message regardless of whether or not the recipients have read it. Additionally, when the system manager deletes a user, the outstanding mail messages (read and unread) should be automatically deleted.
- 288006 State VAX CPU performance claims/estimates in office terms rather than in terms of concurrent users. For example, indicate how many users a CPU will support if they are typing at 70 words a minute and using Word Processing or Electronic Mail.
- 288007 Provide reporting facilities where the system manager can select messages by time created and have displayed the users attached, or select messages by title (or partial title) and have displayed the users attached.
- 288008 Allow node specific ports to be added when defining computer lines, e.g. nodename::TXA1. This is especially important in a VAXCluster with load balancing implemented — the user doesn't know if he's on the same machine as the dial-out modem.
- 288009 Make the WPS-Plus editor callable rather than linked with All-In-1. If it were a callable image users could build their own shell with just the features that they wanted or needed.
- 288010 Provide system services or programmer facilities to access and manipulate WPS-Plus files, the All-In-1 file cabinet, etc. from high level languages such as C.
- 288011 Entry form scrolled regions should be more accessible. Currently when developing All-In-1 application entry forms with scrolled regions, it is difficult and messy to combine the scroll data file with the entry form data file.

### **ALL-IN-1: ELECTRONIC MESSAGING**

- 485001 Provide some kind of audit trail, notification to a user or duplicate messages indicating that something was sent to him and auto-forwarded.
- 386023 Provide the ability to request Return Receipts from selected users, rather than all recipients of a mail message.
- 486001 Provide a user-selectable default for Received Receipts and Read Receipts; currently, NO is the default and YES must be selected on a per document basis.
- 187026 When Spell Check is selected from Electronic Messaging (EM), ensure that it returns to the EM menu, not Word Processing.
- 287018 Expand the Current Item Block to include the name of the sender of the message.
- 287020 Allow messages to be deleted before they have been read.
- 287021 Expand the mail header on "answer" messages to include a reference to the title of the document being answered.
- 387014 Provide the ability to mail spreadsheets and executable images (binary files).
- 387016 Provide a Speed Read facility that allows you to Read New Mail messages, but does not return to the E-mail menu after reading each mail message.

- 487008 For the ANSWER function, Paper Mail recipients should be identified by name, not just "Paper Mail".
- 487009 The recipient of a message should be notified as to who sent the message and that a Return Receipt was requested. The recipient should then have the option of *not* reading the message at that time, so that the Return Receipt will not be generated until it is read.
- 188030 Allow for the use of Next Screen and Previous Screen keys and allow "search" capabilities when executing the Read New function.
- 188031 After Reading a new mail message, automatically display a Delete Message prompt with the default set as "no".
- 188032 Automatically alphabetize Distribution Lists after any changes or entries are made.
- 288012 Save the default print settings in Electronic Mail messages, rather than forcing the user to set them each time. Given the method that Digital has chosen for managing mail messages (maintaining one copy regardless of the number of recipients), print settings should be maintained on a per user basis, rather than on a per document basis. Print settings may differ based upon the type of printer used by individual departments, and print settings that are appropriate for the LN03 may be very different from those appropriate for the LA100. Forcing the recipient to use the sender's print settings for the message is inconsistent with the All-In-1 concept of flexibility as well as with the print facilities available for Word Processing documents. A user cannot be expected to remember which documents were created with Electronic Mail and which with Word Processing.
- 288013 Allow Distribution Lists to be created from an ASCII file of valid addresses. Currently, Distribution Lists must be created by manually entering each username.
- 288014 Provide a function that allows a user to "recall" a message, if none of the addressees have read it.
- 288015 Provide an alarm facility that will notify the user if there are any mail messages in the CREATED folder over "x" days (or perhaps 48 hours) old. This will minimize the number of times users create mail messages and forget to send them.
- 288016 Allow keywords to be added to a mail message AFTER it has been filed. Currently, keywords cannot be changed in the UPDATE function.
- 288017 DO NOT expand the Distribution List; leave it as it is entered rather than displaying the users on the list.

### ALL-IN-1: TIME MANAGEMENT

- 287026 All Time Management facilities should use the same entry screen. This would be consistent with a user having a single calendar page for a day.
- 287029 In Time Management To Do Lists, provide the ability to print and view the items in priority sequence.
- 387019 Provide a Multiple Delete/Purge option for Action Items, Reminders and To Do's, similar to the facility in Meetings and Appointments.
- 387020 Allow Calendar Access (i.e. Management, Two Calendar Access, Meetings) to work across nodes. (Note: Multiple nodes, connected via DECnet, can be located in the same building.)
- 487014 If an appointment is scheduled within the bounds of the hours specified in the user profile, the AM or PM notation should be optional, e.g., from 8 to 12 should assume 8AM to 12PM.
- 487015 Replace the Display Events and Print functions for Weeks and Months Schedule with something more similar in format to the Days Schedule. And, rather than have three menu entries (day, week, and month) have a single menu entry that allows the user to specify the number of days to list.

- 487016 On the Advanced Calendar display, the selected appointment should be highlighted so the user can easily see which appointment would be edited, deleted, etc.
- 487017 In the Advanced Calendar function, instead of using the SEL function, the user should be able to position the cursor on the appointment to be operated on and then press the desired function, such as D (delete) or E (edit).
- 487020 Prior to scheduling a meeting, a check of the attendees calendars should be made to ensure that they don't already have an activity scheduled.
- 487023 Eliminate the To Do function as it is too similar to the Action Item and Reminder functions.
- 487029 Add a 'tentative meeting scheduled' status. This should appear on the user's calendar until an attendee accepts or declines the invitation to a meeting. (This should also appear when the SCAN function is used.) If the meeting scheduler cancels a meeting, the 'tentative meeting scheduled' status should be removed.
- 188033 When Scheduling a Meeting, automatically look for a free time slot for the scheduler and those attendees on the local VAX or on the VAXCluster. For attendees on remote VAXes, just send the message for the meeting just scheduled.

### **WPS-PLUS: GENERAL**

- 385033 Provide better journaling in WPS-Plus so that a little bit more of the document is left when the system crashes and comes back.
- 485049 Allow all PC's to transfer files and WPS documents to ALL-IN-1, Rainbow and P/OS, as part of user-friendly application.
- 485056 Enable DECmates, Rainbows, PRO's and anything else running WPS-Plus to directly exchange documents.
- 187021 In WPS-Plus List Processing, provide the ability to use multiple forms.
- 287030 The location of the NEW PAGE marker should be consistent in List Processing Form Documents. Currently, the location differs between DECmate WPS and WPS-Plus/VMS documents.
- 287061 Allow WPS-Plus to support the escape <ESC> character, as EDT does; this would implicitly allow users to support their own non-Digital printers.
- 287062 WPS-Plus does not require a Right margin when rulers are defined; a Right margin should be required. This is inconsistent with the other WPS products and can cause problems when editing the document.
- 287063 The Index function in WPS-Plus/VMS should display the VMS file specification for each document.
- 287064 The Index function in WPS-Plus/VMS should display the VMS file size (in blocks).
- 387022 In WPS-Plus, when the user moves past the bottom or top of the document, "any key" must be pressed in order to continue. Change the function to recognize any Gold-key or arrow sequence as alternatives to the "any key to continue".
- 387024 Make the Footnote Editor work the same as WPS-Plus, in terms of size, editing features, etc.
- 387025 The Gold-Get facility of WPS-Plus/All-In-1 should retain the rulers of an E-mail message.
- 387026 Make WPS-Plus/All-In-1 display text correctly when Mail Notify and Broadcast Messages are received.
- 487030 Provide a status line for cursor position and insert/overstrike status.
- 487032 Provide a small reference card that can be placed next to the terminal to prompt the user on commonly used functions.
- 487035 Provide multiple paste buffers.

- 487037 Provide a Widow/Orphan option.
- 487039 Allow editing to occur in View mode.
- 487040 Provide for auto-hyphenation.
- 487041 Provide a facility for automatically creating an Index for a document.
- 487042 Provide a facility for automatically creating a Table of Contents for a document.
- 487046 Current Text Size should automatically be adjusted according to the document's page size and top and bottom margins. Or, the Current Text Size should be located on the Print menu instead of the Editor's menu.
- 487049 Change the status so that the line number of each page is displayed when scrolling backwards.
- 487053 Provide a statistical column layout feature.
- 487054 Allow for automatic column centering for column headings.
- 487056 When printing, allow several non-consecutive pages of a document to be queued at the same time.
- 188034 Provide a column facility in WPS-Plus.
- 188035 Provide WYSIWYG, multi-column editing and column cut and paste.
- 188036 Provide a key for toggling the status line in and out, such that once it is toggled on it will remain displayed until it is toggled off.
- 188037 Allow WPS-Plus to support proportional fonts.
- 288018 Include an Insert/Overstrike key.
- 288019 Retain the last specified search phrase when exiting from a document so that it can be used for the next document — just as the paste buffer is managed.
- 288020 When printing a document, "from" and "to" pages (via PG) should NOT be saved. The "from" and "to" should automatically be reset to 1 and 0 after printing.

### **WORD PROCESSING: WPS-Plus/DOS**

- 486023 WPS-Plus/PC should be more like WPS/DECmate — there are differences in the user interface, keystrokes and functionality.
- 287037 Provide the ability for print functions to occur in the background.
- 287039 Provide support for Overstrike Mode, rather than just Insert Mode.
- 287049 Develop a "hot-key" to DOS to allow simple DOS commands to be executed without exiting WPS-Plus/PC.
- 188038 Have WPS-Plus/DOS support the Toshiba keyboard.

### **MISCELLANEOUS**

- 386065 The LN03 should not produce controller errors every time pages that are more than 90 characters wide are sent to it.
- 387027 Increase the amount of information provided by the Message Router Manager Utility about mail messages, e.g. name of sender, name of receiver, etc., in order to simplify problem tracking and resolution.
- 188039 Provide dual tray sheet feeders (with envelope capabilities) on LN03 laser printers.



# PERSONAL COMPUTER SPECIAL INTEREST GROUP



## NEWSLETTER

# TABLE OF CONTENTS

## PRO Section

PRO Software Update - - - - -	PC-1
By Gary Rice - New releases for some existing software	
PROgramming Quickie - - - - -	PC-3
By Gary Rice - How to fake an AST from FORTRAN	
Updates to the PRO Public Domain Software Collection - - - - -	PC-6
By Gary Rice	

## General Section

Digital Announces PCSA Version 2.0 Program - - - - -	PC-9
By Digital Equipment Corporation	
DIGITAL EXTENDS NETWORK APPLICATIONS SUPPORT FACILITIES TO UNIX, APPLE MACINTOSH, MS-DOS AND OS/2 USERS - - - - -	PC-10
By Digital Equipment Corporation	
PCSA TO SUPPORT COMPAQ, OLIVETTI, ZENITH - - - - -	PC-12
By Digital Equipment Corporation	

## Workstations Section

Speeding Up Your Scriptprinter (and Making it Work) on a VAXstation - - - - -	PC-13
By Mark Sebern - Upgrading to Postscript on your VAX-PC	

## MACINTOSH Section

APPLE COMPUTER AND DIGITAL EQUIPMENT CORPORATION ANNOUNCE JOINT DEVELOPMENT EFFORT - - - - -	PC-15
By Digital Equipment Corporation - The MAC has been Officially "blessed"	

## VAXmate Section

No submissions this month.

## Rainbow Section

No submissions this month.

## DECmate Section

No submissions this month.

## PRO Software List Update

Coordinated by Gary Rice, PC SIG Newsletter Editor

In an effort to keep you informed about software being shipped from various vendors, I began the following list in April, 1986. This list was last published in the October, 1987 issue of these Newsletters. The updated list reflects information that I have received as of January 23, 1988. An asterisk by an entry indicates that the item has changed or been added since the last time the list was published.

	<u>List</u>	<u>Last</u>	<u>Source</u>	<u>Still</u>	<u>P/OS v3</u>
	<u>Price</u>	<u>Rev</u>	<u>of info</u>	<u>Avail?</u>	<u>Supported?</u>
<u>DEC Software</u>					
20/20	495	1.0.54	User	Yes	UNK
Athena/Graph	450	1.0	DEC	Yes	UNK
BASIC-11/RT-11					
			(Replaced - See BASIC-PLUS/RT-11)		

<u>DEC Software</u>	<u>List Price</u>	<u>Last Rev</u>	<u>Source of info</u>	<u>Still Avail?</u>	<u>P/OS v3 Supported?</u>
BASIC-PLUS/RT-11	UNK	3.0	DEC	Yes	N/A
CT*OS	UNK	1.0	DEC	Yes	UNK
Design Graphix/Executive	595	1.0	User	Yes	Yes
Easyentry	995	3.0B	DEC	Yes	UNK
FORTTRAN IV/RT-11	495	2.8	DEC	Yes	N/A
*Installation & Maintenance	UNK	3.2	DEC	Yes	Yes
LOGO	350	1.4	DEC	Yes	UNK
MAIL-PLUS	N/A	1.0	DEC	No	N/A
MJA Accounts Payable	600	5.2	DEC	Yes	UNK
MJA Accounts Receivable	600	5.2	DEC	Yes	UNK
MJA General Ledger	600	5.2	DEC	Yes	UNK
MJA Order Entry/Inventory	600	5.2	DEC	Yes	UNK
MJA Payroll & Personnel	600	5.2	DEC	Yes	UNK
NPL Information Management	N/A	1.4	DEC	No	UNK
Phoenix-PRO	1795	1.0A	DEC	Yes	UNK
P/OS ADCCP Driver	UNK	1.0	DEC	UNK	UNK
P/OS (Diskette)	N/A	1.8	DEC	No	No
P/OS (Hard Disk)	475	*3.2	User	Yes	Yes
P/OS Hard Disk (Arabic)	783	R3.1	DEC	Yes	Yes
PRO 2780/3780	53	1.2	DEC	DECUS	No
PRO Application Starter Kit	399	1.0	DEC	Yes	No
PRO/Associate	N/A	1.0	DEC	No	No
PRO/BASIC	195	1.4	DEC	Yes	Yes
PRO/Comm (diskette)	N/A	*1.8	DEC	No	No
PRO/Comm (hard disk)	195	3.0	DEC	Yes	Yes
PRO/CPM-80	UNK	1.1	DEC	UNK	UNK
PRO/Datatrieve	495	2.0	User	Yes	Yes
PRO/DECnet	250	*2.1	DEC	Yes	Yes
PRO/FORTTRAN-77 Debug (See PRO/Toolkit Symbolic Debugger)					
PRO/IVIS	UNK	3.1	DEC	Yes	Yes
PRO/Laboratory Subroutine Lib.	300	1.2	DEC	Yes	Yes
PRO/NAPLPS	N/A	1.0	DEC	No	No
PRO/Office Workstation	UNK	2.0	DEC	Yes	Yes
PRO/PRODUCER Toolkit	300	1.6	DEC	Yes	Yes
PRO/RDT	495	1.1	DEC	Yes	Yes
PRO/Scientific Subroutine Library	300	1.3	DEC	UNK	No
PRO/SIGHT	295	1.1	User	Yes	Yes
PRO/SNA	N/A	1.1	DEC	No	No
PRO/Smart Mailer	53	1.0	User	DECUS	Yes
PRO/Toolkit	520	*3.2	DEC	Yes	Yes
PRO/Toolkit BASIC-PLUS-2	495	*2.5	DEC	Yes	Yes
PRO/Toolkit COBOL-81	495	2.4	DEC	Yes	Yes
PRO/Toolkit DIBOL	495	1.7	DEC	Yes	Yes
PRO/Toolkit FORTTRAN-77	495	5.2	DEC	Yes	Yes
PRO/Toolkit PASCAL	495	1.3	User	Yes	Yes
PRO/Toolkit Real Time Library	150	2.1	DEC	Yes	Yes
PRO/Toolkit Symbolic Debug	200	2.0	DEC	Yes	Yes
PRO/VENIX	495	2.0	DEC	Yes	N/A
PRO/Videotex	895	1.0	DEC	Yes	UNK
Professional CTS-300	995	1.0	DEC	Yes	N/A
Professional Real Time Lib/RT-11	250	1.0	DEC	Yes	N/A
PROSE PLUS	295	2.0	User	Yes	Yes
RS/1	1900	12.0	User	Yes	UNK
RSX Host Toolkit	UNK	3.0	DEC	Yes	Yes
RT-11	550	*5.4B	DEC	Yes	N/A

<u>DEC Software</u>	<u>List Price</u>	<u>Last Rev</u>	<u>Source of info</u>	<u>Still Avail?</u>	<u>P/OS v3 Supported?</u>
Supercomp-20	N/A	1.28	User	No	UNK
Synergy	695	2.0	User	Yes	Yes
VAX Host Toolkit	UNK	3.0	DEC	Yes	Yes
WPS/Plus	695	1.0	DEC	Yes	Yes

<u>3rd Party Software (Vendor)</u>	<u>List Price</u>	<u>Last Rev</u>	<u>Info Source</u>	<u>Still Avail?</u>	<u>P/OS v3?</u>
D-M-DRIVER for P/OS (PROTO SYSTEMS)	295	V2/V3a	Vendor	Yes	Yes
Fingraph (Graphic M*I*S)	N/A	2.0	DEC	No	UNK
IT*OS (Intermation)	UNK	5.2	User	Yes	UNK
Online Disk Unfragmentor (By Hand)	*59	*2.0	Vendor	Yes	Yes
PRO/Menu Manager (Wasatech Computer)	25	1.0	User	Yes	No
PRO/Sentinel (By Hand)	47	1.0	Vendor	Yes	Yes
PRO/Session Logger (By Hand)	29	2.0	Vendor	Yes	Yes
PRO/Text Locator (By Hand)	43	1.1	Vendor	Yes	Yes
RDM Relational Data Manager (Interactive Technology)	995	4.0L	User	Yes	Yes
SPSS/Pro (SPSS Inc.)	UNK	1.1	Vendor	Yes	Yes
TK!Solver (Software Arts)	N/A	1 (2A)	User	No	UNK

If you have received a shipment of software in the last month (and you DIDN'T get it in a fire sale), please compare the documented REV level to the one I have listed. If your software is more recent (or it isn't listed at all), please let me know so I can update the list. Also, if the source of my information is listed as "DEC", I would appreciate hearing from a user, since I've found that hearing about it from DEC doesn't always mean that it is actually shipping. I will publish a new list each time it changes.

You can contact me at: McDonnell Douglas  
5555 Garden Grove Blvd.  
MS: K20 77/200  
Westminster, CA 92683  
(714) 952-6582

## PROgramming Quickie

By Gary Rice, PC SIG Newsletter Editor

In the process of creating the "ultimate" in "user friendly" programs, I found it necessary to provide a way for a user to cancel out of a menu option that initiated a lengthy activity. Now, you say, what about the <Interrupt> <Do> sequence? Well, in my program, I do some things that wouldn't be very nice to a user's system if they were left hanging around. The <Interrupt> - <Do> sequence just didn't give me the control that I needed to "clean up" after myself and still give the user the desired control over canceling an activity that was taking too long.

Reading through my manual set, I came across some references to AST (Asynchronous System Trap) routines. These routines seemed to provide exactly what I was looking for. Further reading was frustrating though, because most of these routines provided no "high level language" support and I didn't want to write the program in MACRO.

Thinking about the problem some more, I remembered that a QIO could be issued to read something, but program execution could continue even though the "read" hadn't finished. Using this knowledge, I came up with the following piece of code that seems to work quite nicely.

```

C CHPAST.FTN - This program (CHeaP AST) demonstrates a method of
C             simulating an AST in FORTRAN
C
C ORIG VERS:      1.0
C
C CURR VERS:      1.0
C
C AUTHOR:         Gary Rice
C
C CREATED:        January 2, 1988
C
C REVISIONS:      None
C
C INPUTS:         None
C
C OUTPUTS:        None
C
C*****
C
C             PROGRAM CHPAST
C
C
C             BYTE BUFFER(20)           ! Set up a "big" keystroke buffer
C             INTEGER*2 PARM(6), STATUS(2) ! Needed for the QIO call
C             INTEGER*2 FLAG             ! Event flag
C             INTEGER*2 SET              ! Event flag checker
C             INTEGER*2 LUN              ! Logical unit #
C
C
C             CALL GETADR (PARM(1), BUFFER) ! Get the addr of the buffer
C             FLAG = 16                    ! Pick an unused event flag
C             LUN = 16                     ! Match it with a logical unit #
C
C
C Attach the terminal to the task (octal 1400) with escape sequence
C recognition (octal 20)
C             CALL WTQIO ("1420,LUN,FLAG)
C
C
C Make sure that the terminal can capture escape sequences by issuing
C the equivalent of the "$ SET TERMINAL/ESCAPE" command (ie: "Set
C Multiple Characteristics" QIO)
C             BUFFER(1) = "35              ! Escape Sequence Recognition
C             BUFFER(2) = 1                ! Turned ON
C             PARM(2) = 2                   ! # of bytes in "BUFFER"
C             CALL WTQIO ("2440,LUN,FLAG,,STATUS,PARM)

```

```

C
C
C Issue a QIO that doesn't wait for completion. Use a "Read Logical Block"
C (octal 1000) with the "No echo" (octal 20) sub-function set
      PARM(2) = 20                ! The buffer's size
      CALL QIO ("1020,LUN,FLAG,,STATUS,PARM)

C
C
C Your program code goes here
C
C
C
      CALL READEF (FLAG,SET)      ! Check on the "AST"
      IF (SET .EQ. 2) GOTO 999    ! If SET=2 then the QIO has completed

C
C
C More program code . . .
C
C
C
999      CALL WTQIO ("20,LUN,FLAG) ! Cancel the QIO to avoid a stack dump
      END

```

Calls to the READEF directive should be made periodically within your code so that if the user presses a grey key, it will be recognized by the program in a timely manner.

**CAUTION:** This code will recognize grey keys ONLY properly. It will NOT perform any useful function if the user presses a standard QWERTY or keypad key. These keys will be effectively ignored unless the user presses 20 of them. If 20 QWERTY or keypad characters are typed, the QIO will complete and the "AST" will occur in the same manner as a SINGLE grey key press.

The program (as shown) will "signal an AST" for ANY grey key pressed. However, if you wanted to honor only ONE grey key (such as the <Cancel> key), you could look at the contents of the BUFFER variable. In it, you will find the "character" transmitted to your program by the key. Grey keys will transmit either 4 or 5 bytes depending on which key was pressed. The contents of STATUS(2) will contain the number of bytes that the QIO actually read.

The command file used to link this program is as follows:

```

CHPAST/FP/CP=CHPAST
LB:[1,5]PROF77/LB
/
UNITS=16
ASG=TT1:16
; See the note below
;
; EQUATE P/OS SYMBOLS TO LUNS
;
GBLDEF=WC$LUN:0
GBLDEF=MS$LUN:6
GBLDEF=HL$LUN:0
GBLDEF=MN$LUN:0
GBLDEF=TT$LUN:5
GBLDEF=TT$EFN:5
;
; DEFINE CLUSTER SCHEME

```

```
;
CLSTR=PROF77,POSRES,RMSRES:RO
;
//
```

The value of 16 MUST MATCH the value assigned to to the LUN variable in the program. If it doesn't, the program won't work.

Send me your own PROgramming Quickie and I will publish it here in this on-going column in these Newsletters. (RX50 Please) .

## Updates to the PRO Public Domain Software Collection

By Gary Rice, PC SIG Newsletter Editor

Since last month, the following software has been added to the collection and/or added to the catalog.

<u>Catalog #</u>	<u>Description</u>
LIB-2	<p>PROPLOT v3.1 - This package originally appeared as PRO-163 in the DECUS Library. This version was distributed at Fall '87 Symposium prior to being submitted to theLibrary.PROPLOT does least squares curve fitting to polynomial equations, graphs the resulting curves on the monitor, and has provisions for hard copy to LA50, LA100 or plotter (HP 7475, 7471, 7440 or DEC LVP16)</p> <p>1 diskette; Sources included; SOME objects; Task image included FORTRAN-77, MACRO</p>
LIB-3	<p>Smart Mailer - This package originally appeared as PRO-145 in the DECUS Library. It is a mailing label generator.</p> <p>5 diskettes; Sources included; NO objects; NO task images BASIC PLUS-2</p>
LIB-4	<p>Smart Mailer - This package originally appeared as PRO-146 in the DECUS Library. It is the BINARY version of LIB-3. That is, only the task images, documentation and data files are included.</p> <p>3 diskettes; NO sources; NO objects; Task images included</p>
LIB-5	<p>This diskette originally appeared as PRO-101 in the DECUS Library.The MCR program was written to enable me to explore the P/OS system, and to provide me with a command line interface to tasks. This kit contains the following: THE MCR PROGRAM - The MCR program accepts command lines from the terminal, and using its built in knowledge of a P/OS V1.0 system, can display various features as well as dispatching the commands. TECO - This is a modified TECO 36, based on the RSX teco 36 kit. COPY - This is a simple, image, disk copier. It always copies from drive 1 to drive 2. SRD - This is a somewhat modified version of SRD.</p> <p>1 diskette; SOME sources; NO objects; Task images included MACRO</p>

- SYM-4 PRO/VLINK - A "Virtual" LINKer for P/OS - This version of VLINK was distributed by DEC at the Spring '87 Symposium. The creation of a running program on the PRO using the P/OS PRO/Tool Kit requires the user to create, in addition to the program itself, a task builder command file and an overlay descriptor file. Although not terribly difficult for the experienced programmer, this step can prove to be a formidable obstacle to the initial user of P/OS. This program relieves the programmer from having to create these two complex files and allows the application development cycle to be simply create, compile, link and run.  
 OPERATING SYSTEM: P/OS Version 3.0 or later  
 SOFTWARE VERSION: PRO/VLINK Version 2.0-03  
 PREREQUISITE SOFTWARE: PRO/Tool Kit Version 3.0
- 1 diskette; NO sources; NO objects; Task images included
- SYM-5 P/OS v3.1(+) This software was originally distributed by DEC at the Spring '87 Symposium. It allows the LN03+ and LA75 printers to be used by print services. This update can ONLY be applied to a V3.1 system.
- 2 diskettes; NO sources; NO objects; Task images included
- SYM-6 Ray-Traced Images - This software was originally distributed by DEC at the Fall '85 Symposium. It displays some VERY NICE Graphics on a PRO that has a color monitor.
- 4 diskettes; NO sources; NO objects; Task image included
- SYM-7 Utilities for the PRO under P/OS. This software was originally distributed at the Fall '85 Symposium. The following utilities are included:  
 PRO/VLINK - utility to make the job of task-building a little easier. This program creates the necessary TKB command file. It will also create overlay descriptor and installation files.  
 FLX - this is a limited version of RSX FLX. It was written to convert RT-11 format files on floppy disk into P/OS format.  
 PRO/Kermit - A menu-driven P/OS version of the standard Kermit file transfer utility. Installs as a standard P/OS menu application.  
 DIR - a program which writes out a directory into a special format to be used with PRO/DTR for searching, sorting, etc.
- 1 diskette; SOME sources; SOME objects; Task images included  
 PASCAL, FORTRAN-77
- SYM-8 This package contains the March, 1986 Version 8.1 BONNER LABS RUNOFF for the PRO-350. This is John Clement's Bonner Labs (Rice University) Runoff. It is very powerful text formatting software that contains most of the features of Digital Standard RUNOFF (DSR) and many more not supplied by DSR.
- 2 diskettes; NO sources; NO objects; Task images included
- SYM-9 This diskette was originally distributed at the Spring '86 Symposium. It contains mostly demo programs that show off the graphic capabilities of the PRO. A lot of the programs are written in PRO/BASIC. Some are in Pascal. Some don't include ANY source code.
- 1 diskette; SOME sources; NO objects; Task images included



PRO/BASIC, Pascal, MACRO

- SYM-10 This is the first release of Kermit for the Digital Professional 350 series personal computers. This version was based on the Common BLISS modules that are used in Kermit-10 and VAX Kermit, so contains most of the functionality of Kermit-10 and VAX Kermit. Pro/Kermit is not dependent on any Digital product to do the communications, so Pro/Communications is not required to run Pro/Kermit.
- 1 diskette; NO sources; NO objects; Task image included
- SYM-11 This package contains the version of PROPLOT that was distributed at the Spring '86 Symposium.
- 2 diskettes; Sources included; Objects included; Task images included  
FORTRAN-77
- SYM-12 Memory Disk - This diskette was originally distributed by Jerry Ethington at the Fall '86 Symposium. This diskette contains full sources and binaries implementing a memory disk driver for P/OS versions 2.0 and later.
- 1 diskette; Sources included; Objects included; Task images included  
MACRO
- MISC-1 This 3 diskette collection contains a 90,000+ word dictionary. The files on the disks must be concatenated to each other in one file for the dictionary to be useful. Then, it could be combined with a spelling checker like the SPELL program cataloged as F85-23.
- 3 diskettes; Text files
- MISC-2 This diskette was sent to me by Tom Cooper. It contains things that he found of use as well as some stuff that he wrote for his own use. On it are Michael Reese BASIC and documentation in Runoff format. Also a grab-bag of stuff, mostly for using the TCWPS.BAS with Michael Reese BASIC. This is what I wrote to use for word processing and it works fairly well.
- 1 diskette; SOME sources; NO objects; Task images included  
MRBASIC
- MISC-3 This diskette was sent to me by Mark Sebern. It contains a 2D graphics drawing program for the PRO.
- 1 diskette; Sources included; Objects included; Task images included  
Pascal
- F87-1 SRD version 6.62 - This version of the SoRt Directory program contains the following new things: Use FEAT\$ to test for decimal version number & named directory support Fixed the bug that sometimes truncated named directory strings to six characters. Show decimal version number and/or named directory support in the /ID display. Show the taskbuild date and time in the /ID display.

1 diskette; Sources included; NO objects; Task image included  
MACRO

Distribution of the Public Domain Library is handled in the following way: After looking through the "catalog" and selecting the items you want, send me enough diskettes to hold the software you desire. Diskette counts are listed with each catalog entry. Include a return mailer, box, carton, palette, etc. sufficiently large to hold the diskettes. Include enough postage to pay for the return trip. I will NOT use UPS. Sorry. 1st class mail is recommended, but parcel post is ok. I will then copy the requested software for you and send it along. Give me at least a week for ANYTHING (plus travel time). Large (more than 5 diskettes) orders will likely take longer. PLEASE don't ask for "specials". It took a lot of time to put THIS collection together.

Contributions are also welcome. However, if the work is NOT YOURS TO GIVE, please DON'T.

In addition to this diskette based distribution, we are planning a tape distribution as well. The tape will be available after the Spring '88 symposium in the following formats: RSX BRU (1/2 " 9 track 1600 BPI and TK50); VMS BACKUP (1/2" 9 track 1600 BPI and TK50). The tape will contain EVERYTHING that we can assemble by then.

Send your diskette based contributions and/or software requests to me:

Gary Rice  
PC SIG Newsletter Editor  
McDonnell Douglas  
5555 Garden Grove Blvd.  
Westminster, CA 92683

Send your tape based contributions ONLY to:

Tom Hintz  
PRO/MAC/WORKSTATIONS Working Group Chair  
University of Florida  
IFAS Computer Network Bldg 120  
Gainesville, FL 32611

If you are submitting something to the collection, please include a signed copy of the following statement with your submission:

*The program that I am submitting to the Public Domain titled \_\_\_\_\_ does not contain technical data/information that is proprietary, classified under US Government Secrecy Laws, controlled by non-disclosure agreements with the US Government or third parties or governed by US Department of State's International Traffic in Arms Regulations (ITAR).*

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## **Digital Announces PCSA Version 2.0 Program**

**By Digital Equipment Corporation, Personal Computing Systems Group  
Littleton, Massachusetts**

At U.S. Fall DECUS Symposium in Anaheim last December, Digital's Personal Computing Systems Group (PCSG) announced an integrated personal computing program that includes the next version of Personal Computing Systems Architecture (PCSA) software.

PCSG also announced that they will support selected PC compatibles and the IBM PS/2 (Microchannel) systems in future releases of software.

The Personal Computing Systems Architecture (PCSA) is an extension --- to the MS-DOS desktop --- of Digital's systems and networking architecture. It merges the VMS and MS-DOS environments by transparently integrating the personal and departmental or enterprise-wide computing environments, so PC users and terminal users can share information and resources.

With VAX/VMS Services for MS-DOS server software, any VAX anywhere in a DECnet network can act as an application, data, and resource 'server' to groups of personal computer 'clients'. Yet the PCs are treated as true peers in the network. The client software --- available for the IBM PC family and Digital's VAXmate personal computer --- is called DECnet/PCSA Client. The VAX/VMS Services for MS-DOS and PCSA Client software implement Digital's Personal Computing Systems Architecture.

An integrated personal computing network includes: VAX and/or MicroVAX server systems running DECnet-VAX networking software and VAX/VMS Services for MS-DOS server software, and VAXmate and/or IBM PCs running DECnet/PCSA Client software, all tied together with Ethernet products.

During the 'PC Integration --- DEC's PCSA' session, Digital announced the following highlights of its VAX/VMS Services for MS-DOS products future capabilities:

- Improved Performance --- including a faster file server and the addition of a high-performance virtual disk server
- NETBIOS interface support
- Simplified system management --- including remote boot capability
- More configurations supported --- included 3Com IE2 and IE4, MICOM-Interlan NI5010-1 and NI5010-2, Asynch DECnet connections, and IBM keyboard support
- Simplified packaging --- including separate server and client kits, and the inclusion of the entire DECnet-DOS-VAXmate software in the PCSA Client kit
- MS-DOS Version 3.3 support for VAXmate
- Support for VMS Access Control Lists
- Cluster-wide locking
- MS-DOS file storage as sequential, fixed-length records
- Scripting for terminal emulators

Digital also announced a more cost-effective integration of networked personal computers with a change in the DECnet-VAX and DECnet for PCs software licensing policies. Under the new licensing policy, DECnet-VAX software licenses now include the license for the VAX/VMS Services for MS-DOS, making every VAX computer running DECnet a licensed PC server, at no additional cost. Digital's PCSA Client Software license now includes the DECnet-DOS or DECnet-VAXmate software license.

PCSG also announced the latest version of DECnet/PCSA Client Software --- Version 1.2. This software supports PC-DOS Version 3.2 and 3.3 for IBM personal computers networked in Digital's integrated personal computing environment with servers running VAX/VMS Services for MS-DOS. This new version has been available since December 1987.

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# DIGITAL EXTENDS NETWORK APPLICATIONS SUPPORT FACILITIES TO UNIX, APPLE MACINTOSH, MS-DOS AND OS/2 USERS

By Digital Equipment Corporation, Personal Computing Systems Group  
Littleton, Massachusetts

... Support allows communications and information exchange across leading operating systems on a single network ...

Digital Equipment Corporation announced it is extending its Network Applications Support facilities to provide common access to services on the open DECnet/OSI network, to users of the most widely-installed industry standard operating systems at a press conference in Boston, Massachusetts, on January 19.

Network Applications Support facilities allow customers to communicate and share information between:

- VT family terminals
- VMS on VAX
- UNIX-based systems on VAX
- Apple Macintosh
- MS-DOS and OS/2

"Many large organizations today have installed a variety of systems which are unable to share information. Workers need application support that gives them easy, uniform access to information and computer resources across an organizational computing environment -- regardless of the systems they use," said William Strecker, Vice President, Digital Product Strategy and Architecture. "Digital meets this critical need with its Network Applications Support program, which provides common access across an enterprise-wide network so users can easily exchange mail and revisable documents, share files, and access databases and printers from industry-leading desktop devices in an organization."

## A SIMPLE, MODULAR APPROACH TO ENTERPRISE COMPUTING

Digital's strategy for enterprise computing is to view the network as a system. This is a distributed computing environment which allows VAX systems and systems from other vendors to work together as part of a cohesive enterprise network based on VAX and DECnet/OSI.

The strategy includes servers and a range of desktop products that take advantage of network resources. They are designed for different users with different needs: low-cost networked terminals; the VAXmate networked personal computer; and the VAXstation family of high-performance worksystems.

In addition, Digital provides Network Applications Support facilities to allow customers who have selected Digital systems and systems from other vendors to work together at the applications level. The International Standards Organization's Open Systems Interconnect (OSI) model provides worldwide standards for networking. Digital's adherence to those international standards ensures that customers who are making key computing strategy decisions today can be assured that their systems will work with future standards-compliant systems.

Digital became the industry leader in integrating MS-DOS PCs into enterprise networks, with a series of products introduced over the past 18 months, including DECnet-DOS software. In June, 1987, VAX/VMS Services for MS-DOS software was voted the best Micro-to-Mainframe link by Computerworld readers.

Last month, Digital announced a new DECnet software licensing policy, making every VAX computer running DECnet software a licensed PC server, at no additional cost. Last week's announcement of the joint development effort between Digital and Apple is another significant step in making it easy for customers to extend the power of the network to every desktop in an organization.

## EXTENDING NETWORK LEADERSHIP

"Digital is the established leader in designing, implementing, and maintaining worldwide customer networks, and the distributed applications that run on them," said Henry Ancona, Vice President, Digital Business and Office Information Systems. "The extension of Digital's Network Applications Support facilities to users of

UNIX-based systems on VAX computers, the Apple Macintosh computers, and MS-DOS and OS/2-based personal computers, reinforces that leadership position."

Network Applications Support facilities provide users of the VT family of terminals, VMS operating systems on VAX computers, UNIX-based systems on VAX computers, the Apple Macintosh and MS-DOS and OS/2 personal computers with common:

- Application Access Services
  - ALL-IN-1 (ANSI)
  - DECwindows (X-Windows)
- Business Communications Services
  - Electronic Data Interchange (X12)
  - Electronic Mail (MAILbus X.400)
  - Electronic Conferencing
  - Corporate Videotex
- Information/Resource Sharing Services
  - Compound Document Architecture and Interchange via DDIF (ISO/ODA)
  - Publishing Services
  - Network Printing (PostScript)
  - File Sharing
  - Database Access (SQL)

Digital Equipment Corporation, headquartered in Maynard, Massachusetts, is the world's leading manufacturer of networked computer systems and associated peripheral equipment and the leader in systems integration with its networks, communications, software, and services.

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Macintosh is a trademark of Apple Computer

UNIX is a trademark of American Telephone and Telegraph Company

OS/2 is a trademark of International Business Machines Corporation

## **PCSA TO SUPPORT COMPAQ, OLIVETTI, ZENITH**

**By Digital Equipment Corporation, Personal Computing Systems Group  
Littleton, Massachusetts**

At the press conference announcing the Network Applications Support facilities on January 19 in Boston, Digital Equipment Corporation also disclosed that it plans to support the COMPAQ, Olivetti, and Zenith personal computers in its Personal Computing Systems Architecture (PCSA) software.

The Personal Computing Systems Architecture (PCSA) is an extension --- to the MS-DOS desktop --- of Digital's systems and networking architecture. It merges the VMS and MS-DOS environments by transparently integrating the personal and departmental or enterprise-wide computing environments, so PC users and terminal users can share information and resources.

The COMPAQ, Olivetti, and Zenith personal computers will be supported in future versions of DECnet/PCSA

Client Software. The DECnet/PCSA Client Software is currently available for the IBM PC family and Digital's VAXmate personal computer that are networked in Digital's integrated personal computing environment with servers running VAX/VMS Services for MS-DOS. These personal computers will also be supported in future versions of DECnet-DOS software.

With VAX/VMS Services for MS-DOS server software, any VAX anywhere in a DECnet network can act as an application, data, and resource "server" to groups of personal computer "clients". Yet the PCs are treated as true peers in the network. The VAX/VMS Services for MS-DOS and DECnet/PCSA Client software implement Digital's Personal Computing Systems Architecture.

An integrated personal computing network includes: VAX and/or MicroVAX server systems running DECnet-VAX networking software and VAX/VMS Services for MS-DOS server software, and VAXmate and/or IBM PCs running DECnet/PCSA Client software, all tied together with Ethernet products.

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MS and DOS are trademarks of Microsoft, Corp.

## **Speeding Up Your Scriptprinter (and Making it Work) on a VAXstation**

**By Mark Sebern, Sebern Engineering Inc., P. O. Box 268, Cedarburg, WI 53012  
(414)375-2200**

### Introduction

As one of those users who views a VAXstation as a personal computer, I do virtually all of my software development, financial applications, technical documentation, and correspondence on my VAXstation II/GPX. Like most laser printer users, I quickly became spoiled by my LN03, and now use it for everything. (Except for checks, that is; anybody seen laser-compatible check stock?) This is a story of converting to the new Postscript LN03R, and trying to get things to work right, especially at faster data rates.

### Initial LN03R Experience

After deciding to purchase Interleaf's Workstation Publishing Software, I needed a Postscript printer, so I upgraded my LN03 to an LN03R Scriptprinter, by means of the LN03R-UA upgrade kit. I also ordered the VMS Scriptprinter support software (Q4ZFQ-xx), which took a while to arrive.

In the meantime, I experimented with Interleaf and direct Postscript programming, using the LN03R attached to the GPX's console port (CSA0:) and the normal VMS print symbiont. (If you do this, be sure to set the halt switch on the back of the GPX to the "disable" position; otherwise, you'll probably crash the system every time you turn the printer on or off.) It worked nicely, but I had to swap the LN03 controller board back in whenever I wanted to print ANSI text rather than Postscript. This was inconvenient, and the boards are not really designed for regular swapping.

At this time, I was running the LN03/LN03R at 4800 baud, and both Interleaf documents and normal ANSI text printed with only one problem. Interleaf's Postscript translator symbiont crashed the job controller whenever I shut down its queue after printing a document. Still, that caused no real difficulty beyond cleaning up multiple copies of SYS\$SYSTEM:JOBCTL.DMP. I did some limited testing at 9600 baud, and that seemed to work fine as well, though I went back to 4800 baud for easier switching between the GPX and my two Pro-350's.

### The VMS Scriptprinter Support Software

Finally, the Scriptprinter software arrived. It installed with no difficulty, though the fact that it was Version 1.0 bothered me a little, since I hadn't signed up to be a field test site. The ANSI translator allowed

me to print normal text files without swapping the printer controller boards, and all seemed well.

The first sign of trouble was that occasionally I would send an Interleaf document to the printer, only to have the job vanish without a trace. Usually, a second try would yield the correct output. After enabling messages on the Scriptprinter's Postscript print queue, I started seeing errors like:

```
"%LPS-S-USERDATA, %[[ageCount: 2673]]%"  
"%LPS-S-USERDATA, %[[ Mbytes: 407425]]%"  
"%LPS-F-UNDETVM, Could not determine VM size"
```

The apparent missing characters in "PageCount" and "VMbytes" are not typos, but are rather indications of the problem. These errors were infrequent at 4800 baud, but very common (and annoying) at 9600 baud. It seemed that the Scriptprinter symbiont was trying to handshake with the LN03R, but that the printer's response data was overrunning the system. DEC personnel at Anaheim said they had seen similar problems on other VAXen, but thought they had "fixed" them all. The only warning I could find in the documentation was that a DMZ32 had to be run at 4800 baud or slower.

### Troubleshooting Attempts

Following up on a suggestion by Holberg Masson, the European DECUS PC SIG chair, I tried increasing the SYSGEN parameter TTY\_ALTYPAMD from 200 bytes to 1024 bytes, and then to 10,000 bytes. This increased the size of the input typeahead buffer on CSA0:, where the Scriptprinter was connected, since the DEC software already had set the line to use the alternate typeahead buffer. Small increases in this parameter seemed to help a little, without really fixing the problem, and large increases actually made things a little worse.

At this point, I decided to bite the bullet and install a DHQ11 terminal interface, which incorporates a 256-byte FIFO buffer on the input side. I had thought about doing this anyway, in order to support a modem and my LA100 (got to print those checks, remember!). To make a long story shorter, things seem to work a lot better, and after several days of testing I have had no problems even at 19200 baud.

### Was It Worth the Trouble?

As a benchmark, I selected two Postscript print jobs: the first is a short Postscript program which produces three pages of output for a multiple-part invoice form, while the second is a four page Interleaf document consisting exclusively of VERY complex graphics images. The print time summary looks like this:

Line speed (baud)	Total print time - MM:SS	
	Test 1	Test 2
4800	01:14	17:22
9600	01:16	9:23
19200	01:15	5:30

As you can see, the smaller job was unaffected by the data rate, at least within the experimental error. The longer job exhibited performance roughly proportional to the data rate. On big print jobs, 19200 baud is a real improvement.

### VMS Scriptprinter Support Software Limitations

As to the Scriptprinter software, it still needs work. When using the ANSI translator to print normal ASCII files (e.g., program listings), you can't use an ANSI set up module to do things like setting top margins in landscape mode, to avoid printing over the 3-ring binder holes. Instead, the appropriate escape sequences must be inserted into the file to be printed. While I now have a command procedure to do that, this is still a kluge of the first order. Because of the way the symbiont is implemented, some PRINT switches like /PAGES= no longer work, and special forms of the /PARAMS switch must be used instead (and even this doesn't work right all the time).

### DHQ11 Notes

In the VAX SIG newsletter for January 1988, two Input/Output items (818.0 and 818.1) refer to a MicroVMS 4.6 bug in the YFDRIVER, which may cause a process to hang if you type ^C or ^Y. Apparently the solution is to SET /NODMA or to use the V4.5 YFDRIVER. I haven't looked into this, since I normally run my Pro 350's through LAT and have no terminals on the DHQ11 lines.

The only (minor) difficulty I had in installing the DHQ11 was in figuring out the correct CSR address and vector settings. I couldn't use the default because my RRD50 CDROM controller comes earlier in the "floating" address assignment. Here the SYSGEN "CONFIGURE" command was a pleasant help, and told me where it expected to see the DHQ11; I had always thought that this address calculation was a good job for a computer!

### Summary

All in all though, I do like the Scriptprinter itself, and the Scriptprinter support software is significantly more convenient than swapping the controller boards in the LN03. Meanwhile, I'll be waiting for Version 2. I'm getting spoiled by the capabilities of the LN03R, especially coupled with Interleaf, and I have to resist the urge to fill even routine reports with a dozen different type fonts, half-tone screens, and fancy graphics. But then, I guess that's the price of progress!

## **APPLE COMPUTER AND DIGITAL EQUIPMENT CORPORATION ANNOUNCE JOINT DEVELOPMENT EFFORT**

**By Digital Equipment Corporation, Personal Computing Systems Group  
Littleton, Massachusetts**

Digital Equipment Corporation and Apple Computer, Inc. announced a joint development effort to integrate Macintosh personal computers and AppleTalk networks, with VAX systems and DECnet/OSI enterprise networks on January 15 in San Francisco. These development efforts will take advantage of open standards for desktop integration, based on the industry-standard Open Systems Interconnection (OSI) model of the International Standards Organization (ISO).

"The combination of Digital's and Apple's technologies represents one of the strongest alliances yet in the computer industry," said John Sculley, Apple's president. "It brings together the best technologies from two of the industry's best known innovators. The big winners will be large companies and universities who will have new opportunities for powerful, highly integrated, multi-vendor office systems that are easily accessible and usable."

"Digital's strategy is to provide networked server and desktop solutions," said Kenneth Olsen, president of Digital Equipment Corporation. "They include the VT terminal family, VAXmates and VAXstation systems, designed to allow users with different needs to share resources, information and applications across a network based on international standards. Digital also integrates other quality desktop systems -- the development efforts with Apple will extend that integration to our customers who use and love the Macintosh, and will advance the movement toward the OSI international standards."

A growing number of companies use both Macintosh personal computers and Digital networked systems. Studies have shown that about 36 percent of VAX sites now use Macintosh and customers are actively seeking ways to integrate and enhance these systems. The joint development effort will address these customer needs. Also, according to the companies, independent software vendors (ISV's) will benefit. The joint development effort will provide a consistent set of application programming interfaces which developers will use to write distributed applications, leverage industry-standard networks, and interchange documents.

Under the joint development effort, Macintosh applications will be able to access information from and share resources with VAX systems and networks. These applications will use VAX-based services to connect Macintosh computers on an AppleTalk network to Digital systems on an enterprise-wide network, DECnet.



The Digital and Apple development efforts are intended to accomplish the following:

- Distributed Application Methodology. Distributed applications will be able to access VAX-based services using process-to-process communication methods.
- File sharing. Macintosh computers will be able to access files stored on VAX systems using the AppleTalk Filing Protocol (AFP).
- Document interchange. Revisable form documents created on Macintosh and VAX will be interchanged utilizing the ISO/ODA standard via Digital Document Interchange Format (DDIF).
- Printing. Macintosh and VAX users will be able to use both Digital and Apple PostScript printers on the network.
- Terminal emulation. Macintosh computers will be able to emulate Digital terminals to access computers over DECnet/OSI networks. Terminal emulation will support both ASCII characters as well as X-Windows graphics.
- Electronic Mail. Macintosh electronic mail applications will be able to communicate with Digital electronic mail services, including ALL-IN-1 and X.400.
- Conferencing. Macintosh computers will be able to participate in the VAX Notes electronic conference facility and VAX VTX corporate videotex.
- Database. Database standards and capabilities will be jointly specified allowing Macintosh applications to access data on VAX systems over DECnet/OSI.
- Networking. DECnet/OSI Phase V will be used to integrate AppleTalk networks into wide area networks.
- Network Management. Customers will be able to manage DECnet and AppleTalk networks in a unified way.

Digital and Apple made no product announcements; the companies are planning a joint developers conference in August where technical specifications will be published.

Cupertino, California-based Apple Computer, Inc. is a leading producer of personal computers, related peripherals and systems software. Its products are sold through a worldwide network of computer dealers, value-added resellers, system integrators, and through a direct sales force.

Digital Equipment Corporation, headquartered in Maynard, Massachusetts, is the world's largest leading manufacturer of networked computer systems and associated peripheral equipment and the leader in systems integration with its networks, communications, software, and services.

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Trademarks:

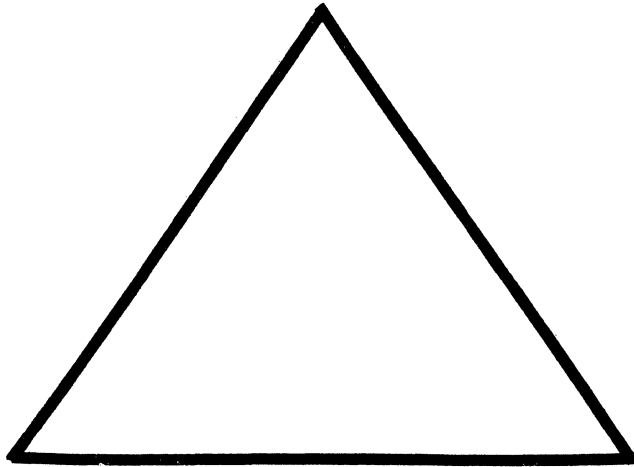
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PostScript is a registered trademark of Adobe Systems.





*edusig*



## Cincinnati Session Input Desired

Ardoth Hassler

Machine resource accounting and management of accounts in an academic environment can be different from commercial environments largely because of the sheer volume of users we accommodate. It is not unusual to allocate 2,000 to 5,000 to 14,000 accounts per semester. Some sites develop their own tools to perform account management and reporting functions. Others rely on 3rd party packages.

The past two DECUS Symposia (Nashville and Anaheim), EDUSIG has sponsored a panel titled "VAX Machine Resource Accounting Packages in an Academic Environment." Panelists who use QUANTUM-RS, PACS-PLUS and RABBIT have participated. Are there others out there using these and/or different commercial packages? If so, and you plan to attend the Cincinnati symposium, and you would be willing to talk for 10-15 minutes and participate on this panel, please contact me at:

DCS: Hassler  
BITNET: Hassler@CUA

or

Computer Center  
The Catholic University of America  
Washington, DC 20064  
202/635-5373

(Disclaimer: While DECUS and I solicit your participation, DECUS cannot fund travel, lodging, registrations, etc.)

## Privacy, Security and Ethics References

At the Fall DECUS Symposium in Anaheim, EDUSIG sponsored a session titled "Privacy, Security and Ethics in an Academic Environment." Over 50 people attended this session which didn't start until 9:30 pm! The discussion was frequently lively! I was asked to publish three references mentioned during the session.

"Thou Shalt Not Dupe"  
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Suite 300  
Arlington, VA 22209

"Using Software: A Guide to the  
Ethical and Legal Use of Software  
For Members of the Academic Community"  
Published by: EDUCOM ADAPSO  
Software Initiative See Above Address  
P.O. Box 364  
Princeton, NJ 08540

Patricia A. Hollander, Esq., Computers in Education: Legal Liabilities and Ethical Issues Concerning Their Use and Misuse (The Higher Education Administration Series, College Administration Publications, Inc., 1986) ISBN 0-912557-03-6.

Also, for those on BITNET, there is an Ethics discussion list. To subscribe under VMS using the Jnet software, type:

\$ SEND LISTSERV@MARIST "SUBSCRIBE ETHICS-L your name"

Ardoth Hassler  
Computer Center  
The Catholic University of America  
Washington, DC 20064  
202/635-5373  
BITNET: Hassler@CUA  
DCS: Hassler

Fellow DEC Users in Education:

After looking at my last couple of articles I realize that I need a better opening statement. So here it is. Want to learn about the latest software, hardware, firmware and vaporware in DEC? Come to Cincinnati in May. Come hear the stories about the latest bugs, patches and work arounds. If you know about the Promised Land please come and share your wealth of knowledge. Come to Cincinnati in May and enjoy our friendship and hospitality. (You know the suite with the free .....) The Edu people will welcome you with open arms and smiling faces. The smiling faces only appears from about 10 am until 4 pm and picks up around 6 pm until curfew. Now if that doesn't tickle your fancy, nothing will.

Now for the serious side of me. I'm trying to write some software that will deliver pictures and text at the same time using a PC. I want to hold the picture on the screen while asking several questions about the picture. I want to do a CAI with a split screen effect. Here is the kicker. I would like to create the picture while using a mouse (maybe something like PC Paint). I'm getting close using Turbo Pascal graphics but it sure seems slow and I have a heck of a time bring up the picture. I know this is a strange place to ask for help on a PC idea; this being a DEC user group. I thought I would just throw my line out and seek what is out there. If you have any suggestions I sure could use some help.

Thanks once again,

Fred Bell  
Taft College  
Taft, CA 93268





DECUS

# GRAPHICS

# From the Editor

## Bob Hays

KMS Fusion, Inc.  
3621 South State Road  
Ann Arbor, MI 48106  
(313) 769-8500 x 458

A funny thing happened on the way to Anaheim.... Since I edit the MIVAXLUG newsletter and wanted to be more active at the national level, I volunteered to edit the GAPSIG newsletter at the Anaheim Symposium. I'm most interested in graphics and user interfaces, especially standards and technical tips. However, I will print almost anything sent to me, as long as it's not profane or abusive. If the article, tip, etc. is not graphics-oriented, I'll pass it on to the other newsletter editors.

I'm going to try to maintain the general format started by Jim Flatten in the last few newsletters but this could change. One issue under discussion within the DECUS leadership is how to handle the newsletters and what they should look like. I personally wish there was more unity of look to the newsletter. What do you think?

On the business side.... Articles can be sent directly to me at the above address, either hard-copy or magnetic tape. We can read 1600 and 6250 BPI mag tape in either BRU or VMSBACKUP formats; straight ANSI-standard ASCII is okay, too. This editorial was done with Mass-11 word processor software, so that format is okay also. If the article has graphs and/or tables, please send a paper copy and place the graphs or tables in separate files from the main text if possible. I am on-line on DCS, so anyone with access can send me articles by that route, too.

I'd like to continue the questions and answers column; send questions to me at the above address and I'll try to find someone that can answer it.

Now, on a more editorial vein, I finally had time to play with UIS on our VAXstation 2000. The particular application we had in mind was an icon image editor. And, let me say that I learned a great deal from this little guy. I used the UISS calls to create a window and draw grid lines for a bit-image editor a little like the FATBITS mode in MacPaint. I also used UISSPLOT calls to fill and clear boxes that represent bits, and here was the rub: display lists are neat and easy to use except that they use up virtual pages fast. If you plan to work on a system requiring repeated updating of many elements, use the UISDCS calls from the start, which bypass display lists and operate on a pixel level. As a warning, however, the UISDCS calls may not be as compatible with DECwindows as the UISS calls, based on notes from a session at the Fall Symposium.

We used the terminal emulation window with SMG for a menu-driven operations interface. That worked fine, except that the program tends to stay at AST level quite a bit when mouse-driven drawing is going on since the in-line code is doing SMG, not UIS. A menu interface system for UIS is definitely needed (DECwindows instead, I suppose). One other gotcha relates to the defined corner of the VT220 UIS terminal emulation window, which is the lower left. SMG uses the upper left corner as a base, so when a window is decreased in size, the top-left-most information is lost first; opps, there goes my bar menu....

But, it was a fun exercise, and something we needed for generating icons quickly. It should be on a future DECUS symposium tape.

---

MacPaint is copyrighted by Apple Computer.  
VAXstation 2000 is a trademark of Digital Equipment Corporation.

## Snippets from Anaheim NOTES

The following were taken from the NOTES conferences at the Fall 1987 DECUS Symposium. These are from the WINDOWS conference (next month I'll include some of the GRAPHICS conference notes):

Note 1.3            3 of 4  
VAXFAM::SNERAD  
"Shava Nerad, MIT VAX Resource Ctr"  
8 lines 10-DEC-1987 12:57

I am interested in finding out if there are any people who are (or are interested in) developing for DECWindows out there? I know that the fiat has come down within DEC for "redevelopment" (kind of like reconstruction?), but I wonder if other software writers (oems, cmps, vars, and other developers who have their own initials...) are getting plugged into this, this early?

Note 1.4            4 of 4  
VAXFAM::FNAGY  
"Frank J. Nagy, VAX Guru&Wizard"  
23 lines 11-DEC-1987 10:18

We are in-progress on development of a distributed beam line control system at Fermilab, based on MicroVAXes (LAVCs,

standalones and using DECnet for communications). Color VAXStation-2000s will provide the main operator interfaces. We are working on the underlying system services (database, data acquisition, etc.) right now and are just getting started with applications development.

Applications will divide into text-based (using SMG) to be used via terminal emulator windows or standard VT220 or VT320 terminals. Some graphics applications are to be written in GKS for use on either the workstations or terminals. Remainder are probably to be workstation-based only. As I said, all this is just getting off the ground and we really don't want to embark on UIS and then have to change (for reasons I won't go into here).

Frank J. Nagy  
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Fermilab POB 500 MS/220  
Batavia, IL 60510  
(312) 840-4935  
Bitnet: NAGY@FNAL  
Hepnet/Span: FNAL::NAGY or WARNER::NAGY



# JTC1/SC24 (Computer Graphics) Plenary Berlin 1-3 December 1987

**John McConnell**

Digital Equipment Corporation

110 Spitbrook Rd., ZKO2-3/R56  
Nashua, NH 03062

## INTRODUCTION

This was the first meeting since JTC1 elevated Computer Graphics from working group (SC21/WG2) to subcommittee (SC24); hence, SC24 concentrated on organizational and procedural issues at this meeting.

## U.S. Representation

The U.S. delegates were:

Dr. Peter R. Bono (Peter R. Bono Associates, Inc.),  
Chief Delegate & SC24 TAG Co-chair  
Dr. Steve Carson (GSC Associates, Inc.), X3H3.2 Chair  
& Graphics Reference Model Document Editor  
Dr. George Grinstein (University of Lowell), X3H3.6  
Chair  
Mr. John I. McConnell (Digital), X3H3 Vice-Chair &  
GKS-3D and GKS/FORTRAN Document Editor

Dr. Barry Shepherd (IBM), SC21/WG2 Language Binding  
Rapporteur, also participated in this meeting, but he was  
not formally part of the US delegation.

## Member Body Representation

Austria (2), Brazil (1), Czechoslovakia (2), Denmark (2),  
France (2), F.R. Germany (8), Italy (2), Japan (1), Nether-  
lands (1), Switzerland (1), the U.K.(4), and the U.S. (5)  
sent delegates to the meeting. A liaison from SC22 also  
attended.

## Resolutions

Twenty-five resolutions were approved without dissent. A  
complete copy of the resolutions and some of the referenced  
documents are attached to this report.

John McConnell is an alternate DEC representative to X3H3 and is currently the Vice-Chairman of X3H3.

## STRUCTURE AND LEADERSHIP

### Scope and Area of Work

SC24 recommended that JTC1 appoint Mr. J. Schönhut (F.R.G) as Chair of SC24 for a 3 year term of office, effective Dec 1987.

SC24 approved the following Title and Area of Work:

Title: Computer Graphics Area of Work:

- o Development of the reference model for Computer Graphics.
- o Standardization of methodologies for Computer Graphics programming.
- o Standardization of functional specifications of Computer Graphics facilities (including those needed for image processing, graphical data bases and graphical user interfaces).
- o Standardization of programming language bindings for computer graphics functional definitions.
- o Standardization for graphical information exchange, including Computer Graphics metafiles and Computer Graphics device interfaces.
- o Methods and procedures for testing and validation of implementations of Computer Graphics standards.
- o Specification techniques for Computer Graphics standards.
- o Standardization of procedures for the registration of graphical items and administration of those parts of the procedures for which the subcommittee is responsible.

SC24 approved operating procedures based on the existing SC21 procedures (SC21 N2105) and the TC97 supplement to the ISO directives (JTC1 N47).

**GAPSIG Newsletter**  
**JTC1/SC24 (Computer Graphics) Plenary**

**Special WG on Future Planning**

SC24 approved creation of a special working group on future planning. The terms of reference for this WG are to prepare and submit a report to the SC24 secretariat for distribution by 27 Apr 1988 covering the following items:

- o Recommendations for a 5 year strategic plan for organizing the work of SC24.
- o Recommendations for a unified structure relating to Computer Graphics standards, considering:
  - consistent graphics pipelines,
  - interfaces to external standards, and
  - distributed graphics processing.
- o Identification of new areas of Computer Graphics to be covered by a standard. This may include areas like:
  - realistic rendering
  - windowing systems
  - image processing
  - graphical data bases
  - user interfaces
- o Study of the relationships of Computer Graphics standards with at least the following areas:
  - Open Systems Interconnection
  - Office Systems
  - Standards for the Exchange of Product Model Data (STEP)
  - Character Sets and Coding
  - Systems Software Interface.
- o Recommendations defining appropriate interfaces and describing a strategy for achieving a consistent set of information processing standards.
- o Definitions of the areas in which Computer Graphics standards need to be reevaluated and extended and/or new standards need to be developed to meet user requirements.
- o Revision of existing standards.

Attendance at Special Working Group meetings is restricted to at most two representatives from each member body.

**Conveners, Rapporteurs and Document Editors**

SC24 approved the creation of the following permanent working groups and provisional conveners:

WG	Title	Convener	Country
WG1	Architecture	P. Bono	U.S.
WG2	Application Programming Interface	J. Bettele	Switzerland
WG3	Device Interface	D. Arnold	U.K.
WG4	Language Bindings	B. Shepherd	U.S.
WG5	Validation, Testing, and Registration	B. Kirsch	F.R.G.

SC24 invited those member bodies providing WG conveners and secretariats to endorse these nominations and to confirm to the JTC1 and SC24 Secretariats by 1 Apr 1988 that they have the necessary support to carry out the responsibilities assigned to them.

Member bodies and working groups are invited to submit contributions on this structure and terms of reference for consideration at the next SC24 meeting in Tucson, AZ.

SC24 approved the following rapporteurs:

WG	Rapporteur Group	Rapporteur	Country
SWG	Future Planning	S. Carson	U.S.
WG1	User Requirements	G. Grinstein	U.S.
	Graphics Reference Model	G. Faconti	Italy
	GKS Revision	J. Fitz	F.R.G.
WG2	GKS-3D	J. McConnell	U.S.
	PHIGS	J. Bettele	Switzerland
WG3	CGI	K. Vecchiet	U.S.
	CGM	E. Moeller	F.R.G.
WG5	Validation and Testing	J. Pink	U.K.
	Registration	M. Skall	U.S.

No rapporteurs are appointed for WG4 (Language bindings).

SC24 approved all existing document editors carried over from SC21/WG2. In addition, SC24 approved T. Hewitt (U.K.) as document editor for the CGM Addendum 2 and G. Guth (U.S.) as document editor for the GKS-3D/C language binding.

**GAPSIG Newsletter**  
**JTC1/SC24 (Computer Graphics) Plenary**

Date	Place	Topic	Category	Purpose
18-19 Feb 1988	Amsterdam	GKS-3D	E	Resolution of comments on DIS 8805 (GKS-3D) and preparation of IS text.
25-26 Feb 1988	Darmstadt	GKS Review	R	To prepare recommendations concerning the review of the GKS standards.
28-29 Mar 1988	Paris	Validation and Testing	R	To prepare recommendations on Parts 1 and 2 of the Conformance Testing standard for consideration at the next SC24 meeting.
11-16 Apr 1988	Norwich, England	Future Planning	S	To prepare proposals for future planning for SC24.
18-20 Apr 1988	Norwich, England	CGM Addenda	R	Preliminary analysis of comments on Addendum 1 to ISO 8632 parts 1-4 and preparation of Addendum 2 to parts 2-4 of 8632.
13-20 Apr 1988	Tokyo	Language Binding	W	To prepare DP texts for PHIGS/Extended Pascal, PHIGS/C and GKS/C; resolution of comments on DIS 8651-3 (GKS/Ada binding) and DP 9593-3 (PHIGS/Ada binding) and preparation of revised drafts.

SC24 approved the above schedule of meetings for the period up to the next plenary meeting:

**Future Meetings**

SC24 approved the following 5 year plan for its plenary meetings:

Date	Place
27 Jun - 9 Jul 1988	Tucson, Arizona USA
1989	Brazil
1990	Germany
1991	UK
1992	vacant

The U.S. will consider holding the 1992 meeting, if there are no other nominations. However, SC24 encourages other countries, especially from the Eastern Hemisphere, to consider volunteering to host a meeting in 1992.

**PROJECTS**

All projects carried over from SC21/WG2 were assigned new project numbers, as follows:

Project Number	Project Title
1.24.1	GKS
1.24.2	GKS Language Bindings
1.24.3	PHIGS
1.24.4	PHIGS Language Bindings
1.24.5	CGM
1.24.6	CGI
1.24.7	Conformance Testing
1.24.8	Reference Model

**Documents Registered for DP and PDAD**

SC24 approved DP registration for the PHIGS/Ada binding (DP 9593-3) and DPAD registration for the CGM Addendum 1 Parts 1 through 4. In addition, SC24 delegated authority to WG4 to forward the PHIGS/Extended Pascal, PHIGS/C, and GKS/C bindings for DP registration when the revised texts have been prepared.

**DIS Registration**

SC24 approved forwarding the PHIGS/FORTRAN binding (DIS 9593-1) for DIS registration.

**GAPSIG Newsletter**  
**JTC1/SC24 (Computer Graphics) Plenary**

**Documents for Study and Comment**

SC24 approved the following documents for study and comment:

- o CGM Addendum 2 Part 1.
- o Draft proposal for a NWI for Addendum 3 to ISO 8632 (CGM).
- o CGM Addendum 3 Initial Draft.
- o Draft proposal for a NWI for GKS revision.

Comments from member bodies on these documents must be submitted to the appropriate WG Secretariat by 27 Apr 1988.

**Technical Reports**

SC24 instructed its Secretariat to circulate TC97 N1913 (Procedures for the Registration of Graphical Items), as updated to refer to SC24, and to submit it to ISO Central Secretariat for publication as a Technical Report Type 2, assuming the concurrence of the JTC1 Secretariat.

**Project Cancelled**

SC24 directed that work on the GKS-3D name set addendum (project 97.21.2.3) be terminated and instructed the document editor to submit the addendum together with any previously received comments to WG1 for distribution as input to the GKS revision process.

**LIAISON ACTIVITY**

**Liaison Representatives**

SC24 approved the following external liaison representatives:

Name	Liaison	Subject
S. Carson	SC21	Terminal Management, ODP
G. Cuthbert	SC22	Ada Language Bindings
A. Ducrot	SC2	Coding
I. Grieger	SC22	FORTRAN Language Bindings
D. Larson	SC22	Pascal Language Bindings
J. Rix	TC184 /SC4	Industrial Automation Systems/Standard for the Exchange of Product Model Data
G. Schaeffer	SC22	C Language Bindings
A. Scheller	SC18	Office Systems
M. Sparks	SC22	Language Binding Techniques
To be appointed	SG-FS	Functional Standardization

SC24 appoints S. Carson, D. Arnold, and G. Grinstein as liaison officers to represent SC24 at the March 1988 SC21 meetings on the topics of Terminal Management and Open Distributed Processing.

**Liaison Statements**

SC24 requested a technical liaison between SC24 and SC18 for the following areas:

- a. Description and Identification of Character Fonts (Parts 1-7).
- b. Standard Page Description Language.
- c. Document Composition Semantics and Specification Language.
- d. Office Document Architecture and Interchange Format: Raster and Geometric Content Architectures (Parts 7 & 8).
- e. Colour Addendum to ISO 8613.
- f. Future extensions to ODA for data and business graphics.

In addition, SC24 submitted specific comments on 8613 Part 8, which is undergoing DIS ballot within JTC1.

- o SC24 has invited a liaison representative from TC184 /SC4 to attend the next SC24 meeting to discuss Presentation Entities. SC24 will also invite SC18 representatives to a separate liaison meeting held in conjunction with the next SC24 WG and SC meetings. The target date for both liaison meetings is 2 July 1988, in Tucson, Arizona, USA.

- o SC24 reviewed the liaison statement from the JTC1 Special Group on Functional Standardization, will explore the applicability of the Protocol Implementation Conformance Statements (ISP) to Computer Graphics standards, and will issue a report on its findings following the next meeting.
- o SC24 requested that SC18/WG3 evaluate the use of the CGM when extending ODA to cover Business Graphics and that SC18/WG3 make their application requirements known to SC24 via a liaison statement.
- o SC24 invited SC22 to review the GKS/C and PHIGS /C bindings for conformance of the bindings to the C language standard, use of deprecated functionality, and adherence to the spirit of the language.

#### **OTHER ACTIONS OF SC24**

- o SC24 invited member bodies to nominate CGM experts to participate in the procedures defined in Annex C of JTC1 N47 for the rapid amendment of ISO/TC97 standards as applied to ISO 8632.
- o SC24 invited its member bodies to submit proposals by 27 Apr 1988 for the Register of Graphical Items to be considered at its next plenary meeting.
- o SC24 invited member bodies to submit input to the SC24 Secretariat on future planning activities by 11 Feb

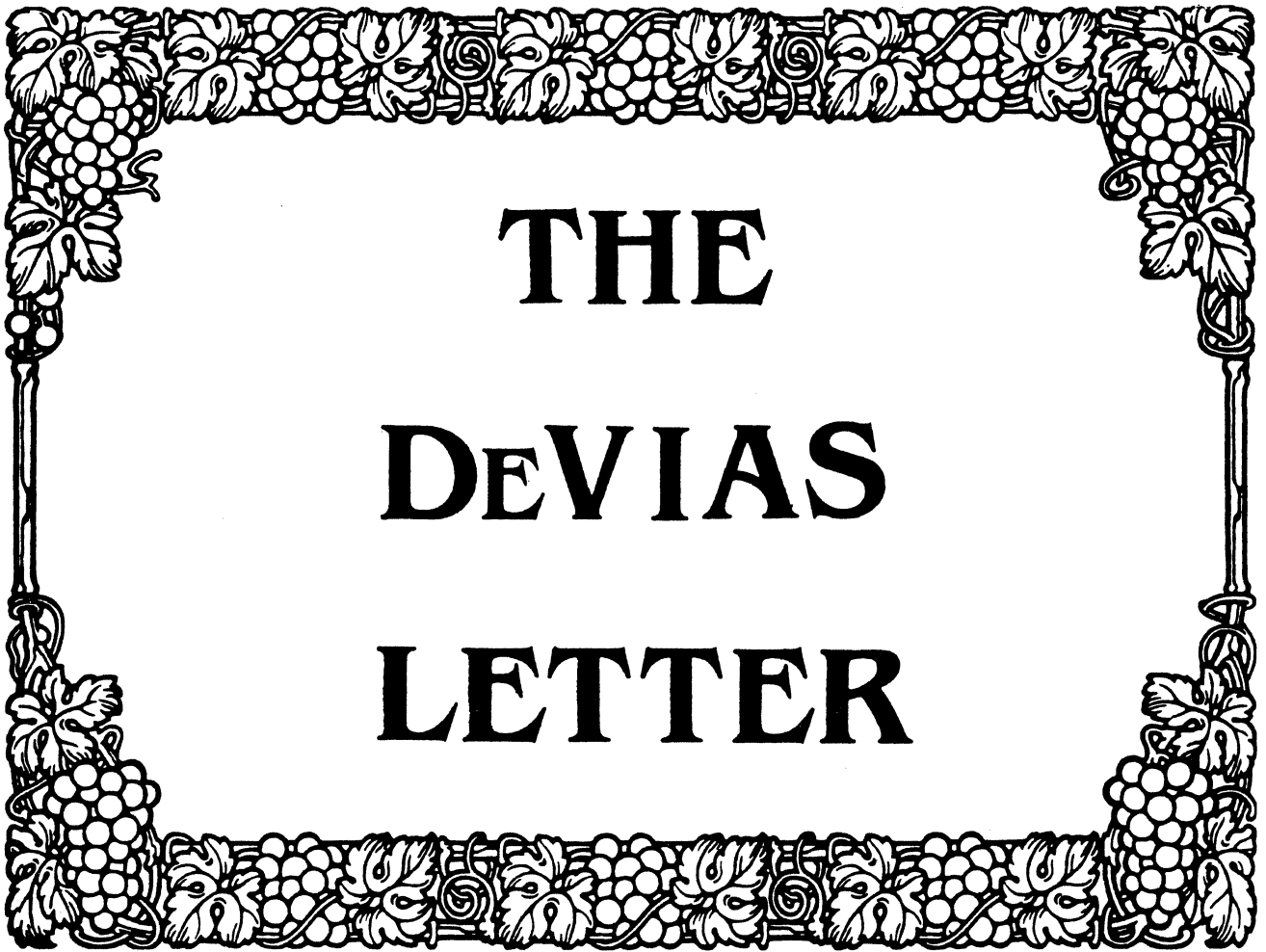
1988.

- o SC24 requested member bodies to submit to the SC24 Secretariat for distribution, documents that were hand-carried to the Valbonne and San Diego rapporteur group meetings on CGL, and that have not otherwise been formally circulated by SC21/WG2 or SC24.
- o SC24 invited its member bodies to submit contributions by 27 Apr 1988 to the SC24 Secretariat on the applicability of implementation conformance statements in graphics standards and to identify any International Standardized Profiles (ISP) that might be appropriate for Computer Graphics standards.

#### **OBSERVATIONS AND ANALYSIS**

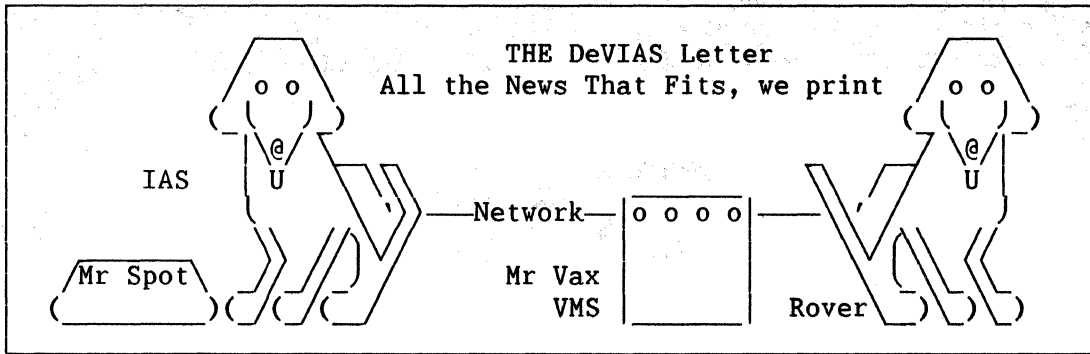
- o All resolutions were passed without dissent.
- o New work items on windowed user interfaces and image processing are likely to be proposed within the next 12 months.
- o There continues to be an urgent requirement for close ties with SC18. SC18 has not been successful in getting SC18 experts to attend and participate in SC24 meetings. Several SC24 people do participate in SC18 meetings on a regular basis.





# THE DEVIAS LETTER

Contribution guidelines.....	1
From the Editor's Keyboard.....	1
IAS SIG Fy89 Activity Plan.....	2
Ten Years Ago This Month.....	4
The Program of the Month Club.....	5



CONTRIBUTION  
GUIDELINES

Contributions should be sent to:

Frank R. Borger  
 Michael Reese Medical Center  
 Department of Radiation Therapy  
 Lake Shore Drive at 31st St  
 Chicago, IL 60616

Contributions of letters, articles, SPR's etc will be accepted in any form, (including notes jotted on stained tablecloths.) They will be more graciously accepted in one of the following formats:

Non machine readable sources, (SPR's etc,) should be reasonably dark to insure good photocopying. Text should be 66 lines at 6 lpi, with 4-line top margin, 5-line bottom margin, left-margin 10, right margin 74 at 10cpi. We can also accept submissions by FAX.

Contributions may be submitted on 9-track Mag-tape, (800,1600, 3200 or 6250 BPI,) DEC-tape II, DecMate floppies, or whatever. We're not fussy, we'll even accept paper tape or cards. Preferred format is DOS or BRU for tapes, Files-11 otherwise.

We have 1200 baud modems on our IAS system and our VAX, with KERMIT for electronic submission. Give the

editor a call @ (312)-791-2515 (preferably later in the day,) to obtain access information, etc.

Any media sent to us will be promptly returned.

If you have a problem you would like to submit to the Devias wizzard, write a letter or fill out a copy of a standard SPR and send it to the Editor at the above address. Answers to problems from members (or anyone) should also be sent to the Editor.

FROM THE  
EDITOR'S KEYBOARD

This month's newsletter will be primarily devoted to a discussion of the status of the IAS SIG. Alan's FY89 Activity Plan both states the current status of the SIG succinctly and proposes a viable direction for the IAS sig to pursue. Rather than submit the reader to any more of your editor's usual computer-assisted ruminations, we will get on with the matter.

And finally, a program we use to do on-line disk random access. Nice for testing system response, exercising disks, etc.



IAS SIG FY89  
ACTIVITY PLAN

DECUS -- US Chapter  
IAS Special Interest Group  
FY89 Activity Plan  
Compiled by: Alan E. Frisbie  
January 21, 1988

1. Unit Goals

The IAS SIG is established under the bylaws of the DECUS U.S. Chapter to exchange ideas, programs, and any other items of common interest. Also, it provides feedback to Digital on all matters concerning the IAS Operating System, related hardware and software products, services, policies and other matters of interest to the IAS community.

2. FY88 Activities

In calendar year 1987, the IAS SIG suffered from a lack of leadership. The Chair at that time, Mike Robitaille, became heavily involved in "real-world" work and was unable to devote any time to DECUS activities. From the standpoint of the users, no difference was seen, due mainly to the efforts of our newsletter editor (Frank Borger), symposium representative (Lynda Roenicke), library representative (Ted Smith) and seminars representative (John Roman).

When the SIG Council took note of the absence of the SIG Chair, they acted to change the status of the SIG to a SIC. This was done without notifying any members of the IAS SIG steering committee, or even following their own procedures. This action took place

in late September 1987. After this action, Mike Robitaille resigned as chair and Alan Frisbie was elected as the new chair.

At the Fall 1987 symposium in Anaheim, the SIG Council decision was appealed through DECUS channels to the DECUS Board of Directors. At this time, the appeal is still pending before the Board, as is a request for immediate injunctive relief. In the meantime, the IAS SIG has lost its vote on the SIG Council and in other DECUS operating units.

While this appeal is taking place, the SIG has been attempting to regain voting status through the SIC to SIG process. To aid us in this endeavor, Terry Medlin has been assigned as a "mentor" to the SIG. With the assistance of Terry and Jim Bostwick (RSX SIG Chair), this activity plan and FY89 budget has been prepared.

Despite repeated requests for copies of previous budgets and activity information, no help has been forthcoming. That has made it very difficult to produce this plan and budget.

In spite of these problems, the IAS SIG has continued to provide products and services to the SIG members. The newsletter (The DEVIAS Letter) has not missed an issue in many years. The IAS-sponsored Pre-Symposium Seminar at the Anaheim symposium was very well attended -- in the top 20% of all seminars.

3. Planned FY89 Activities --  
Problems and Opportunities

Discussions with former and current IAS SIG members, as well as with our DEC counterpart, indicate

that the majority of IAS users today are at government installations. This poses some unique problems as well as some excellent opportunities for the SIG.

### 3.1. Problems

The primary problems we are encountering are:

#### o Security

The users are actively discouraged from talking with other users. This is because many of the systems are engaged in communications and intelligence applications -- secret by their very nature.

The security issue will probably be a permanent barrier to their use of DECUServe. This is unfortunate, as it is probably the most cost-effective alternative to face-to-face contact. However, the very idea of a modem or outside telephone line in these sites is absolutely unthinkable.

#### o Money

Even when the users wish to exchange information with other users, their budget does not allow for the high cost of attending a DECUS symposium.

The money issue is, of course, a continuing one. Since government IAS systems are providing an existing service, there is little money available for new activities. What little travel and conference money that is available is usually earmarked for conferences that provide a more direct benefit. In particular, users generally attend the DoD Communications Support Processor (CSP) Conference.

#### o Inexperience

Since many of the IAS sites are in military installations, the high turnover results in a lack of experience. The same is also true, to a lesser extent, in the commercial sector. Unless someone they know is an active DECUS member (unlikely), they do not know of all the help available to them.

Inexperience, fortunately, is a correctable problem. In the following section, we will see how this problem can be turned into an opportunity.

### 3.2. Opportunities

Since today's typical IAS user cannot be reached in the traditional DECUS fashion, we must investigate how best to serve them. With the low budget, limited travel and high security many users face, we should probably NOT focus on symposium sessions as a primary method. Our primary focus will, instead, be on the IAS SIG newsletter (The DEVIAS Letter) and the DECUS library.

The newsletter will continue to solicit and print articles and short programs of interest to the IAS community. Since some users are exploring new upgrade paths outside the DEC world, we will continue to print articles that will try to keep them as DEC (and DECUS) customers. The Macro-11 to Macro-32 series is an example of how we can keep them thinking of DEC as a solution to their problems.

A project will be undertaken to identify the programs in the DECUS library and on the RSX/IAS SIG tapes that would be useful to IAS sites. The goal will be to assemble an index or collection of programs that IAS users might

otherwise not be able to find.

While the CSP conference is draining away many of the users we wish to reach, it also provides a golden opportunity to deliver our message to a high concentration of IAS users. With the assistance of our DEC counterpart, a member of the IAS SIG steering committee will attend a meeting of the CSP conference. There, we will deliver the message that DECUS is more than just a big VAX convention every six months.

We will promote both the DECUS library and the newsletters as one of the least-expensive tools they could possibly find. Besides appealing to the money side of their problems, we will also be addressing people who may have never heard of DECUS before. We hope that the combination of low cost and high quality will result in renewed interest in DECUS.

Finally, we intend to conduct a survey of known IAS SIG members to find out why their overall level of DECUS activity is so low and what we might do to better serve them. Hopefully, the results of this survey will allow us to better direct our efforts in the years to come.

### 3.4. Budget Items

The budget for Fiscal Year 1989 contains five main items:

1. SIG Administration -- This item includes the normal day-to-day communications between the SIG leaders. In addition, it includes the expenses for printing and mailing the user survey. These costs will be kept low by the use of donated services. Considerable efforts will also be made to recruit new people for the

### SIG leadership.

2. "Woods" meetings -- We are planning for two woods meetings during the year, to take place roughly midway between symposia. If our efforts to use telephone conference calls for SIG business succeeds, one of these meetings will probably be dropped.

3. Symposia Suites -- In our traditional cost-saving and cooperative way, the IAS SIG will share a suite with the RSX SIG. Therefore, our only cost will be that of snacks and "munchies" for the user/DEC/leadership informal get-together.

4. DoD CSP meeting -- As discussed above, we will be sending one steering committee member to the CSP conference for one day. This will be coordinated with our DEC counterpart to make sure that the meeting will be as productive as possible.

5. Promotional items -- Because of the small percentage of IAS users at DECUS symposia, it is difficult to identify fellow users. Therefore, we plan to print distinctive (but tasteful) buttons or ribbons to identify IAS users. One criteria for the design is that it also be useful at the CSP conference for promoting DECUS and the IAS SIG products.

TEN YEARS AGO THIS MONTH
-----------------------------

An interesting SPR reported that CRF worked properly if one specified a file, but did not work if one specified a device for the listing.

MCR>TKB TMP, LP:/CR=TMP

I just love it, CRF's trying to read from the line printer.

A report on RSX11D, V6.2 said:

DKOVL, the overlapped seek DK handler tended to crash the system.

"At the moment we don't understand DSC." Why is it not possible to put several copies of RK disks onto the same tape?

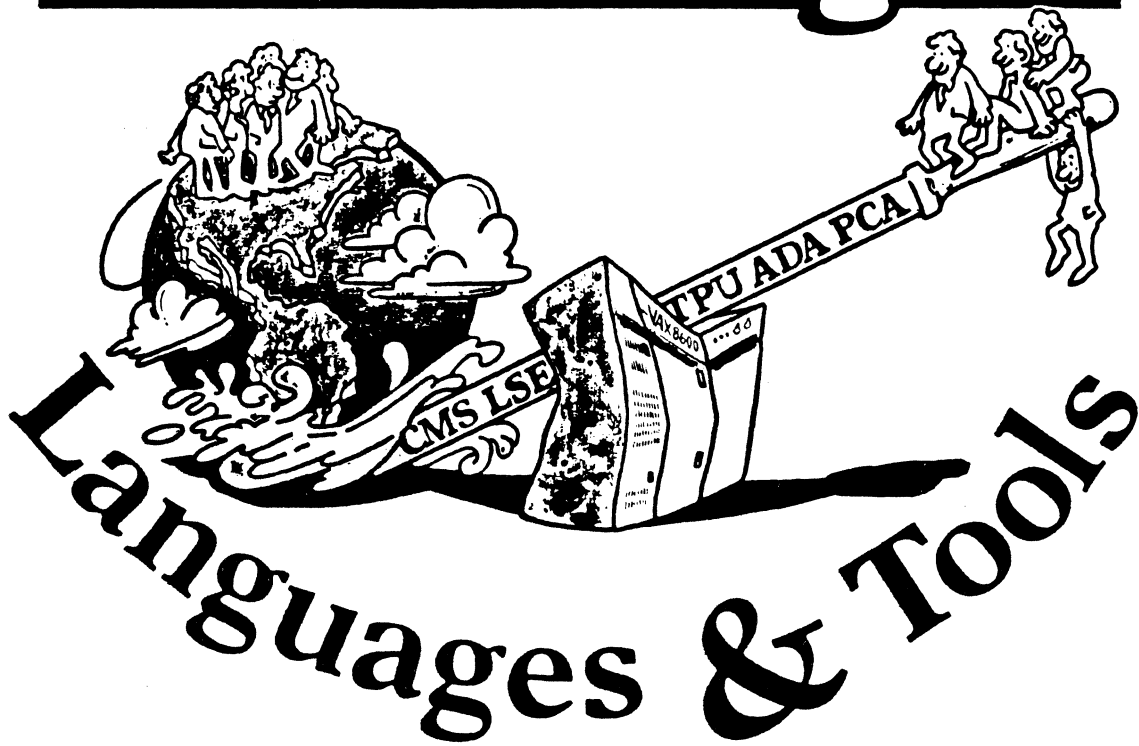
And a curious F4P SPR reported that for the following:  
IF (I.EQ.-1) PRINT ....  
IF (I.EQ."177777") PRINT ....  
the first print statement was executed, but the second was not.

THE PROGRAM OF THE MONTH CLUB
----------------------------------

```
.TITLE    RMRANSEEK
;
;This program is designed to do random seeks on an rm disk
;
    readsz=1000                ;read one block
    blockh=0
    cylmax=823.                ;maximum cylinder number
;
    .mcall  qiow$,dir$,exit$$,gmcr$
start:  dir$    #getmcr          ;so we recall the caller
        mov    #start,r5       ;point pointer to start of code
regio:  add    (r5)+,r4         ;add some to random block number
        inc    r4               ;just in case we got a 0
        cmp    r5,#end         ;past end of code ?
        blt    1$              ;branch if not
        mov    #start,r5       ;else reset pointer
1$:     tst    r4               ;did block number go negative ?
        bgt    2$              ;br if not
        neg    r4               ;fudge things
2$:     cmp    r4,#cylmax       ;is it too big ?
        blt    3$              ;br if ok
        sub    #cylmax,r4       ;take some off
        br    2$               ;and check again
3$:     mov    r4,r0            ;convert to block number
        clr    r1
        mul    #160,r0
        mov    r1,reaqio+q.iopl+10;fill in block in io request
        mov    r0,reaqio+q.iopl+6
        dir$   #reaqio          ;do disk read
        br    regio            ;and do it again
                                ;now the disk read qio
reaqio: qiow$   io.rlb,2,1,,iosb,,<readbf,readsz,0,0,0>
iosb:   .word   0,0             ;returned status
getmcr: gmcr$   ;get mcr dpb
readbf: .blkb   readsz         ;buffer for reading 1. block
end:    ;end of code pointer
        .end    start
```

# Leverage

---



## TABLE OF CONTENTS

Editor's Notes	2
Letters	3
L&T SIG Steering Committee Minutes	4
L & T SIG - Cobol Working Group <i>Bill Leroy, The Software House</i>	7
Report of the PL/1 Working Group <i>David K. Ream, Lexi-Comp</i>	17
Report of the Scan Working Group <i>David K. Ream, Lexi-Comp</i>	19
L&T Clinic Report for Anaheim '87 <i>George L. Scott, Computer Sciences Corporation</i>	23
Report on ANSI X3J2 (BASIC) Meetings <i>Stephen Jackson, SCJ Consulting, Inc.</i>	26
Trip Report for ANSI Pascal Standards Committee Meeting, December, Miami, Florida <i>Philip W. Wirth, E-Systems</i>	27
Languages and Tools SIG Masters Directory	30

## EDITOR'S NOTES

As the deadline approached for last month's issue, I had just returned from the Anaheim symposium, the Christmas break was upon us, and except for the faithful Bill Leroy of the the Cobol working group, I had had no material submitted. Needless to say, the L & T section of the Newsletters was blank. *This* month, I've got, for one of the few times in my tenure as editor, more material than I feel I can publish. Harassing people at symposia can work wonders for the submissions, if not for my popularity, I guess.

First in this issue is a letter from Kelvin Smith of Financial Computer Systems, who contributed the article two months ago about TECO initialization. He is correcting two misprints in the article which I probably introduced while typesetting it (I warned you I knew nothing about TECO). My apologies for the errors, and if you were interested in Mr. Smith's article, please be sure to read his letter.

Next are the minutes from the L&T Steering Committee meeting in Anaheim. If you have any comments on the issues raised there, please address them to the SIG officers, we are always looking for your input.

This month there are *two* COBOL working group columns. Bill gets his material to me religiously, even during the holiday season when everyone else, including your editor, slacks off.

After the material from the COBOL working group, we have submissions from several other working groups, a report from the L&T Clinic at Anaheim, and some trip reports from various standards meetings. There should be something here of interest for you. Particularly, you might like to look at the Clinic report, to see if any of the problems address are affecting you, also. I hope we can continue with a variety of these short reports. It should be one of the priorities of the various working groups to make their activities and interests known through the newsletter.

The final submission is the latest edition of the L&T Masters Directory. If you need help in any area, this is the place to find it. This Directory supersedes all earlier versions.

That's it for this month. When I'm done writing this column, I'm going to make a mad dash for the Federal Express pickup. I thought I had plenty of time for this issue, but a couple of days down with the flu have once again pushed me right to the deadline. Please consider contributing to the newsletters, and let me know what you like, dislike, or expect from us.

Al Folsom      *Leverage* Editor



# Financial Computer Systems Inc.

One Strawberry Hill Court, Stamford, CT 06902

(203) 357-0504

January 11, 1988

Mr. Alan Folsom, Jr.  
Leverage Editor  
Fischer & Porter Co.  
E. County Line Rd.  
Warminster, PA 18974

Dear Al:

My January article on TECO initialization sure looks nice coming off a laser printer with proportional spacing. As I looked through it, however, I did find two problems:

- 1) At the top of the third page of text, the flag for /FIND should be the eight-character sequence "`^^/\^^<CR><LF>`" - what some people call "the mountain in the clouds." Through an error on my part, the backslash did not print.
- 2) Throughout the sample initialization file, exclamation points at the end of lines are sometimes missing, apparently because they were slightly beyond the copying border. Any line that has a comment on it should terminate with an exclamation point, or the commands on the following line will be treated as comments and the comments will be treated as commands, likely with disastrous results.

Also, a comment on the sample file: The typeface used makes it rather difficult to distinguish the letter O and the number 0. With the exception of the TECO "go to" command, which uses the letter O, all circles in the command portion of the file are numeric zeroes.

Anyone who would like a machine-readable copy of the sample initialization file can either send me a tape (I can write at 800, 1600, or 6250 BPI) or call or write me to arrange a download using KERMIT.

Sincerely,

Kelvin Smith  
Data Processing Manager

Anaheim DECUS Symposium, Fall, 1987  
Saturday, December 5, 1987

L&T SIG STEERING COMMITTEE MINUTES  
Pre-Symposium Organization Meeting

STEERING COMMITTEE POSITIONS --- Discussion Leader, Sam Whidden; Recorder, Dave Ream

Sam opened discussion regarding Steering Committee positions by indicating that he believes a large Steering Committee is more effective in involving volunteers and spreading the workload than a small one. He suggested that, as one way to fill open positions, people who offer suggestions (or complaints) can be recruited and charged with establishing improvements. He feels that anyone who is active on behalf of the SIG should be a member of the Steering Committee.

The Steering Committee may need Alternates for Product Unit Representatives and ANSI Standards Committee representatives Product Unit or Standards meetings and duties conflict with SIG or other DECUS activities. Communication between the regular Rep and the Alternate must be maintained, and both must interact with the rest of the Steering Committee as much as is feasible.

BY-LAW CHANGES --- Sam suggested some language changes for the SIG by-laws. Motions were made and approved to include the following changes (subject to approval by the BOD):

Volunteer activation was formalized by inclusion of a new item under Article III -- Membership, which notes that any DECUS member can become a member of L&T by filling out a volunteer form or by accepting appointment to any L&T position.

In Article IV, the Steering Committee was expanded to include all SIG permanent administrative and technical positions, including formal alternate and assistant positions.

A new item 4.2, Member Initiative, was added:

#### 4.2 Member Initiative

- 4.2.1 Any Language and Tools SIG member may place an item on the Executive Committee agenda by submitting it in writing to any Steering Committee member.

It's Operating Procedures give the SIG's mission as follows:

'To promote the interchange of information concerning maximizing software development productivity and quality through effective use of computer languages, software development tools and software development methodologies, utilizing Digital Equipment Corporation computer equipment and software.'

There was some discussion about changing the name of the SIG to include 'methodology' (like our European analog). Sam stated that changing the name of the SIG might not be practical and suggested, instead, that a methodology theme be developed for the next two symposia in order to emphasize this area of L&T concerns.

INFORMATION FOLDER EDITOR --- Discussion Leader, Sam Whidden; Recorder, Dave Ream

Sam announced that there is a need to fill a new steering committee position of Information Folder Editor. Al Folsom agreed look for someone to assume these responsibilities. Sam will help initiate the new person to the position, and he can bequeath the files (in computer-readable form) that produce the various blank forms. The person who holds this position will need access to LaTeX in order to generate these forms.

UPDATE.DAILY CORRESPONDENT --- Discussion Leader, Joe Pollizzi; Recorder, Dave Ream

Another new steering committee position which needs to be filled is Update.Daily correspondent. Joe Pollizzi submitted the copy for the articles which were published in Update.Daily at the Anaheim symposium. He reworked the articles used at the Nashville symposium to have a base for the Anaheim submissions. Joe reported that he will try to find someone to fill this position.

Articles which are to be published in the Weekend edition of Update.Daily must be submitted in accordance with a deadline prior to the symposium which is established by Cheryl Smith. Submissions for daily issues must be received by 12 noon of the day prior to publication.

Joe also suggested that Working Group Chairs should advertise their own sessions in Update.Daily articles.

SESSION QUALITY COORDINATOR --- Discussion Leader, Sam Whidden ; Recorder, Mark Hyde.

There are currently four separate Session Evaluation Forms: the Chair's form, the L&T Steering Committee's long form, the L&T attendee's session evaluation card, and (possibly) an evaluation by a subcommittee of the Symposia Committee. Data from all these sources must be coordinated in order to compile session evaluations. The SIG faces meeting room limits for sponsoring sessions at each symposium, and needs to establish criteria to be used for cutting sessions. Good analysis of evaluation data will help in this regard.

Some suggestions for improving session quality were made. One was that a blacklist/whitelist be compiled, and another was that sessions should be focused around a theme whenever possible.

Gary Lelvis will hold the position of Session Quality Coordinator as long as it does not overload him, and it was decided that he should focus on session evaluation for the time being.

ADDITIONAL WORKING GROUP CHAIRS --- Discussion Leader, Joe Pollizzi; Recorder, Dave Ream

Suggestions which had been received for new Working Groups were discussed, as were replacements for some retiring Chairs.

LIBRARY REP --- Discussion Leader, Tony Scandora; Recorder, Bruce Mebust

Tony expects to attend a Library Committee meeting(s) during the Anaheim Symposium.

CINCINNATI CFP'S --- Discussion Leader, Sam Whidden; Recorder, George Scott

Working Group Chairs were instructed to give Cincinnati CFP's to Gary Lelvis or Earl Cory who are responsible for scheduling working group meetings and special items, such as panel discussions. The chairs were also requested to ask for ideas for sessions during their particular working group meetings.

THE ROLE OF L&T'S PRODUCT UNIT REPRESENTATIVES --- Discussion Leader, Sam Whidden; Recorder, George Scott

L&T recognizes that a Product Unit Representative is torn between loyalties. Sam wants a representative who can think for himself or herself. He recognizes that other SIG chairs may want their representatives to make sure that they have backing on every detail, but Sam feels that a representative must be trusted to have good judgement and to make correct decisions. A Product Unit Representative must represent the SIG and should consider SIG needs and wishes in casting Product Unit votes. The representative should report to the SIG regularly.

COMMCOMM REPORT --- Discussion Leader, Jay Wiley; Recorder, Dave Ream

Jay reported that newsletter circulation has dropped to 6000. No tracking is available on who does not resubscribe, why, or what follow-up occurs. At least one notification of subscription is sent. It is thought that, in large companies, many people share the newsletter.

Page count limits constantly affect the VAX SIG and have affected L&T at least once.



L&T SIG -- COBOL Working Group

Bill Leroy, Editor

For those of you who missed Anaheim, we had a number of great sessions, including a presentation by Chip Rice of Digital on the new features of COBOL V4.0. A primary enhancement asked for by a lot of people is "start regardless of lock". Another enhancement is "not on" and the use of ">=", "<=", etc.", conditionals.

We had an interesting hour with the COBOL Working Group meeting in Anaheim. I wish there was a way to meet more often. (A plea to use this newsletter?) A general feeling is that possibly more people use COBOL than DECUS realizes. We had representation from the VAX COBOL community, as well as from COBOL-81 and from COBOL-Plus. All of you should submit an article to this newsletter.

One item that I brought up was that I was the only person to sign up for the COBOL PSS. If you didn't know we sponsored one, let me know. If you weren't interested, please let me know, also. We would like to reschedule it again for Anaheim in October if there is enough interest.

We would like to try and start a "lending library" of sorts of COBOL sub-routines, and I would like some discussion as to the mechanics of it. Certainly, we can submit to the L&T SIG tape, and possibly also to the DECUS library. I have some 74 sub-routines, many of which are only pertinent to my applications. However, to start off, I would like to submit the following as at least a beginning:

ACCEPT\_REPLY.SUB

Accepts a single character and/or a control key, converts to upper-case, displays time of day on line 2, (and also changes 0=N, 1=Y, and 9=X); and then returns the cursor to the "accept" point.

CHECKS.SUB

Converts 99,999.99 to the English equivalent for check protection purposes. Zero and negative numbers print as "V O I D".

DISK\_ERROR.SUB

Converts the numeric disk errors to the English language equivalent.

DISP\_ERROR.SUB

Displays an error message (reversed) on line 24, the time of day on line 02, accepts a null reply, clears line 24, and returns the cursor back to its original point.

DISPLAY\_TABLE.SUB

Accepts a table of 500 - 130 column lines, converts the CRT and the attached terminal printer to 132 column mode, and displays the table. Uses the VT-220 keys as follows: "Prev Screen", "Next Screen", "Up arrow", "Down arrow", "Left arrow" (top of table), "Right arrow" (bottom of table), "F10" (exit), "F19" (print table on terminal printer).

EDIT\_ADDRESS.SUB

Converts a thirty character line to lower-case, then converts each character following a space or non-alphabetic character to upper-case. In front of any character "-" forces upper-case, "~" forces lowercase, and "!" in column 1 says leave as entered.

GET\_SYS\_DATE.SUB

Get the system day of week, date, and time -- and builds a character string as follows:  
Monday 12/14/87 05:01:58 p.m.

L&T SIG -- COBOL Working Group

HYMD\_EDIT.SUB

Edits a date entered [pic 9(8)] as MMDDYY or MMDDHHYY and converts it to HHYYMMDD, [pic S9(8) comp]. Errors are returned in a 34 character message field.

HYMD\_DISPLAY.SUB

Displays a date field [pic S9(8) comp] as "Month DD, HHYY".

HYMD\_MASK.SUB

Displays a date field [pic S9(8) comp] as "MM?DD?YY", where "?" = "\*" for 1800, "/" for 1900, "-" for 2000, & "+" for 2100.

HYMD\_JULIAN.SUB

Converts a date field [pic S9(8) comp] from HHYYMMDD to the corresponding Julian date S9(6), with the high order = 1 for 1900 and = 2 for 2000.

HYMD\_CALC.SUB

Calculates the difference between two dates [pic S9(8) comp] as to age near birthday, age last birthday, number of days, number of years.

LABELS.SUB

Takes a sequential file of 208 characters per record in a special format, and prints Cheshire labels (11x4), LN-03 labels (11x3), one-up gummed labels (1x1) on line-printer, or one-up gummed labels (1x1) on dot-matrix printer.

NAMREV.SUB

Takes a thirty character field and edits as follows:  
changes "Leroy, Walter Wm." to "Walter Wm. Leroy"  
changes "Leroy, Walter Wm., Jr." to "Walter Wm. Leroy, Jr."

PHONE\_MASK.SUB

Takes a phone number stored as S9(14) comp and displays it as AAA / XXX-NNNN EEEE.

SCREEN\_SETUP.SUB

Displays the my default settings on the users CRT. Called each time activate an image, in case the previous screen created strange settings.

TIME\_STAMP.SUB

Display the date, time, and operator (XXX) ID on line 2 of the CRT.

TRAP\_BROADCAST.SUB

Traps VMS broadcast messages, and displays them on line 24.

VERIFY\_STATE.SUB

Takes a 2-character DATA field, and returns "US", "CN", "TE", "FO", or "##" (error) in a 2-character STATUS field, as well as an English language decoding of the state in a 20 character message field.

XPRINT.SUB

Sub-routine to talk directly to the VMS print symbiont.

One of the many complaints about COBOL by non-users (and even by some users) is that it is slow. Several things can be done to help out the situation. One good thing to do is to have "assigns" made at SYSTEM startup time, rather than at USER log-in time. This reduces the "logicals" stored in memory, especially if you have a lot of USERS. Simply put a file called LOGICAL.COM into SYSTARTUP.COM with DCL commands as follows:

```

$ ASSIGN/SYSTEM [TSH.SOURCE] SRC:  ! Source code
$ ASSIGN/SYSTEM [TSH.COPY]  CPY:  ! Copy modules
$ ASSIGN/SYSTEM [TSH.SUB]   SUB:  ! Sub-routines

```

th the L&T editor and the DECUS publication staff have permission to CUT my submission each month in the rest of space. However, those on the mailing list will get it automatically. If you would like to be on the mailing list, please send me your name, address, & telephone number.

d finally, please send any articles, questions, hints, kinks, wish list items, bugs, SPR's, "puff" sheets on yourself to be showcased in a future issue, new members, or whatever -- on pieces of paper, or if a long article, send in VAX/VMS or EXCHANGE format -- on 1600 bpi magnetic tape, TK-50 magnetic tape, RX-50 floppy disk, or CDROM platters -- to me at:

Bill Leroy (404) 231-1484  
 The Software House, Inc.  
 2964 Peachtree Road, N.W., Suite 300  
 Atlanta, Georgia 30305-2120

Patrick Stair sent me the following letter, which has been slightly edited. Several points have already been answered in COBOL V4.0.

Dear Bill:

In the September 1987 NEWSLETTER, Michael Error gave a COBOL routine to determine the number of significant characters in a field prior to writing the field to an output record. Rather than using COBOL, I suggest a simple call to the VMS Run-time Library routine STR\$TRIM. As shown in the example below, this gives a much simpler code. ("Less is more," as the saying goes.) In addition, I suspect that the RTL subroutine accomplishes the same task with less overhead than performing a high-level language loop, although I haven't performed any tests on this.

```

identification division.
program-id. TRIM-EXAMPLE.
data division.
working-storage section.
01 IN-STRING          picture X(10).
01 STRING-LENGTH     picture S9(05) computational.

procedure division.
begin-main-logic section.
100-START.
  display "Enter string: " with no advancing.
  accept IN-STRING
  at end stop run.
*
*   This is the single call which produces the length of the string.
*
  call "STR$TRIM" using by descriptor IN-STRING
                      by descriptor IN-STRING
                      by reference STRING-LENGTH.
  display "Input value: ", IN-STRING, ", Length: ", STRING-LENGTH with conversion.
  go to 100-START.

```

Editors note. Reply from Mike Error. -- After trying your suggestion on using the Run-Time Library Routine  
 L&T-9

STR\$TRIM I found that it is a better method for us to use. A quick comparison against the current COBOL Loop showed that CPU Time was cut in half using STR\$TRIM. I thought it would be faster but not quite that fast. It also simplifies the code, making for easier reading. Thanks for the suggestion and we'll probably look more closely at the other system routines.]

Documentation on STR\$TRIM can be found in the VMS Run-Time Library manual, Part II, in which the description says "STR\$TRIM copies a source string to a destination string and deletes the trailing blank and tab characters". The source and destination strings can be the same string.

In the October issue, George Mayer was discussing COBOL techniques, and I have a few comments there, too.

Item 2 -- Segmented keys. I, too wish COBOL supported segmented keys. I have no workaround. [Ed. note. The problem is apparently RMS.]

Item 3 -- VFC record formats. This is an obnoxious technique of COBOL's, isn't it. (I'm not being very helpful, yet, am I?)

Item 4 -- File deletion on close. As the editor indicated, use of the RTL routine LIB\$DELETE\_FILE will work, but it tends to delete all versions unless you happen to know the version number. Since this can be dangerous in multi-user systems, I've borrowed a technique from IBM and developed a sub-routine that gives me unique file names based on the date, time, and PID. I can then call a sub-routine that uses LIB\$DELETE\_FILE to delete all versions of the file, knowing that only that user at that time is or ever will use that file.

Item 7 -- Suppressing file creation when "OPEN I-O" is used. I have no way to suppress the file creation. But in cases when I need to be sure that the file is there, I open the file as "INPUT" (which requires an existing file) and check the I-O status. If the open was successful (i.e., the file was there), I close it and re-open it I-O. [Editors note. See COBOL V4.0]

(Unfortunately VMS 4.6 has an interesting little bug that prevents me from using this as often as I wish. It turns out that under certain conditions, the file doesn't close quickly enough before I re-open it, and I get an error for "file already in use". These conditions are the use of (a) an indexed file, (b) alternate keys on the indexed file, (c) global buffers as a file parameter (e.g., in the FDL file used to create the indexed file), and (d) record locking of the file by the COBOL program. All four conditions are necessary to cause the problem.)

Item 8 -- Start regardless of lock. This is an odd and frequently frustrating restriction in VAX COBOL. Some years back someone submitted an SIR to the VAX Systems SIG requesting this but nothing came of it. Perhaps if it is resubmitted, we can all vote for it this time. I was also encouraged by someone at the Colorado Customer Support Center to use the SPR forms to make suggestions to DEC. This person indicated that DEC actually pays attention to them, but I wonder. [Editors note. See COBOL V4.0]

Item 9 -- Locked record handling. The use of "read regardless of lock" will return a condition code indicating that the record is locked by another program (if it is indeed locked). In one particular system of mine, when I detect this condition, I inform the user that the record is being updated by another user, and that they can look at it, but they will not be allowed to update it. That's the best I've been able to do.

Sincerely,

J. Patrick Stair, Systems Analyst (501) 562-7444  
 Arkansas Department of Pollution Control and Ecology  
 8001 National Drive  
 Little Rock, AR 72209

L&T SIG -- COBOL Working Group

Bill Leroy, Editor

is month the feature article is a report on three X3J4 COBOL standards meetings attended by our COBOL standards representative, Bruce Gaarder; or by the alternate, Dale Marriott. I know we will all appreciate time when the same COBOL source code can work on a VAX, as well as on all other manufacturer's hardware. Please thank Bruce and Dale for their efforts the next time you see them. Read their reports, if you have any comments, please send them to both me for our newsletter, and to Bruce, at:

Bruce Gaarder 612 / 721-2418  
Donahue Enterprises, Inc.  
2441 - 26th Avenue, South  
Minneapolis, MN 55406

popular request. I am printing the sub-routine to do "Check Protection". It is self explanatory (he smiles with a smile on his face), was written in 1970, updated for COBOL-85, is not fancy, but works.

Sections of the Combined SIG Newsletter (both L&T and other SIG's) belong to you the reader as a forum to exchange ideas, ask questions, and submit wish list items. All of the editors would prefer the READERS submit articles to publish, and with the experience you get in writing for the Combined SIG Newsletter, you might even eventually want to submit to the "3rd party slicks" where they pay money.

Therefore, GET EXPERIENCE in writing by sending any articles, questions, hints, kinks, wish list items, suggestions, "puff" sheets on yourself and what you do with COBOL, or whatever -- on pieces of paper, or if a long article, in VAX/VMS format, on 1600 bpi magnetic tape, TK-50, RX-50, or RRD50 (CDROM) -- to me at:

Bill Leroy (404) 231-1484  
The Software House, Inc.  
2964 Peachtree Road, N.W., Suite 300  
Atlanta, Georgia 30305-2120

**X3J4 COBOL Standards Trip Reports**

*Report of Accredited Standards Committee X3J4, COBOL, Meeting # 151 at St. Louis, MO on July 28-31, 1987, by Dale D. Marriott, Alternate DECUS Representative*

The intrinsic functions addendum is nearing the end of the public comment period and four comments have been received and processed. The major points of discussion had to do with error conditions and error default values. An attempt to cut off work on the addendum failed.

The international COBOL working group, ISO/TC97/SC22/WG4, has requested that a new work item be initiated for an upwardly compatible revision to COBOL-85 with an expected completion in the mid-1990's. This was approved and an assignment was made to draft the proper request for the work item.

The proposed Forms Interface Management System (FIMS) was discussed, and a request will be made of the CODASYL COBOL Committee to develop an ACCEPT/DISPLAY screen facility in addition to FIMS.

The committee discussed and approved 29 interpretations at this meeting and assigned 9 new requests for interpretation to committee members. One proposed interpretation was discussed and will be brought up at the next meeting.

L&T SIG -- COBOL Working Group

The committee continues to work on the addendum which corrects errors and ambiguities in the standard.

*Report of Accredited Standards Committee X3J4, COBOL, Meeting # 152 at Montgomery, AL on September 14-18, 1987, by Bruce L. Gaarder, DECUS Representative*

The ISO COBOL working group was directed to proceed with the development of a corrections addendum to the COBOL-85 standard. This means that X3J4 will need to have an approved work item from X3, since we do the bulk of the work in developing the international standard, since it is highly desirable that the ANSI and ISO standards continue to be identical. ISO is also proceeding in parallel with X3J4 on public comments on the proposed intrinsic functions addendum. ISO is requiring that all future international standards be able to handle multi-byte character sets.

We are tracking the SQL2 database committee's bindings for COBOL.

The committee has sent to SPARC a request to do work on a screen management addendum which would address the FIMS work being done by CODASYL.

The balance of the public comments on the intrinsic functions addendum were addressed. The major actions taken: eliminating error default values; affirming that it is a single level, optional module; deleting of implicit subscripting in function arguments; and addition of explicit ALL in place of implicit subscripting in function arguments. These changes require a second public review, which will take place after the next X3J4 meeting.

No interpretations were approved, and 17 proposed interpretations were discussed. No new requests for interpretation were received.

*Report of Accredited Standards Committee X3J4, COBOL, Meeting # 153 at Austin, TX on November 30 - December 4, 1987, by Bruce L. Gaarder, DECUS Representative*

The committee has approved COBOL Information Bulletin 24 for publication. This contains the interpretations of COBOL-85 approved to date.

Dan Frantz, DEC, chairman of the Forms Interface Management System (FIMS) committee gave a presentation on FIMS and discussed the issue of standardizing the COBOL interface to FIMS.

The committee discussed the X/OPEN Portability Guide, which is part of an international effort on the part of UNIX vendors and users to develop a common subset of language features to use for maximum portability on their implementations. X3J4 has sent the X/OPEN group a list of incompatibilities with the COBOL-85 standard and will be discussing the issue further with someone from X/OPEN.

The intrinsic functions addendum was discussed and put into final form for the second public review, which will take place concurrent with the international review.

There were 10 requests for interpretation of the standard which were assigned to committee members. There were 13 interpretations approved and one was sent back for further work.

Five documents were accepted into the corrections addendum.

The committee discussed the large backlog of unfinished assignments and set up a procedure to deal with those that remain unfinished for too long a time.

identification division.  
 program-id. CHECKS.

```
*****
*
*           Copyright (C) 1985-88 by
*
*           The Software House, Inc. (TSH)
*           Post Office Box 52661
*           Atlanta, Georgia 30355-0661
*           (404) 231-1484
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* sibility for the use or reliability of this free software.
*****
```

```
*
* Subroutine to convert numbers to words to "protect" checks.
*
```

data division.  
 working-storage section.  
 01.

```
03 IN-AMOUNT picture 9(6)V99 value zero.
03          redefines IN-AMOUNT.
05 POS1 picture 9.
05 POS2 picture 9.
05 POS3 picture 9.
05 POS4 picture 9.
05 POS5 picture 9.
05 POS6 picture 9.
05 POS78 picture 99.

03 DIGIT picture 9.

03 VOID-DESC picture X(65) value
"V O I D V O I D V O I D V O I D V O I D V O I D".

03 TEEN-TBL.
05 picture X(10) value "Eleven ".
05 picture X(10) value "Twelve ".
05 picture X(10) value "Thirteen ".
05 picture X(10) value "Fourteen ".
05 picture X(10) value "Fifteen ".
05 picture X(10) value "Sixteen ".
05 picture X(10) value "Seventeen ".
05 picture X(10) value "Eighteen ".
05 picture X(10) value "Nineteen ".
```

```
03 UNIT-TBL.
05 picture X(6) value "One ".
05 picture X(6) value "Two ".
05 picture X(6) value "Three ".
05 picture X(6) value "Four ".
05 picture X(6) value "Five ".
05 picture X(6) value "Six ".
05 picture X(6) value "Seven ".
05 picture X(6) value "Eight ".
05 picture X(6) value "Nine ".

03 TENTH-TBL.
05 picture X(8) value "Ten ".
05 picture X(8) value "Twenty ".
05 picture X(8) value "Thirty ".
05 picture X(8) value "Forty ".
05 picture X(8) value "Fifty ".
05 picture X(8) value "Sixty ".
05 picture X(8) value "Seventy ".
05 picture X(8) value "Eighty ".
05 picture X(8) value "Ninety ".

03 CENTS-TBL.
05 picture X(10) value "and /100".

03 SPEC-TBL.
05 picture X(9) value "Thousand ".
05 picture X(9) value "Hundred ".

03 IN-TBL picture X(99).
03 OUT-DESC picture X(65).
```

```
01 computational.
03 IN-NDX picture S9(5).
03 OUT-NDX picture S9(5).
```

```
linkage section.
01 LS-AMOUNT picture S9(6)V99.
01 LS-DESC picture X(65).
```

procedure division using LS-AMOUNT, LS-DESC.

BUILD-WORD section.  
 BUILD-A.

```
if LS-AMOUNT not numeric
or LS-AMOUNT < .01 or > 99999.99
  move VOID-DESC to LS-DESC
  go to BUILD-X.
move LS-AMOUNT to IN-AMOUNT.
move spaces to OUT-DESC.
move +1 to OUT-NDX.
if POS2 = 1 and POS3 = 0
  move POS2 to DIGIT
  perform BUILD-TENTH
  go to BUILD-THOUSAND.
```

```

if POS2 = 1
  move POS3 to DIGIT
  perform BUILD-TEEN
  go to BUILD-THOUSAND.
if POS2 not = 0
  move POS2 to DIGIT
  perform BUILD-TENTH
  if POS3 not = 0
    move "-" to OUT-DESC (OUT-NDX - 1:1).
if POS3 not = 0
  move POS3 to DIGIT
  perform BUILD-UNIT.

BUILD-THOUSAND.
if OUT-NDX not = +1
  move 1 to DIGIT
  perform BUILD-SPEC.
if POS4 not = 0
  move POS4 to DIGIT
  perform BUILD-UNIT
  move 2 to DIGIT
  perform BUILD-SPEC.
if POS5 = 1 and POS6 = 0
  move POS5 to DIGIT
  perform BUILD-TENTH
  go to BUILD-CENT.
if POS5 = 1
  move POS6 to DIGIT
  perform BUILD-TEEN
  go to BUILD-CENT.
if POS5 not = 0
  move POS5 to DIGIT
  perform BUILD-TENTH
  if POS6 not = 0
    move "-" to OUT-DESC (OUT-NDX - 1:1).
if POS6 not = 0
  move POS6 to DIGIT
  perform BUILD-UNIT.

BUILD-CENT.
if POS78 = zero
  move "NO" to CENTS-TBL (5:2)
  else
    move POS78 to CENTS-TBL (5:2).
move CENTS-TBL to OUT-DESC (OUT-NDX:10).
move OUT-DESC to LS-DESC.

BUILD-X.
  exit program.

```

```

* ***** Build pieces of description *****

BUILD-TENTH.
  compute IN-NDX = (DIGIT * 8) - 7.
  move TENTH-TBL to IN-TBL.
  perform BUILD-OUT.
BUILD-TEEN.
  compute IN-NDX = (DIGIT * 10) - 9.
  move TEEN-TBL to IN-TBL.
  perform BUILD-OUT.
BUILD-UNIT.
  compute IN-NDX = (DIGIT * 6) - 5.
  move UNIT-TBL to IN-TBL.
  perform BUILD-OUT.
BUILD-SPEC.
  compute IN-NDX = (DIGIT * 9) - 8.
  move SPEC-TBL to IN-TBL.
  perform BUILD-OUT.

*           ** Move appropriate verbage **

BUILD-OUT section.
BUILD-OUT-NEXT.
  if IN-TBL (IN-NDX:1) = space
    add +1 to OUT-NDX
    go to BUILD-OUT-X.
  move IN-TBL (IN-NDX:1) to OUT-DESC (OUT-NDX:1).
  add +1 to IN-NDX, OUT-NDX.
  go to BUILD-OUT-NEXT.
BUILD-OUT-X.
  exit.

```

## EMERGENCY LIST OF EXCUSES FOR LATE PROJECTS

It's enough anguish to have the deadline for a project zip by without adding to it the torment of thinking up an excuse for why the work wasn't done right, or didn't get completed on time. Therefore, we offer the following:

1. That's the way we've always done it.
2. I didn't know you were in a hurry for it.
3. That's not in my department.
4. No one told me to go ahead.
5. I'm waiting for an o.k.
6. How did I know that this was different?
7. That's her/his job, not mine.
8. Wait until the boss comes back and ask her/him.
9. I forgot.
10. I didn't think it was important.
11. I'm so busy, I just cannot get around to it.
12. I thought I told you to do it.
13. I wasn't hired to do that.

Report of the PL/I Working Group  
from the Fall 1987 DECUS Symposium

The very first meeting of this Working Group was held on Thursday, December 10. Opening business included a report on the formation of the W/G at Nashville in the previous spring, solicitation for active participation in the masters program and session presentations. It was also noted that the W/G could address all areas regarding PL/I be they technical, maintenance, or administrative. Activity can include VAX as well as PDP systems, and should include any standards activity.

The technical issues took up most of the time and the wish list follows this report. The requested features are enhancements as opposed to problems or bugs. The current VAX version of PL/I is V3.0. It was released slightly after the Spring 1987 DECUS and has been noted to be relatively stable.

Following DECUS, contact was made with Dr. John Klensin, the chair of the PL/I standards committee. He reported that the ANSI X3.74 (1987) was made it through the review period and that the committee is in hibernation for the moment. The standard can be acquired from the ANSI publications department at (212) 642-4900. He is sending me an encapsulation of the changes which will get distributed and/or published. He did not think that DEC has stated full compliance yet.

Two sessions were given on PL/I in Anaheim and this was noted. The working group meeting was well attended; someone even commenting that it was the most useful session they had been to so far.

A session has been submitted for Cincinnati entitled: "PL/I: the forgotten language." This is a reference both to a language panel that is being planned from which PL/I was dropped and to the fact that DEC itself doesn't seem to be promoting PL/I. It will be given by Arthur Costen, a member of the standards committee.

Special thanks to the new vice-chair, Lon Amick, who was helpful by supplying the names of some PL/I standards committee members.

David K. Ream, Chair

PL/I WORKING GROUP WISHLIST

from the Fall 1987 DECUS

- 1) Force the compiler to enable /CHECK if the program contains "ON STRINGRANGE" or "ON SUBSCRIPTRANGE". At minimum issue a warning if this situation occurs.
- 2) Allow FORTRAN\_CARRIAGE\_CONTROL as an ENVIRONMENT option when creating files.
- 3) Provide a method for using named RMS key references for indexed sequential file indexes rather than only the index numbers; possibly, INDEX(key\_name\_string). Another approach would be to define the keys structure in the ENVIRONMENT so that file organization checks could be thoroughly accomplished, such as, in COBOL.
- 4) A left-over request from the Spring '87 DECUS: provide for creation of indexed sequential files using the OPEN statement. This fits in closely with number 3.
- 5) New built-ins:
  - occ = TALLY ( string, substring )  
count the number of occurrences of substring within string.
  - BALANCED ( string, substring1, substring2 )  
true is returned if proper nesting of delimiters, substring1 and substring2, occur within string.
  - str = RIGHTJUST ( string, pad\_chars, length )  
return a new string with string right justified with a size of length where pad\_chars are filled in any extra positions on the left.
  - SUBSTITUTION ( string, locate, replace )  
returns a string with the locate substrings replaced with the replace substring.

Report of the SCAN Working Group  
from the Fall 1987 DECUS Symposium

The very first meeting of this Working Group was held on Tuesday, December 9. Opening business included a report on the formation of the W/G at Nashville in the previous spring, solicitation for active participation in the masters program and session presentations. It was also noted that the W/G could address all areas regarding VAX SCAN be they technical, maintenance, or administrative.

Since SCAN is a relatively new DEC product, attention focused in two areas:

technical: a wish list was produced and follows this report; and,  
promotion: what can the W/G do to foster more interest in SCAN through DECUS or any other means?

The technical issues took up most of the time, as is represented by the lengthy wish list. The requested features are enhancements expected in a new product as opposed to problems or bugs. The current version of SCAN is V1.1 and has been noted to be relatively stable. C was represented by Jim Totton. He mentioned that a support team is now in place at Spitbrook and will be undertaking review of outstanding SPR's, presumably with an eye toward a maintenance release.

Two sessions were given on SCAN in Anaheim: a tutorial on the concepts of the language and the fact that it is more of a tool builder than a true general-purpose language that would replace a major language like FORTRAN et al; and, the second was on building tools in SCAN with examples of actual programs created by a DEC software consultant from the LA office. Both sessions were well attended with about a third of the audience acknowledging they had purchased SCAN already.

Ready sessions are submitted for Cincinnati. One of these will be on esoteric uses of SCAN citing several case studies of applications within the publishing area.

David K. Ream, Chair

SCAN WORKING GROUP WISHLIST

This wish list is divided into areas of decreasing importance. That is, it was felt that some areas were more desirable to address over other areas. Since SCAN is a thought of primarily as a tool, it should integrate more with other DEC products and as other compilers do. Also, new or improved scanning features should take precedence of general purpose language enhancements.

Compiler features  
-----

Support for SCA

Complete STARLET support

Currently only files can be included. A method to include text modules from libraries is desired. Using a logical name (SCAN\$LIBRARY) as PL/I does would also be useful. Possible syntax for this would be:

INCLUDE LIBRARY module\_name;

DBMS support

CDD support

Parameter passing to subroutines should allow for full string descriptor checking. This is especially important as SCAN is called as a subroutine more frequently than other languages. Also, parameter capabilities for dealing with system services (ANY in PL/I) and truncated argument lists (eg., LIB\$SIGNAL) should be provided.

Run-time features  
-----

DEBUG needs events to reflect more closely what input stream is actually structured like. Also, a way to display the partially built tokens is needed. It was realized that this will probably require enhanced tracking within the state table.

PCA needs to be able to reflect time spent in the various transition states so that performance of token and macro definitions can be determined.

Documentation  
-----

Include meaningful examples of the more esoteric SCAN features, such as, error recovery and nested macros.

A section/appendix on the underlying algorithm used in tokenizing and picture matching. This is strewn throughout the manual under various specific topics, but it is not presented as a cohesive whole.

Another useful section would be on how to best code the scanning statements for optimal performance. For instance, is a set with ranges for both lowercase and uppercase alphabets faster than a token with the caseless attribute? Is it better to have more complicated tokens or more complicated macros?

A tutorial manual, ala DATATRIEVE or DOCUMENT, should be written to tie everything together into "How to code a SCAN program". It is a different methodology than that used for an algorithmic language.

#### Scanning language features

---

Allow multiple modules in one source file. This would be useful in creating distinct state tables, although being able to create named state tables that could be referenced on the START SCAN statement should not be rejected out-of-hand. For instance, one main procedure may want to read in an option that could cause different state tables to be processed within one procedure over the same input.

Context-sensitive tokens that could be used as non-trigger tokens in macros--basically, like a syntax macro but without the procedural body and overhead.

Dynamic tokens that could be used as triggers, ie., a string read in from the end-user or passed as a subroutine parameter.

A way to match against universal tokens; something like

```
MACRO trap TRIGGER { UNIVERSAL };
```

Of course, this built-in token could be used in concert with other picture patterns as well.

Within a macro or error procedure, the ability to call a procedure to return the current or last "line" being used for tokenizing, similar to SCN\$GET\_TOKEN\_NAME.

An ANSWER ALL statement to automatically return the entire string matched by the picture for a macro without having to capture it in a picture variable.

Eliminate the need for an output clause on the START SCAN statement when the user does not desire output in any form.

Allow output files to be created in the same format as the input file, ie., indexed sequential.

A new built-in (COLLECT ?) that will match all the characters from the current point up to either the next token built or the next token in the current picture. This is to solve the problem where one knows what appears on either side of an arbitrary string but not what characters might appear as part of it, especially when what appears internal to the bounding tokens might be built as tokens, but wouldn't in the current context.

Allow the look ahead operator in macro pictures.

In addition to the indefinite repetition token operator "...", provide for finite repeats: "n..m" or n to m times; for example,

```
file_spec-char 1..31
```

#### String manipulation features

---

More string built-ins ala PL/I: COPY, TRANSLATE, BYTE, RANK,

L&T-21

#### SEARCH.

Allow TRIM to specify leading and trailing trim strings.

```
occ = TALLY ( string, substring )
```

count the number of occurrences of substring within string.

```
BALANCED ( string, substring1, substring2 )
```

true is returned if proper nesting of delimiters, substring1 and substring2, occur within string.

```
str = RIGHTJUST ( string, pad_chars, length )
```

return a new string with string right justified with a size of length where pad\_chars are filled in any extra positions on the left.

```
REVERSE ( string )
```

return the reversal of string

```
SUBSTITUTION ( string, locate, replace )
```

returns a string with the locate substrings replaced with the replace substring.

#### General language features

---

Honor Control\_Z on READ statements with an "AT END" clause.

Add array handling.



# L&T CLINIC REPORT FOR ANAHEIM '87

George L. Scott

Computer Sciences Corporation

Over 100 questions were answered by over 25 languages and tools experts at the L&T Clinic at the DECUS Fall 1987 Symposium in Anaheim. The experts were Digital developers and other experienced users. Topics ranged from Ada to VMS DCL. The counts by topic are:

Ada	3
BASIC	4
C	7
CMS	6
COBOL	4
Debug	8
DIBOL	2
DTM	6
EDT	1
EVE	1
FORTRAN	6
F77	4
LaTeX	1
Linker	3
LSE	3
Macro	1
MMS	4
Multi Editors	4
Multi Tools	4
PASCAL	4
PCA	3
PL/I	2
Runoff	1
Run Time Lib	2
Scan	2
SMG	1
SwProjManager	1
Terminals	1
TeX	1
TPU	5
VMS DCL	2

Some questions and answers of general interest are repeated here.

L&T-23

Q: Can VAX C be extended to support quad length integer arithmetic as part of the language? A: There are no plans to extend C to handle quad-word integers. C could not be extended to do this support without inserting many, many "invisible" runtime library calls into the code in order to do the simplest of operations. The overhead would very likely obscure any benefit.

Q: VAX C I/O system is too slow for our application. Should we write our own version of it or wait for DEC to make it better? A: When you install V4.6 on your system, there will be two wonderful new options to play with on open statements, "MBC=n" and "MBF=n". These can help substantially with your performance problems. As for your more detailed [spoken] questions, I suggest you look into purchasing the source fiche for the C runtime library. If you've got suggestions for improving the performance, we'd love to see them!

Q: How can I logically delete a CMS element from appearing in any future general fetches without deleting it from the library? [The element was used in earlier versions of the product that the library contains, but it is no longer a part of the product. It must stay in the library because of the earlier versions.] A: How about a class, such as ACTIVE, into which all active elements are inserted? Then, FETCH/GEN=ACTIVE+. To delete from the set of active elements, remove the element from the ACTIVE class.

Q: How do I install and support CMS 2.3 and 3.0 at the same time? A: Please don't do this. V3 and V2.3 should not be used together because V2.3 might try to write into a V3 library and corrupt it.

Q: Searching for occurrences of a string in a CMS library returns all versions of the string, even obsolete ones. How does one avoid this problem? A: Use reference copy directories.

Q: When the Debugger shows source and FMS is writing out to the terminal, it's a mess! Is there a command in the Debugger to manage output to the terminal control area? A: Use two terminals or a multi-session terminal. Allocate the other terminal to your process, then define DBG\$INPUT and DBG\$OUTPUT to that terminal. See also the next Q & A.

Q: How do you take advantage of DBG\$INPUT and DBG\$OUTPUT on VT300 series terminals running SSU on a LAT? A: You must have SYSPRV and SHARE. Log in to both terminals. At terminal 1, assign DBG\$INPUT and DBG\$OUTPUT to the other terminal. (It now has a name, you logged into it.) At terminal 2, issue a DCL WAIT 10:00. T1 will have program input and output. T2 will have Debugger input and output.

Q: I have a detached process that is created through SYS\$CREPRC that I wish to run in DEBUG. Is there a way to do it? A: Use mailboxes for DBG\$INPUT and DBG\$OUTPUT.

Q: I have heard that for DTM "interactive test capture," mouse clicks are not recognized. Is there any hope for me to use the interactive test capture feature to test [a point and click] product now or in the future? A: [DTM] cannot test workstation applications now. The ability to do so is a very high priority item.

Q: Using DTM, I have erratic access violations when leaving Review. A: Fixed in a future release. Exit handler problem.

Q: I'm a FORTRAN programmer who has to interact with COBOL programs and programmers. How can I convert COBOL's packed decimal data type to

something I can use? A: Use LIB\$CVT\_dx\_dx

Q: When using LSE, what is the statement to get a CMS file? A: Use \$LSE  
CMS\$LIB:element.type

Q: If extensions to LSE are loaded at execution, when attempting to save and then enter again, some extensions are not there. Extensions are TPU and LSE input commands. Neither SAVE SECTION nor SAVE ENVIRONMENT nor both works totally. A: You must do both saves. The SAVE ENV saves the language extensions. The SAVE SECTION saves the compiled TPU procedures. At start, you must tell LSE which environment file and which section file to use. Note: If it is key definitions that you are trying to save, you must write a user initialization procedure to define the keys.

Q: Digital recommends using /NOOPT with the /DEBUG qualifier when compiling a FORTRAN program. Does this recommendation apply when the debugger information is being collected for use by PCA? A: No, it is not necessary or even recommended to compile /NOOPT for the purpose of PCA analysis. Ignore the FORTRAN informational message in this case. The message will be changed in the future so as not to imply that /NOOPT should be used with PCA.

Q: Support for 8-bit Multinational Code is not implemented in Runoff's Table of Contents. Runoff inserts an accept flag before characters like the Swedish [this editor couldn't do it, either. The need is for diacritical marks, such as ", ', and ', over letters.] This makes the right margin look like a saw-blade! How does one tell Runoff to treat these characters like it does in normal text? A: Send in a SPR. Bug in Runoff.

Q: Do the DECUS tapes containing TeX and LaTeX contain drivers, for example for an LN03 laser printer? A: Yes! The L&T SIG tape contains all including a driver for the LN03.

Q: Why is it necessary for VT200 terminals on a multiplexor to be set to VT100 mode before they can use TPU editors? A: Set to 7-bit controls.

Q: We've got several large DCL applications. Can we compile or translate them to executables somehow? A: No. It is best to rewrite in a high-level language. Possibly in VAX BASIC.

To: Al Folsom  
Sam Whidden

From: Stephen Jackson

Re: Report on ANSI X3J2 (BASIC) Meetings in 1987

The 43rd meeting of the ANSI X3J2 BASIC Standards Committee was held at Deerfield Beach, Florida, on January 26th and 27th, 1987.

At the time of this meeting, there was some confusion as to just what the current status of ANSI BASIC standard. They were involved in the lengthy process of seeing that all objections had been resolved and all other paperwork had been completed. It was hoped that the standard would be released before the end of 1987.

There was a report of the international ISO TC97/SC22/WG8 meeting held the week before and it was felt that the American standard would be put forward with a new subset which is consistent with the ECMA-116 BASIC-1 standard and the ECMA Standard Graphics Module.

The committee spent time discussing the new addendum to the full BASIC standard to deal with individual character input and modules. A letter ballot will be sent out to the members on whether to forward those addendum for public review.

Future work was discussed and it was decided to meet at least once a year and to discuss technical matters only when those matters are covered by an existing project. This does not prevent us from discussing a new project at those meetings.

The 44th meeting of the ANSI X3J2 BASIC Committee was held in Minneapolis, Minnesota, on June 22nd and 23rd, 1987.

The current status of the ANSI BASIC standard was discussed. It is currently at the printer and should be done by this fall.

Jim Totton, of Digital Equipment Corporation, ended his three year term as chairman of the committee and was replaced, as chairman, by James Harle, of the United States Naval Academy.

There were two no votes received on the two proposed addendum to the BASIC standard, single character input and modules. I never received a letter ballot for this vote. The committee discussed and drafted responses to those objections. Another letter ballot will be sent out to decide whether to forward those addendum for public review.

Additional work was discussed and it was decided our next meeting will not be held until spring of 1988.

# Trip Report for ANSI Pascal Standards Committee Meeting December, Miami, Florida

Philip. W. Wirth  
Joint Pascal Committee (ANSI X3J9/IEEE P770)  
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January 11, 1988

During the week of 7-11 December, I attended the fourth-quarter meeting of the Joint Pascal Committee, which was held in Miami, Florida.

For those who may not be familiar with standards activity, the Joint Pascal Committee (JPC) is sponsored by ANSI and the IEEE and works closely with its ISO counterpart, ISO/TC97/SC22/WG2. The purpose of the group is to examine the extensions made to Pascal by compiler vendors, such as DEC, and to then write a document defining "an implementable, internationally acceptable Extended Pascal Standard." If you use VAX Pascal this standard will directly affect you due to DEC's traditional vigorous support of standards. DECUS' participation in the St. Paul and Miami meetings established full voting rights for our representative; you can help influence the standard by contacting either Wayne Sewell, our representative, or me at the address given above.

The main order of business at the December meeting was to finish evaluating and responding to over 700 comments from 30 different sources received during the first public comment stage which ended on 1-May, thus

finalizing the next draft standard which will also be published for public comment. Much of the the work dealt with the minutiae of typographical and wording changes, but where substantial technical changes were involved debate was both lively and prolonged. Theoretical differences as to what ought to be considered a part of Pascal, ease of compiler implementation *versus* ease of language use and conformance to ANSI, IEEE and ISO expectations all helped spice the debate. A counterpoint to the theoretical issues was concern about the business impact of the new standard. The time and money spent by a compiler vendor to upgrade to the new standard are considerable and the actual cost will be affected by how closely the Extended Pascal Standard resembles the vendor's current Pascal offering. Similarly, DECUS members could face a considerable recoding effort if the new Pascal standard varies greatly from VAX Pascal, DEC's current Pascal implementation. In general, the position voted by DECUS in the meeting was to oppose substantial changes to the standard which might delay its release, since the longer the standard and, thus, DEC's release of a new standard compiler is delayed, the larger the body of existing Pascal code will be. A number of motions introducing 11th hour features were defeated by one vote margins; in those cases your vote was decisive in moving the standard closer to publication.

By far, the most hotly debated topic of the week was the binding of variable names within a program to things outside the program. A familiar example is binding a VMS file name to a FILE type variable in VAX Pascal. Generally the debate broke down along little system/big system lines. People who work with little systems ( *eg.* IBM PC) want to be able to bind variables to any external thing at run time and still meet the standard. This implementation will allow them to provide the "PEEK and POKE" type instructions that microcomputer users have come to expect from their compilers. The big computer camp was concerned about the effect run time binding would have on program safety, the safety provided by Pascal's strong data typing being one of its selling features, and by how the compiler could optimize code without knowing what a variable might be bound to at run time. A motion to include run time binding in the standard achieved the required two thirds majority at the end of the last session.

At the previous meeting in St. Paul, a decision on how to implement

short-circuiting of Boolean expressions in Extended Pascal was left pending. A compiler can optimize complex Boolean expressions, by "code hoisting", more effectively if the compiler is free to reorder subexpressions (as the VAX Pascal compiler does), than if it has to evaluate them in a particular order, say left to right. Using this technique, evaluation can be aborted (short-circuited) as soon as the evaluation of one (hopefully the simplest) subexpression satisfies the test. The problem here is that the order is sometimes important; in such cases we users must kludge up our code with nested IF statements to insure that the Booleans are evaluated in desired order. The solution adopted by the committee was to add two new operators, **and\_then** and **or\_else** as order dependent versions of Boolean **and** and **or**. Though these operators are admittedly ugly, they will allow users to specify order where it is important and while retaining full optimization of the normal **and** and **or**.

Schemata are a feature of Extended Pascal which received a lot of attention during comment period. Schemata are collections of similar data types that differ only in the subrange bounds specified. For example a type SQUARE could be defined as a schemata of RECTANGLE by replacing a two value subrange (2 pairs of equal sides) with single value (ie, all sides equal). The code would look like this.

```
TYPE
{ first a normal extended Pascal definition of RECTANGLE... }
RECTANGLE(X_LEN,Y_LEN : POSITIVE) ARRAY[1..X_LEN, 1..Y_LEN] OF
REAL;

{ ... then define SQUARE as a discriminated schemata of RECTANGLE.}
SQUARE(SIDE : POSITIVE) = RECTANGLE(SIDE,SIDE);
```

Schemata are intended to provide a clean replacement of implementations such as VAX Pascal's Conformant Schemas (see DEC manual Programming in VAX Pascal, section 10.3.5) which subvert Pascal's strong type checking to allow the programmer to pass variable length arrays and strings. Some of the public comment complained about the apparent complexity of schemata and the committee responded by simplifying the draft proposal. Schemata

were changed from a complex implementation where Schemata created new data types and built identical but incompatible replicas of data types to a simpler implementation where the schemata just select a data type.

Type-inquiry, a method to request the data type of some object which was included in the draft to support dynamically generated types, was no longer strictly necessary when schemata were changed to stop generating data types. Interestingly, type-inquiry was thought to be useful by itself without schemata generated types and the committee voted to keep it in the standard.

---

Earl Cory took notes during the wrapup session at the Anaheim Symposium on the best and worst aspects of the week. Here are the results:

BEST	WORST
Clinic	Titles don't match abstract or subject of session
Signs in session rooms	Separation of working group area in campground
The Editor session stream	L&T Tapes Not in Library
Reception of Digital personnel by everyone	More than one BOF on similar subjects
People telling about how they do things	Stronger stress on no Commercialism
Food	
Guides in the Hilton	
No herding by lunch personnel	
Variety of sessions	
BOFs	
LSE - "MY keys to success" was worth an "E" ticket.	

## LANGUAGES & TOOLS SIG

### MASTERS DIRECTORY

January 18, 1988

Those listed here have agreed to answer questions from users, normally by telephone, on the products or subjects listed beside their names. Expertise is generally in VMS layered software, unless otherwise noted. A State Code in braces {} follows each name to help the user locate Masters in appropriate geographical areas. Complete addresses and phone numbers appear in an alphabetical list following this directory. The alphabetical listing includes [notes] on other software in use at the Master's installation, where this information could be helpful to a user in selecting a Master and where the Master has supplied it.

The list will become fuller as time goes on. Not all L&T products are listed here, and we await volunteer Masters in all the missing areas. A few non-L&T products are mentioned to accommodate individual Masters with interests broader than L&T's. Mumps is included by special request of the Mumps SIG, as a service to Mumps users.

The expertise of these volunteer Masters overlaps; you may find it necessary to call more than one. Please remember that these Masters can provide you with brief assistance, not with long-term support. Some Masters are professional consultants who have agreed to donate their time and talent in their areas of expertise; it is not L&T's intent to provide a reference service for consultants, and any instance of unwanted commercialism should be reported to the L&T Masters Coordinator (see below). Neither L&T nor DECUS make any claim that the information you receive will necessarily be correct or complete.

Please also notify the L&T Masters Coordinator of any errors in the entries in this Directory, or if you experience real difficulty in your effort to obtain help through this list. **Please note that this list expires three months from the date appearing above. After that time, please consult a more recent issue of the Newsletter for a current list.**

If you can participate as a Master yourself, please fill out the attached Masters Program application. Submit it to the L&T Campground Host during symposium or mail it to either:

**Dena Shelton, L&T Masters Coordinator, Cullinet Software, Inc., 2860 Zanker Road, Suite 206, San Jose, CA 95134; (408)434-6636**

or

**George Scott, Assistant L&T Masters Coordinator, Computer Sciences Corporation, 304 West Route #38, P.O. Box N, Moorestown, NJ 08057; (609)234-1100**

*Languages & Tools SIG — Masters Directory*

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•APL

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•Basic (VAX) •Basic Plus 2 (RSX) •FMS

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•Basic (INCL. VAX) •Basic-Plus •Basic Plus 2 •Eve

#### •Basic-Plus

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 ave L. Dirks {MN} •Dibol  
 ewart F. Flood {SC} •Dibol  
 ul Manning {OR} •Dibol  
 uce L. Mebust {MN} •Dibol •TECO  
 le Phillips {CA} •Dibol  
 m Stewart {CO} •Basic (INCL. VAX) •Basic-Plus •Basic Plus 2 •Cobol (RSTS/E, VAX)  
 •Dibol (RT, RSTS/E, VAX)  
 •Dibol  
 an Tucker {TX} •Dibol

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 •TPU  
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 •C •EDT  
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## •FMS

Scott Krusemark {OH} •Cobol •EDT •FMS •Fortran •Test Manager  
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 Mark Katz {MA} •CMS •LSE •MMS •Runoff & DSR •SCA •TECO •TPU  
 G. Del Merritt {MA} •CMS •Config Mgmt •Emacs •Fortran •MMS  
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 Rick Evans {OR} •Pascal •TeX and LaTeX •TPU  
 Joel Finkle {IL} •Basic •CMS •Fortran •MMS •Pascal •Test Manager •TPU  
 Thomas Lane {TX} •Pascal  
 Lorin M. Ricker {OR} •C (incl VAX/ELN) •Debug •Macro-32 •Pascal (incl VAX/ELN) •TeX and LaTeX •TPU  
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**•PL/I**

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 Matthew Madison {NY} •PL/I  
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Donald E. Amby {WI} •Ada •C •CMS •EDT •LSE •MMS •Pascal •Runoff & DSR •TPU  
 Al Beer {CA} •EDT •Runoff & DSR  
 Donna Calhoun {TN} •Fortran •Runoff & DSR  
 Carl Cory {CA} •CMS •DCL •EDT •Fortran •LSE •Runoff & DSR  
 William Graham {AZ} •Ada •CMS •Debug •Fortran •Runoff & DSR •TPU  
 Howard Holcombe {NJ} •CMS •Fortran •MMS •Runoff & DSR  
 Mark Katz {MA} •CMS •LSE •MMS •Runoff & DSR •SCA •TECO •TPU  
 Andrew Potter {NY} •Fortran •Runoff & DSR •VAX Notes  
 Christopher Thorn {NY} •Basic Plus 2 •EDT •Kermit •Runoff & DSR  
 Allen Watson {NJ} •EDT •EVE •Runoff & DSR •TECO •TPU •VAX Notes

## SCA

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 Mark Katz {MA} •CMS •LSE •MMS •Runoff & DSR •SCA •TECO •TPU

## SCAN

Jeff Boes {MI} •LSE •MMS •SCAN  
 Joseph A. Pollizzi 3rd {MD} •CMS •MMS •SCAN  
 David K. Ream {OH} •Cobol •PL/I •SCAN  
 Steven Szep {NY} •Scan •TPU

## Software Proj Mgr

Daniel J. Garvin {KY} •APL •Basic •Fortran •Software Proj Mgr  
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## SQL

Mike Terrazas {UT} •C •Debug •EDT •Macro •SQL (Oracle)

## TECO

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 Lawrence J. Kilgallen {MA} •Bliss •TECO  
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 Kelvin Smith {CT} •Basic •TECO  
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 David J. Powell {MI} •Test Manager  
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## TeX and LaTeX

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•VAX Notes

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 Phillip D. Brooke President Future Generations, Inc. , 5 Prospect Street, Rowley, MA 01969; (617)948-7812; |Pascal,Basic,LSE,Runoff&DSR;  
 R. Alan Bruns Allied Electronics, Inc. , 401 E. Eighth Street, Fort Worth, TX 76102; (800)228-6705;  
 Donna Calhoun Computer Engineering, 704 S. Illinois Avenue, P.O. Box 3174 Oak Ridge, TN 37831; (615)483-0000;  
 Anthony J. Carter Systems Programmer Bates Linear Accelerator Center, Massachusetts Institute of Technology, P.O. Box 846/21 Manning Road Middleton, MA 01949-2846; (617)245-6600; CARTER@MITBATES(BITNET) |Debug,Fortran,EDT,C,TeX and LaTeX;  
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 Jack Davis NAP Consumer Electronics Corp. , Videowriter Business Unit, 1111 North Shore Dr. Knoxville, TN 37919; (615)558-5206; |CMS,LSE,MMS;  
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## MASTERS APPLICATION

Name: \_\_\_\_\_ Title \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_ Phone: (     ) \_\_\_\_\_

Network Address: \_\_\_\_\_ Date: \_\_\_\_\_

The Languages & Tools SIG has established the designation "LANGUAGES AND TOOLS MASTER", to be applied to selected, qualified people willing to share their expertise in various subjects with others. Masters are people who are knowledgeable enough in one or more languages or tools to be comfortable answering questions about them. The qualifications of an L&T Master are: expertise in a specific area, a willingness to have his/her name published as a Master, and a willingness to volunteer services in different ways. Each product may have several Masters, and there is an overall Masters Coordinator who is a member of the L&T Steering Committee.

Masters are asked to serve other users (and, under some circumstances, DEC), as a resource on products within their competence. In addition to being listed in the L&T Masters Directory (published in the newsletter) as available for occasional telephone consultation, Masters may act as 'Doctors' at Symposium Clinics, present Symposium sessions on the products of interest to them, field test products, interact with DEC product managers when appropriate, or act as a reference for a product for Digital salespeople. Especially on mature products, the SIG is anxious for knowledgeable users to offer product tutorial sessions at Symposia, and Masters can be of great help here. At Symposia, Masters will wear an identifying button bearing the legend "Ask Me About....." and the name of the language or tool in which he/she specializes.

If you'd like to serve as an L&T Master, please mark the products on which you are willing to answer questions with an "M" (for Master). Please mark any other products running at your site with an "A" (for "also running") to provide users with a broader picture of your facilities. (Although not an L&T product, Mumps is included here at the request of the Mumps SIG as a service to Mumps users). You may request removal of your name from the Masters Directory at any time, although you may continue to be listed for a month or two, because of publication lead times.

I am qualified to act as an L&T Master for the following products:  Mumps

- |                                    |                                |                              |                               |   |   |
|------------------------------------|--------------------------------|------------------------------|-------------------------------|---|---|
| <input type="checkbox"/> Debug     | <input type="checkbox"/> Bliss | <input type="checkbox"/> CMS | <input type="checkbox"/> TPU  | <input type="checkbox"/> C                | <input type="checkbox"/> Test Manager                                       |
| <input type="checkbox"/> Pascal    | <input type="checkbox"/> Basic | <input type="checkbox"/> MMS | <input type="checkbox"/> EVE  | <input type="checkbox"/> Ada <sup>1</sup> | <input type="checkbox"/> Runoff & DSR                                       |
| <input type="checkbox"/> Fortran   | <input type="checkbox"/> Cobol | <input type="checkbox"/> LSE | <input type="checkbox"/> EDT  | <input type="checkbox"/> APL              | <input type="checkbox"/> T <sub>E</sub> X & L <sub>A</sub> T <sub>E</sub> X |
| <input type="checkbox"/> Document  | <input type="checkbox"/> Dibol | <input type="checkbox"/> SCA | <input type="checkbox"/> TECO | <input type="checkbox"/> RPG              | <input type="checkbox"/> Cobol Generator                                    |
| <input type="checkbox"/> VAX Notes | <input type="checkbox"/> Emacs | <input type="checkbox"/> PCA | <input type="checkbox"/> PL/I | <input type="checkbox"/> Scan             | <input type="checkbox"/> Software Project Mgr                               |

Briefly describe your experience with those you checked. \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

How long have you held your present position? \_\_\_\_\_

Are you able to attend at least one symposium each year? \_\_\_\_\_

Users are encouraged to seek assistance with products by calling appropriate Masters listed in the Directory. As a Master, your name and telephone number will be published in the Masters Directory, and users will call on you for limited help from time to time. Please check, below, any additional activities you might do:

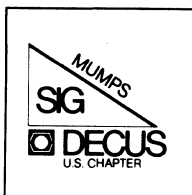
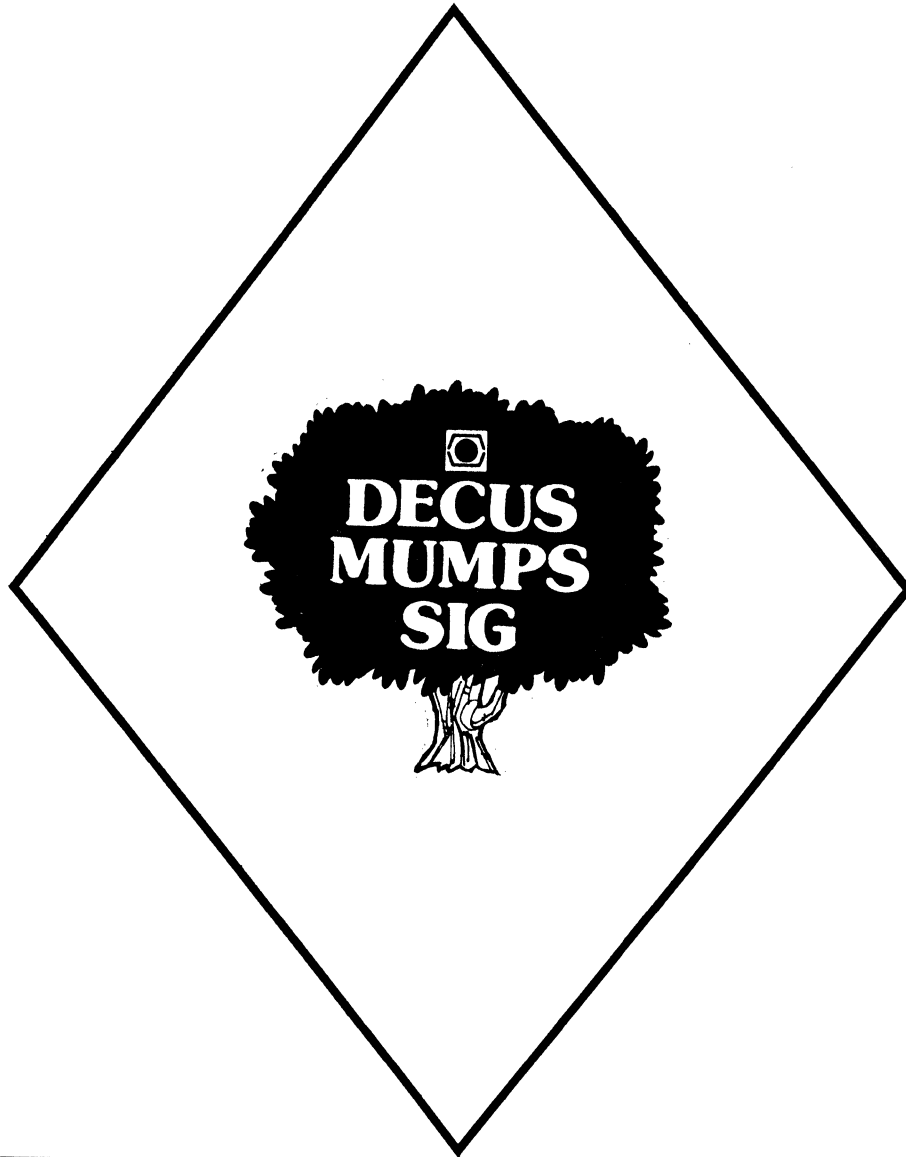
- Field-test new versions of your product at your work site.
- Provide feedback on the product when needed by its DEC product manager.
- Act as a reference for the product at the request of Digital Sales or Marketing people.

Mail to: Dena Shelton, L&T SIG Masters Coordinator, Cullinet Software, Inc., 2860 Zanker Road, Suite 206, San Jose, CA 95134.

<sup>1</sup>Ada is a trademark of the DoD



# GLOBAL ACCESS



*"If you don't want it in the paper, don't let it happen."*



MMP

# GLOBAL ACCESS

Volume 1, No. 5

March, 1988

MUMPS means you never have to say you're sorting.

## \$VIEW(Chair)

Some interesting developments have happened recently in the MUMPS Special Interest Group. Our former Chairman has gone to work with Digital and everyone else has been moved or has additional titles. The change in the roster is as follows;

Chris Richardson, Rich Cmp Rsch	- SIG Chair
Mark J. Hyde, Adv Comp Svcs	- Vice Chair
	Communications Committee Rep.
	Newsletter Editor
Dave Smith, DEC	- DEC Counterpart
Denise Simon, DEC	- Alternate DEC Counterpart
Brad Hanson, Group Health	- Symposium Scheduler
Michael McIntyre, PRX, Inc.	- Library Representative
	PDP-11 Working Group Rep.
Edward Woodward, SAIC	- Seminars Representative
Jerry Hsu, Rubicon	- Campground Coordinator
	Asst. Symposium Scheduler
Bob van Keuren, UserWare	- Session Note Editor
Mark Berryman	- Past Chair
	MUMPS Development Comm. Rep.

As you can see, our steering committee has grown. However, we still have much to do and we seek your involvement. How can you become more active? Submit an article to our Newsletter Editor. Got a nifty utility or game you wish to submit to the Software Library? Contact our Library representative. Got an interesting application written in MUMPS? Submit an abstract to our Symposium Scheduler. Got a question about MUMPS? Write the Newsletter Editor or myself and we will be more than happy to answer your questions. Do you have a number of people in your area that need to be trained in MUMPS? Please contact our Seminars representative. Training can be arranged in a regional seminar format.

Our emphasis in the MUMPS SIG is to bring more awareness of MUMPS to the general computing community. There has been a great deal of misunderstanding of this powerful, yet simple little language. The applications being done in MUMPS include medical data management, Artificial Intelligence, applications breadboarding, software development tools, banking, order entry, office automation, and fourth generation user interfaces. Our goal

is to highlight the variety and simplicity of the language and how it can help you, the user, accomplish your tasks in a rapid and productive manner.

I look forward to meeting you all at DECUS in Cincinnati. C U there.

## \$VIEW(Editor)

As I have previously related, I have been a member of DECUS for a long time (17 years as of mid-February). During that time, I have watched with extreme frustration the demise of several SIGs (18-Bit, TECO, 12-Bit) that were important to me. The motivations behind these losses were usually obscure, and occasionally downright spurious. Further, the frustration was intensified by the reality of being on the outside looking in, since the structure of "the Old DECUS" made it more difficult to attain a leadership position. Thus, when the opportunity to join the MUMPS Steering Committee befell me in New Orleans, I accepted eagerly in the belief that I might be able to work from such a base to forestall such catastrophes in the future. Little did I realize (the crystal ball must have caught a line hit) that the next set of photon torpedoes was aimed foursquare in that direction. However, this time I was on the inside, and that made all the difference. Rather than just looking on in despair, I could set my back and my mind (humble entity that it is) to the task of damage control. And, wadda ya know, it even looks like it worked.

## \$DATA

In the continuing story of the MUMPS and IAS Special Interest Committee status, a motion was presented during the SIG Council meeting on Saturday before the Symposium to rescind the previous vote to demote the two SIGs. That motion was defeated. On Wednesday, the vote was appealed to the Management Council; that appeal was denied. On Thursday, the appeal was brought before the Board of Directors; that appeal remains pending. On Monday, January 25, SIG Council voted to reinstate both MUMPS and IAS as SIGs. The Board appeal will continue.

*[Your Editor apologizes for the lack of Anaheim Symposium coverage. The politics surrounding the SIC process constituted a major distraction.--Ed.]*

## \$HOROLOG

March 22	Submission deadline for May newsletter
May 16-20	Spring '88 Symposium; Cincinnati, OH
June 13-17	MUG '88 Conference; New Orleans
October 17-21	Fall '88 Symposium; Anaheim, CA



\$ORDER("Comprise")

Misuse of *comprise* ("New York City *is comprised of* five boroughs") has become not just common but virtually total among North American speakers of English. This has obviously come about because of the word's strong resemblance in both meaning and spelling to *compose*. However, the correct meaning and usage of the two words differ significantly. To compose means "to form the substance of" or "to constitute," while to comprise means "to embrace" or "to include." Thus, proper usage matches that of *embrace* ("The U. S. *comprises* 50 states").

\$NEXT

This seems hard to believe, but the next issue is May and that means the Cincinnati Symposium session preview, so don't touch that dial.

\$NEXT(\$ORDER)="Podium"

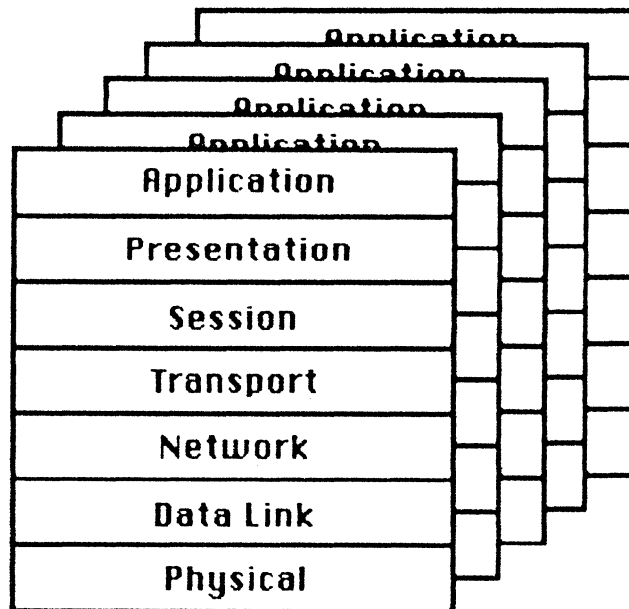
\$RANDOM

"I was so naive as a kid that I used to sneak behind the barn and do nothing." --Johnny Carson



# NETwords

The NETWORKS SIG Newsletter



Dear Readers,

This month's issue is devoted to all who were not lucky enough to attend the Anaheim Symposium, or, who were there but either not aware of, or did not have time to partake in, the VAXnotes Conferences.

I would recommend keeping an eye peeled for this handy tool in Cincinnati: with all the expertise concentrated in one town, what faster way to get help and/or answers to items dear to your heart? In case you haven't run into the "Notes" tool before, it works something like this:

1. A "Moderator" tosses out provocative topics or questions.
2. Users on the system peruse a list of topics. Anyone can join in on any conference. Responses are indexed so you can refer to a specific question or a specific comment.

The areas of interest can get quite concentrated, and the discussions can get as hot and heavy as the consenting participants wish. Its a great way to meet others with similar concerns. As you will see, there aren't always easy answers, and some questions go unresolved.

Here, now, is a sampling of some of the things discussed in Anaheim. Many thanks to Larry Kilgallen, Pageswapper Editor, for facilitating the exchange of the Symposium Conferences. Conferences were spread across most SIG areas of interest. If you are interested in more information regarding Notes conferencing in Cincinnati, please contact me. Keep the ball rolling!

Judi Mandl  
NETWORKS Newsletter Editor  
University of Connecticut  
Health Center  
263 Farmington Ave.  
Farmington, Ct 06032

\*\*\*\*\*

<< DFS,DNS & DQS >>

NOTE 1.0 VAXFAM::MODERATOR WELCOME!

This conference is for discussing the new Digital Distributed Network Products, DFS,DQS, AND DNS.

\*\*\*\*\*

NOTE 2.0 VAXFAM::JOSUDAR "JOHN OSUDAR" DFS QUESTION

1 REPLY

IT IS MY (ADMITTEDLY UNDER-INFORMED) UNDERSTANDING THAT DFS IS EXCLUSIVELEY A FILE-LEVEL PRODUCT, I.E. THT IT WON'T DO ANY GOOD FOR SOMEONE WHO IS LOOKING FOR DEVICE ACCESS, SUCH AS ACCESS TO A TAPE DRIVE FOR BACKUP, OVER THE NET. IS THIS TRUE, AND CAN SOMEONE WHO KNOWS ELABORATE FURTHER?

\*\*\*\*\*

NOTE 2.1 VAXFAM::LKILGALLEN "LARRY KILGALLEN" < DFS QUESTION >

WHAT ABOUT DBMS DATABASE ACCESS?

\*\*\*\*\*

NOTE 3.0 VAXFAM::RJOHNSON < DFS + PROXIES >

2 REPLIES

DFS (AND DQS?) REQUIRE THE ADMINISTRATION OF PROXY LOGINS FOR ACCESS TO A

SERVED DEVICE (OR QUEUE?). HAVING NOT CROSSED THE BRIDGE OF SETTING UP PROXY LOGINS FOR ALL THE SYSTEMS IN OUR LAN, IT SEEMS TO ME THAT THE ADMINISTRATION OF THESE PROXY ACCOUNTS COULD BE QUITE A PAIN. I AGREE THAT THINGS WOULD BE QUITE A BIT EASIER IF ALL USERS HAD THE SAME ID ON ALL SYSTEMS. MY QUESTION IS, WHAT WOULD A GOOD APPROACH BE IN A DECENTRALIZED ENVIRONMENT WHERE ALL USERIDS ARE NOT CREATED IDENTICAL . . . . .

IDEAS?

R. PAUL JOHNSON  
C.S. DRAPER LAB

\*\*\*\*\*

NOTE 3.1 VAXFAM::FNAGY "FRANK J. NAGY, VAX GURU&WIZARD" < DFS + PROXIES >  
DQS DOES NOT NEED PROXY ACCOUNTS.

\*\*\*\*\*

NOTE 3.2 VAXFAM::RJOHNSON < DFS + PROXIES >

RIGHT, JUST FOUND THAT ONE OUT. THE GOTCHA HERE IS THAT THE ACCOUNTING RECORD PRODUCED BY THE PRINT HAVE THE REMOTE USERNAME IN THE LOCAL USERNAME FIELD, AND THE REMOTE NODE AS THE ACCOUNT NAME. THIS SHOULD WREAK INTERESTING HAVOC WITH ACCOUNTING SYSTEM WHICH HAVE NOTIONS OF AUTHORIZED USERS ON A PARTICULAR NODE.

R. PAUL JOHNSON

\*\*\*\*\*

<< CONVERTING FROM IBM TO VAX >>

NOTE 1.0 VAXFAM::MODERATOR

3 REPLIES

WELCOME TO THE IBM-TO-VAX CONFERENCE. FEEL FREE TO DISCUSS ANYTHING THAT IS RELATED CONVERSIONS FROM IBM TO DEC. HOWEVER, PLEASE USE THE DIR/CONFERENCE COMMAND TO FIND CONFERENCES ON OTHER TOPICS. IF YOU HAVE A QUESTION PLEASE SEND MAIL TO THE MODERATOR ACCOUNT.

\*\*\*\*\*

NOTE 1.1 VAXFAM::RPLUMMER < CONVERSIONS ONLY? >

IS THIS AN APPROPRIATE FORUM FOR DISCUSSING IBM-VAX COMMUNICATIONS? [ I WOULD HAVE SENT THIS TO THE MODERATOR, EXCEPT I DON'T HAVE NETMBX ]

\*\*\*\*\*

NOTE 1.2 VAXFAM::DDEUFFEL < IBM COM NOTES CAN GO HERE... >

YES, THIS IS A REASONABLE PLACE TO DISCUSS IBM COMM PRODUCTS. THE REASON WE HAVE NOT SPLIT OUT EACH PRODUCT INTO INDIVIDUAL NOTES FILES IS TO TRY TO PROVIDE SOME FOCUS IN THE SHORT TIME WE HAVE. (5 DAYS IS NOT A GREAT AMOUNT OF TIME.)

\*\*\*\*\*

**NOTE 1.3 VAXFAM::MHYDE "MARK HYDE, DIGITAL VAX NOTES SUPPORT"**

ALSO MAIL TO MODERATOR CAN BE SENT BY JUST USING MODERATOR AT THE TO: PROMPT AND NOT VAXFAM::MODERATOR.

\*\*\*\*\*

**NOTE 2.0 VAXFAM::BFAUCETTE < PROBLEM WITH DISOSS MAIL >**

OUR SITE (GLAXCO INC IN NORTH CAROLINA) USES THE SNA GATEWAY TO LINK MAIL BETWEEN THE BAX AND IBM DISOSS. THE LATEST VERSION OF PSPC CONTAINS A NEW PRODUCT CALLED "NOTES" (IRONIC, ISN'T IT?) WHICH SUPPOSEDLY STILL ADHERES TO FFT FORMAT. THESE "NOTES" GET "STUCK" IN THE GATEWAY EVERYTIME, ALTHOUGH THE NORMAL PSPC "MESSAGES" AND DW4 FFT DOCUMENTS CAN STILL BE SENT THROUGH THE GATEWAY. DOES ANYONE ELSE HAVE EXPERIENCE WITH THIS PROBLEM, OR CAN A DEC PERSON COMMENT ON THIS AS A KNOWN PROBLEM?

BARBARA FAUCETTE

\*\*\*\*\*

**NOTE 2.1 VAXFAM::LPOROOSHANI < DDXF SUPPORTS DCA FFT AND PC STREAM FILE >**

IF THE NOTES ARE DEFINITELY DCA FFT THEN THE GATEWAY SHOULD CARRY IT WITHOUT ANY PROBLEM.. IF NOT WE NEED SPECIFICS TO FIND OUT THE PROBLEM. DDXF PRODUCT SUPPORTS NORMAL PC STREAM FILE UP TO IBM AND DOWN TO PC WITHOUT DOING ANY CONVERSION. SO THESE NOTES CAN EITHER BE TRANSFERED USING NATIVE PC STREAM FILE FORMAT OR DCA FFT. EITHER WAY SHOULD WORK WITH DDXF.

\*\*\*\*\*

**NOTE 2.2 VAXFAM::BFAUCETTE < DDXF NOT RECOGNIZING PSPC NOTES >**

< IF THE NOTES ARE DEFINITELY DCA FFT THEN THE GATEWAY SHOULD CARRY IT WITHOUT ANY PROBLEM >

THE PSPC "NOTES" ARE RECOGNIZED BY IBM AS "DEFINITELY DCA FFT" — DISPLAYWRITER RECOGNIZES THEM AS SUCH, THE IBM MAINFRAME RECOGNIZES THEM AS SUCH — BUT DDXF DOES NOT APPEAR TO. WHAT KIND OF SPECIFICS WOULD YOU LIKE ME TO SUPPLY? IBM HAS NOT IDENTIFIED THE FORMAT AS BEING ANY DIFFERENT — FOR WHATEVER THAT IS WORTH!

\*\*\*\*\*

**NOTE 3.0 VAXFAM::CAMLEY < SNA RJE THRUPUT — FASTER CPU NEEDED? >**

WE USE AN SNA GATEWAY FOR RJE. WE CAN'T SEEM TO GET THRUPUT ABOVE 12KB/SEC. EVEN WITH A 56KB LINE. THE DEC FOLKS WHO INSTALLED THE BOX SAY THIS IS ABOUT ALL WE CAN EXPECT. WE'RE THINKING ABOUT INSTALLING A BOARD WITH A FASTER CPU (FASTER THAN THE 11/24). HAS ANYONE ELSE TRIED THIS APPROACH?

\*\*\*\*\*

**NOTE 3.1 VAXFAM::RPITKIN < RJE PERFORMANCE INFORMATION >**

THE PERFORMANCE OF THE DECNET/SNA PRODUCTS WILL BE DISCUSSED ON WED. 9-DEC-1987 IN SESSION N071. AS ALREADY INDICATED THE RJE PRODUCT WIL NOT PRODUCE MUCH MORE THROUGHPUT THAN YOU ALREADY SEE. THE CURRENT GATEWAY RUNS WITH AN 11/24 CPU AND THE COST OF THE DATA TRANSFORMATION IS HIGH RELATIVE TO THE CPU THAT IS AVAILABLE. THE GOOD NEWS IS THAT IT DOES NOT COST VAX CPU CYCLES TO DO THE TRANSFORMATION, THE BAD NEWS IS THAT THE 11/24 IS SLOW. IF THE PROBLEM THAT YOU ARE SOLVING IS REALLY FILE TRANSFER THE DECNET/SNA VMS DTE PRODUCT WILL USE ALL OF THE AVAILABLE 56 (OR 64) KBPS LINE FOR OUTBOUND FILES. THE GATEWAY HAS THREE SERVERS AND THE GATEWAY ACCESS SERVER (GAS) IS USED BY MOST OF THE PRODUCTS THAT LAYER ON THE DECNET/SNA GETAWAY. THE 11/24 HAS SUFFICIENT CPU TO MOVE LARGE RU'S GIVEN LARGE FRAME SIZES TO KEEP UP WITH THE ABOVE LINE SPEEDS. THE DECSA HARDWARE WILL NOT ACCEPT ANY CPU BOARD OTHER THAN THE 11/24. THIS IS THE ONLY SINGLE BOARD 11 UNIBUS CPU THAT WILL FIT IN THE BOX. THE DECSA HARDWARE HAS ADDITIONS THAT PRECLUDE USING ANYTHING ELSE, PART OF THE PROBLEM INVOLVES THE LINE CARDS AND THE DASH BUS THAT ALLOWS THE LINE CARDS TO BE HOT SWAPPED. IF YOU NEED MORE INFORMATION ON THIS PLEASE STOP AT THE NAC BOOTH TODAY BETWEEN 3PM-6PM, THURSDAY 3PM-6PM, OR FRIDAY 9AM-12NOON.

RICHARD

\*\*\*\*\*

**NOTE 3.2 VAXFAM::DBOLTHOUSE < WE DON'T LIKE LITTLE CPUS EITHER >**

WE ALSO THOUGHT ABOUT PUTTING IN A BIGGER CPU, BUT IT WAS SO OUR SNA GATEWAY WOULD \*BOOT\*! THE PDP ISN'T FAST ENOUGH TO PROCESS ALL THE MULTICAST PACKETS ON OUR MULTI-VENDOR, MULTIPLE-SITE LAN (WAN?), AND SO MOP CROAKS WITH THE INEVITABLE 'DEVICE TIMEOUT' OR EQUIVALENT. THE RESPONSE WE GOT WAS 'NOTED': I PRESUME THIS MEANS THE PROBLEM MAY EVENTUALLY GO AWAY. OF COURSE, THT MAY TAKE A WHILE...YOU VMS PEOPLE REMEMBER RMS JOURNALLING...

DAVID L. BOLTHOUS  
TEXAS INSTRUMENTS DSEG DEIS VAX SYSTEM SUPPORT

\*\*\*\*\*

**NOTE 3.3 VAXFAM::GMCHELIA < RELIEF IN SIGHT >**

I UNDERSTAND THAT WE CAN EXPECT 32 BIT (MV11) SOMETIME IN 88.

\*\*\*\*\*

**NOTE 4.0 VAXFAM::GSCHULZ < 3270 DATA STREAM >**

ARE THERE ANY 3270 DATA STREAMERS OUT THERE ??????????

\*\*\*\*\*

**NOTE 4.1 VAXFAM::BPOLITZER < BETA TEST SITE IN THE STONE AGE >**

I SERVED AS A BETA TEST SITE FOR THE ORIGINAL PRODUCT.

\*\*\*\*\*

**NOTE 5.0 VAXFAM::WROBERTSON < SNARJE STATUS > 2 REPLIES**

WE USE SNA RJE FOR FILE TRANSFERS. THE VTAM GUYS ARE ALWAYS BRINGING DOWN THE LINE - WE HAVE NO CONTROL OVER THIS. SO I HAVE AN HOURLY BATCH JOB THAT DOES A SET WORKSTATION/STATE=ON (DOESN'T HURT) JUST IN CASE IT'S BEEN TURNED OFF.

WHAT I'D LIKE TO DO, THOUGH, IS CAPTURE THE SENSE CODES FROM THE BATCH JOB SO I COULD PARTICULARIZE MESSAGES TO THE VAX OPERATORS. I'VE BEEN UNABLE TO GET ANYTHING OTHER THAN A NORMAL \$STATUS VIA DCL. IS THERE A WAY TO GET SNARJE PROBLEMS BACK TO THE BATCH DCL STREAM?

\*\*\*\*\*

**NOTE 5.1 VAXFAM::DBOLTHOUSE < EVERY HOUR? >**

I CHECK EVERY 5 MINUTES. WE HAVE A LINE BETWEEN OUR VAX CLUSTER AND THE SITE AT WHICH OUR GATEWAYS RESIDE WHICH LOSES DCD OCCASIONALLY. OF COURSE, WHEN DECNET DIES, JES3 VARIES THE WORLD OFFLINE WHEN AN OPERATION FAILS. I JUST LOG THE OCCURRENCES — I HAVE SOME REDUNDANCY BUILT INTO MY CONFIGURATION.

DAVID L. BOLTHOUSE  
TEXAS INSTRUMENTS

\*\*\*\*\*

**NOTE 5.2 VAXFAM::KRIGGLEMAN < COMING SOON - HERE IS CRUDE WORKAROUND >**

NO, SNARJE DOES NOT CURRENTLY PASS BACK A RETURN CODE IN \$STATUS. HOWEVER, I COMPLAINED ABOUT SAME PROBLEM AND DEC SAYS IT IS ON WISH LIST AND SHOULD BE IN NEXT RELEASE. IN MEAN TIME, MY WORKAROUND IS TO SEND ALL THE OUTPUT FROM SNARJE> COMMAND TO A TEMPORARY FILE. THE DCL PROCEDURE CAN THEN READ THE FILE WHEN THE FILE TRANSFER IS COMPLETE AND SEARCH FOR EITHER A SUCCESS OR ERROR COMPLETION. SO, I OBVIOUSLY WOULD RATHER HAVE \$STATUS RETURN BUT ALTHOUGH MY WORKAROUND INVOLVES QUITE A BIT OF OVERHEAD IT IS WORTH IT FOR US BECAUSE WE CAN NOW RELIABLY TRANSFER FILES AND IF LINE GOES DOWN FILE IS RETRANSMITTED BY DCL PROCEDURE.

KEN RIGGLEMAN  
ELI LILLY  
INDIANAPOLIS, IN 46285

\*\*\*\*\*

**NOTE 6.0 VAXFAM::MSCHERFLING < IBM TO VMS TOOLS NEEDED > NO REPLIES**

WE ARE GOING THROUGH A MIGRAION FROM OUR IBM MVS MAINFRAME TO A VMS AND UNIX ENVIRONMENT. THIS MIGRATION WILL OCCUR OVER THE NEXT TWO YEARS, AFTER WHICH WE WILL BE IBMLESS (HORRAY!). HOWEVER, WE ARE LOOKING FOR TOOLS TO ASSIST IN THE MIGRATION. SOME THAT COME TO MIND ARE BELOW. ANY ASSISTANCE WOULD BE WELCOME. BY THE WAY, DEC IS SOMEWHAT LACKING IN THESE TOOLS. WITH THEIR NEW PRESENCE IN THE IBM WORKD, I WOULD THINK THEY WOULD BE SCRAMBLING TO CREATE THESE.

— MARK

FROM IBM 3083 MBS/TSO TO VAX 85X0 VMS

CLISTS TO DCL?  
VSAM TO ISAM?  
IBM FORTRAN TO VMS FORTRAN?  
DIALOG MANAGER SCREENS TO FMS OR TDMS?  
OTHERS?

\*\*\*\*\*



**NOTE 7.0 VAXFAM::R SIEGEL < REDIRECTING SNA/RJE JOBSTREAMS > 2 REPLIES**  
THE OLD BISYNC RJE ALLOWED YOU TO INCLUDE A RECORD IN THE JOBSTREAM THAT YOU COULD USE TO DIRECT INCOMING JOB STREAMS TO SPECIFIC DIRECTORIES (/RENAME QUALIFIER). UNFORTUNATELY, SNA RJE ONLY USES JES JOBNAME AND FORMTYPE TO DETERMINE FILENAME. IS THERE ANYTHING OUT THERE THAT WOULD LET ME ROUTE SPECIFIC JOBS TO SPECIFIC DIRECTORIES ( I HEARD CSS MAY HAVE THROWN SOMETHING TOGETHER ).

\*\*\*\*\*

**NOTE 7.1 VAXFAM::L MORGAN < \$VAX-FILENAME= >**

THE \*\*\*\$VAX-FILENAMEDSK\$NAME:[DIRECTORY]FILE.TYPE IS APPLICABLE AT OUR SITE. IT MAY BE THAT A SPECIAL PARSER WAS WRITTEN TO HANDLE THIS. IF YOU ARE INTERESTED, I CAN TRY TO FIND OUT.

LARRY MORGAN  
ELI LILLY & CO  
PBX 708, GL941, B201  
GREENFIELD, IN 46140

\*\*\*\*\*

**NOTE 7.2 VAXFAM::DBOLTHOUSE < WE'RE ALSO DOING THIS >**

COME TO THE SNARJE SESSION AT NOON TODAY.

DAVID L. BOLTHOUSE  
TEXAS INSTRUMENTS

\*\*\*\*\*

**<<< IBM PC'S AND NETWORK INTEGRATION KITS >>>**

**NOTE 1.0 VAXFAM::MODERATOR**

WELCOME TO THE IBM PC CONFERENCE. FEEL FREE TO DISCUSS ANYTHING THAT IS RELATED TO USING IBM-PC'S AND THE DIGITAL NETWORK INTEGRATION KITS. HOWEVER, PLEASE USE THE DIR/CONFERENCE COMMAND TO FIND CONFERENCES ON OTHER TOPICS.

\*\*\*\*\*

**NOTE 2.0 VAXFAM::BFAUCETTE < SUPPORT FOR LK250 KEYBOARD AND PS/2S >**

MY COMPANY HAS INVESTED HEAVILY IN COMPATIBILITY BETWEEN IBM-PC AND VAX COMPATIBILITY. TO DATE, ALTHOUGH DEC HAS INDICATED THAT IT WILL PROVIDE ETHERNET CARDS FOR THE PS/2S, IT HAS NOT INDICATED THAT IT WILL PROVIDE CONNECTIONS AND SUPPORT FOR THE LK250 KEYBOARDS ON THE PS/2S. ARE ANY OF YOU FACED WITH THIS SAME PROBLEM? IF SO ,WHAT CONVERSATIONS HAVE YOU HAD TO DATE WITH DEC ABOUT THE PROBLEM? WOULD ANY DEC PERSONNEL LIKE TO COMMENT ON THE PROBLEM?

BARBARA FAUCETTE  
GLAXCO INC  
RESEARCH TRIAANGLE PARK, NC

\*\*\*\*\*

**NOTE 2.1 VAXFAM::KWOHLERT < PS/2 SUPPORT >**

MY NAME IS KIM WOHLERT OF ERIK MAINZ A/S IN DENMARK.

I WOULD SUGGEST THAT YOU INVESTIGATE THE RAF PRODUCT FROM DATABILITY. I BELIEVE THEY ARE AT THE DEXPO AND I HAVE FOUND THAT THEY HAVE A MUCH BETTER PRODUCT THAN THE DECNET-DOS FAMILY.

AS I UNDERSTAND, THEY ALSO HAVE SUPPORT FOR THE PS/2 NOW.

\*\*\*\*\*

NOTE 2.2 VAXFAM::CFRIEDBERF < RAF VS DECNET DOS/PCFS >

I AM NOT SURE THAT THE RAF PRODUCT IS "MUCH BETTER" IN A GENERAL SENSE, ALTHOUGH IT HAS CERTAIN VIRTUES, I HAVE HEARD OF SOME PROBLEMS WITH RAF.

\*\*\*\*\*

NOTE 2.3 VAXFAM::DBRILLHART < RAF AND MOBIUS TRIED >

I HAVE BEEN EVALUATING THE LATEST RELEASE OF RAF AND THEY HAVE FIXED MOST OF THE PREVIOUS BUGS IN THE 3COM ETHERNET VERSION. I FOUND THAT IT WAS BETTER THAN THE DEC PRODUCT IN THAT I WAS NOTE ABLE TO INSTAL MS-DOS SERVICES! I AM ALSO USING MOBUIS. IT HAS SOME SHORTCOMAING THAT THE LATEST RELEASE IS SUPPOSED TO FIX BUT I HAVEN'T RECEIVED IT YET.

I WOULD BE INTERESTED IN TALKING TO ANYONE WHO HAS TRIED TO CONNECT A NOVELL PC NETWORK TO DECNET.

\*\*\*\*\*

NOTE 2.4 VAXFAM::RTINKELMAN < NOVELL TO DECNET >

> I WOULD BE INTERESTED IN TALKING TO ANYONE WHO HAS TRIED TO CONNECT  
> A NOVELL PC NETWORK TO DECNET.

I'D ALSO BE INTERESTED IN HEARING PEOPLE'S EXPERIENCES ON THIS, WE HAVE JUST STARTED WORKING ON THIS AT ONE OF OUR CLIENTS. WE'VE ONLY GOTTEN TO THE POINT OF SEEING THAT WE CAN PUT TWO ETHERNET ADAPTERS IN ONE "GATEWAY PC" AND, FROM A VAX, COPY FILES FROM A NOVELL FILE SERVER. I REPEAT - WE'VE ONLY JUST STARTED AND I WOULD BE INTERESTED IN HEARING FROM OTHERS.

BOB TINKELMAN - CAMBRIDGE COMPUTER ASSOCIATES, INC.

\*\*\*\*\*

NOTE 2.5 VAXFAM::DGINN < A "VT-200" KEYBOARD FOR PS/2S >

CHECK OUT KEA SYSTEMS' POWERSTATION-220/240 PRODUCTS. I HAVE BEEN ASSURED THAT THEY WILL WORK WITH PS/2. THEY HAVE A LITTLE CONVERTER FOR THE CONNECTOR, WHICH ALLOWS THE USE OF THEIR REGULAR PC/XT/AT VT200 STYLE KEYBOARD. KEA IS SHARING THE BOSTON BUSINESS COMPUTING BOOTH AT DEXPO.

\*\*\*\*\*

NOTE 2.6 VAXFAM::DMITTON < NOT A DIFFICULT PROBLEM >

CONNECTING AN LK250 TO A PS/2 CAN BE AS SIMPLE AS WIRING A NEW CABLE. I'VE SEEN SOME THAT HAVE BEEN MADE TO WORK.

I EXPECT SOME SORT OF SUPPORT FOR PS/2 KEYBOARDS TO BE ANNOUNCED WITH THE PCSA V2.0 CLIENT.

DAVE MITTON, DECNET-DOS

\*\*\*\*\*

**NOTE 2.7 VAXFAM::BFAUCETTE < TIMING FOR SUCH SUPPORT >**

THANKS, DAVE. OUR DEC REPRESENTATIVE TOLD US THAT DEC BELIEVES THE PS/2 KEYBOARD TO BE ELECTRONICALLY DIFFERENT FROM THE AT KEYBOARDS AND THAT WAS WHY THEY WOULD NOT BE OFFERING LK250 SUPPORT ON THE PS/2S. CAN YOU COMMENT? CAN YOU ALSO COMMENT ON HOW FAR AWAY YOU MIGHT BE FROM "SOME SORT OF SUPPORT"? PLEASE LEAVE A PHONE NUMBER AND ADDRESS IF I CAN CONTACT YOU DIRECTLY.

BARBARA FAUCETTE  
GLAXCO INC.  
5 MOORE DRIVE  
RESEARCH TRIANGLE PARK, NC 27709

\*\*\*\*\*

**NOTE 2.8 VAXFAM::DMITTON < WILL STILL HAVE TO TALK TO THE RIGHT PEOPLE >**

WELL, I HESITATE TO SPEAK TOO AUTHORATIVELY. I DO BELIEVE THAT THE LK250 CAN BE MADE TO WORK ON A PS/2. HOWEVER, I WILL ALSO BELIEVE THAT IBM HAS MADE CHANGES TO THE NEW PS/2 KEYBOARDS, THT WE MAY WISH TO COPY IN ANY SUCH NEW VERSION OF THE LK250. IN ANY CASE, PCSG IS RESONSIBLE FOR THE LK250 HARDWARE (AND FIRMWARE) AND WILL BE WHERE THE SUPPORT COMES FROM.

SOME OF THESE ISSUES MAY NOT BE VERY FAMILIAR TO US YET, AND MANY OF US DON'T KNOW WHAT THE REAL PRODUCT PLANS ARE.

DAVE.

\*\*\*\*\*

**NOTE 3.0 VAXFAM::RTHESING < VT240 EMULATOR FOR PCSA > 6 REPLIES**

I WANT THIS TOPIC TO DISCUSS REASONS WHY DEC DOES NOT GIVE IBM PC USERS VT240 TERMINAL EMULATION IN PCSA. I HAVE BEEN TOLD THAT THE IBM'S GRAPHICS (I.E. RESOLUTION) ARE NOT GOOD ENOUGH TO DO THIS. WHY THEN CAN THIRD PARTY VENDORS PRODUCE VT240 EMULATORS FOR THE PC? THE ONE I USE CAN'T DO SIXEL GRAPHICS, BUT DOES REGIS GRAPHICS JUST FINE.

CAN ANYBODY TELL ME ANYTHING DIFFERENT ???

\*\*\*\*\*

**NOTE 3.1 VAXFAM::BWONG < VT240 EMULATION >**

THE ONLY VT240 TERMINAL EMULATOR I HAVE EVER SEEN IS THE ONE BY POLYCOM. IT CANNOT FIT THE WHOLE GRAPHIC ON THE SCREEN SO YOU USE KEYS TO SCROLL THE GRAPHIC WINDOW SIDEWAYS TO SEE THE REMAINING 1/3 OF THE SCREEN.

\*\*\*\*\*

**NOTE 3.2 VAXFAM::BFAUCETTE < ZSTEM: ANOTHER 240 EMULATOR >**

KEA (FROM BRITISH VANCOUVER) IS NOW RELEASING A VT240/241 EMULATOR CALLED ZSTEM. THEY CURRENTLY HAVE AN EXCELLENT VT220 EMULATOR ON THE MARKET. KEA IS A SMALL BUT INCREDIBLY COMPETENT AND RESPONSIVE COMPANY.

\*\*\*\*\*

**NOTE 3.3 VAXFAM::BDOOLEY < ANOTHER EMULATOR >**

PERSOFT'S SMARTERM 240 IS ALSO AN EXCELLENT EMULATOR. IT SCALES THE GRAPHICS TO FIT THE RESOLUTION OF THE PC SCREEN SUCH THAT THE ENTIRE VT240 IS VISIBLE WITHOUT MOVING A WINDOW. WITH EGA GRAPHICS, FULL VT241 COLOR EMULATION IS AVAILABLE.

\*\*\*\*\*

**NOTE 3.4 VAXFAM::DBRILLHART < VT240 GRAPHICS A LA SMARTSTAR >**

! VT240 GRAPHICS ON AN IBM PC.

DAVID BRILLHART  
SCOTT PAPER CO.  
MOBILE, AL

WE HAVE BEEN USING PERSOFT'S SMARTERM 240 FOR A WHILE NOW. IT DOES A VERY GOOD JOB OF DISPLAYING REGIS GRAPHICS AND 132 TEXT COLUMNS ON AN EGA DISPLAY. TO DO THIS IT MUST REMOVE A FEW VERTICAL SCAN LINES, BUT ON MOST DISPLAYS THE EFFECT IS NEGLIGIBLE. IF YOU NEED TO SEE THE DISPLAY MAPPED PIXEL TO PIXEL, THEY PROVIDE THT MODE ALSO, BUT YOU HAVE TO SCROLL THE SCREEN BACK AND FORTH TO SEE THE WHOLE THING.

\*\*\*\*\*

**NOTE 3.5 VAXFAM::BDOOLEY < SMARTERM NOTE >**

THE ONLY DRAWBACK TO SMARTERM 240 AT THIS POINT IS THAT IT HAS NO LAT SUPPORT FOR DIRECT ETHERNET CONNECTION.

\*\*\*\*\*

**NOTE 3.6 VAXFAM::DGINN < FULL-SCREEN VT240 EMULATION >**

AT LEAST KEA SYSTEMS (ZSTEMPC-VT240) AND PERSOFT (SMARTERM 240) WILL SHOW THE "WHOLE" SCREEN IF YOU HAVE A HERCULES GRAPHICS ADAPTER (MONOCHROME) OR SOMETHING THAT LOOKS LIKE IT. POSSIBLY ALSO THE WALKER, RICHER, AND QUINN REFLECTION 4 (I THINK THAT IS THE NUMBER - THEY HAVE SEVERAL MODULES OF THE SOFTWARE) CAN DO IT IN ONE SCREEN.

\*\*\*\*\*

**NOTE 4.0 VAXFAM::JHANRAHAN "JAMIE HANRAHAN" < CHEAP TEX FOR PC? > 1 REPLY**

I WOULD LIKE TO HEAR FROM ANYONE WHO KNOWS OF A PUBLIC-DOMAIN PORT OF TEX, LATEX, AND SLITEX TO THE PC. BOT ADDISON-WESLEY AND TEXTURES (OR WHOEVER IT IS WHO SELLS PCTEX) CHARGE WAY TOO MUCH FOR WHAT IS ESSENTIALLY A REPACKAGING OF PUBLIC-DOMAIN SOFTWARE (AROUND \$500; IN OTHER WORDS, THE SAME AS THE WORDPERFECT FOLKS CHARGE FOR A PROPRIETARY PACKAGE THAT THEY WROTE FROM SCRATCH!!!).

\*\*\*\*\*

**NOTE 4.1 VAXFAM::GWINKLER < CHEAP TEX FOR PC >**

**I BELIEVE THERE WAS SOME DISCUSSION OF THIS PORTING BY GLENN  
EVERHART, RCA. CHECK THE CASSETTE OF LT113 OR SEE TONY SCANDORA.**

\*\*\*\*\*

**COMING NEXT MONTH !!!**

**More NOTES from Anaheim; topics to include MAC-VAX and VAXINTOSH,  
NETWORK problems and comments, TCP/IP, LAT issues !**



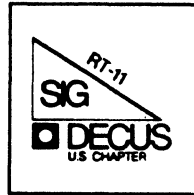
THE  
**mini-**  
**tasker**

DECUS

RT-11 SIG NEWSLETTER

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# RT-11 MINITASKER

## March, 1988

### NEW RT-11 Programs in DECUS Library

#### Contents

From the Editor . . . . .	RT-1
RT-11 Library Programs . . . . .	RT-2
Desktop Publishing . . . . .	RT-3
RT-11 Wish List Survey Analysis (part 1) . . . . .	RT-5
Handlers in XM . . . . .	RT-9
The Flit Gun - bugs and fixes . . . . .	RT-20

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#### From the Editor:

Lots of good stuff this month. Since we all worry about low-memory usage (don't we?), I prevailed upon Jacquelyn Proulx to provide copies of her slides from her talk on RT-11 Handlers in XM wherein she describes how to move handler code into high memory. The audio cassette of this talk is available from Chesapeake Audio Visual Communications, 6300 Howard Lane, Elkridge, MD 21227. Ask for session RT-22 from the Fall 1987 Symposium in Anaheim. Bob Walraven didn't submit his FORTRAN SLATE column this month, so I guess the FORTRAN'S LATE. (Sorry, I couldn't help myself.) But he did submit the first installment of the results of the RT-11 Wish List Survey. More on that in the coming months. Much thanks to Shal Farley, Ruth Radetsky, Powell Heuer, and Nick Bourgeois for their additions.

I'm of course always looking for useful stuff to put into the Newsletter. Send your idle thoughts to:

John M. Crowell  
RT-11 Newsletter Editor  
Multiware, Inc.  
2121-B Second St. Suite 107  
Davis, CA 95616

From month to month, new DECUS Library submissions are listed in the DECUS Newsletter in the LIB section. Usually complete abstracts will appear there along with information about ordering copies. The Latest Mid-Year Addendum of the Program Library Catalog has all the new stuff (and new versions of old stuff) submitted in the last six months or so. A brief list of the RT-11 related submissions from that addendum is in order here. If you want full information and abstracts on these programs, you may find some in this and previous issues of the Newsletter, or get write for a full catalog and addendum to DECUS, Attn: Library, 219 Boston Post Rd. BPO2, Marlboro, MA 01752-1850.

- 11-SP-97 Symposium Collection from RT-11 SIG, Spring 1987, Nashville (25 packages of good stuff)
- 11-490 TSXLIB V6.2 (Updates from Nick)
- 11-665 PB: Device Handler for Data I/O System 19 Prom Programmer
- 11-736 DV: Virtual Device Handler for RT-11 (Those Canadians will do anything to avoid Files-11.)
- 11-856 DUCM/DYC V2b (RT/TSX+ MSCP handler from Australia)
- 11-865 LOGDIR V1.1 (Get directories of logical disks without mounting them.)
- 11-866 IMPNON V1.0 (FORTRAN77 implementation of IMPLICIT NONE?)
- 11-867 FONT V1.0 (Create downloadable fonts for VT220's)
- 11-868 TAPUTL V2.03 (You guessed it. Magtape utilities!)
- 11-872 LAP: Slave Print Utility (for printing on a LA50 attached to your VT100)
- 11-880 Multiprocessor RT-11 V5.0 (Networks the easy way!)
- 11-881 GRAPHIC (PLOT10 in C? from France)
- 11-883 ASKVAL (more C from France)
- 11-889 BS-207 Handler for RT-11 and TSX+ (VM for DATARAM memory)



# CHESHIRE ENGINEERING CORPORATION

650 Sierra Madre Villa, Suite 201  
Pasadena, California 91107  
(818) 351-5493

January 13, 1988

John M. Crowell  
RT-11 Newsletter Editor  
Multiware, Inc.  
2121-B Second St. Suite 107  
Davis, CA. 95616

re: Desktop Publishing under RT

Dear Mr. Crowell:

The letter from John Bullock in January's issue caught my attention on several points. First, I am also interested in obtaining T<sub>E</sub>X for RT. I attempted to gather information on this subject at Anaheim and got only discouraging news. Several folks from the Language & Tools SIG have apparently been involved in impelmenting T<sub>E</sub>X for various systems and they said essentially, "good luck". The problem is that not only is the program itself large, but so are its data structures. It is not clear how much work would be required to break it up into mappable pieces.

Evidently T<sub>E</sub>X is written in a language called *Web* invented (also by Knuth) with the express intent of being portable. *Tangle* is a compiler for this language that generates Pascal sources (rather than assembly or machine code). *Weave* is a compiler that extracts documentation from the source in T<sub>E</sub>X format. This gives one a couple of options when attempting to port T<sub>E</sub>X to new systems: port the Pascal source of T<sub>E</sub>X or port Tangle (written in a minimal subset of itself, of course) through a bootstrapping process. Either way, memory management is sure to be the killer.

If there is anyone who has already made a T<sub>E</sub>X for any PDP-11, or is seriously considering doing so, they should let the T<sub>E</sub>X user's group know. The T<sub>E</sub>X user's group seems very supportive of T<sub>E</sub>X-related activities, and they keep a list of T<sub>E</sub>X implementations and related products. T<sub>E</sub>X USER'S GROUP, P.O. Box 9506, Providence, RI 02940, (401) 272-9500.

This leads me to one of Mr. Bullock's other topics, Modula-2 with VRS. Is it possible to convert Pascal sources to Modula-2 (and in particular, is automatic conversion possible and has anyone written such a utility)? Perhaps that would solve the memory problem with T<sub>E</sub>X. I (for one) would be much more interested in the benefits of Modula-2 if there were an "upgrade path" for my Pascal sources.

Reverting to my original topic (Desktop Publishing), I have implemented a simple-minded utility that allows me to use a PostScript laser printer from RT/TSX. This is a "line printer emulator" that runs in the printer itself and allows it to accept ordinary ASCII files (such as this letter) with embedded PostScript commands. The real purpose of the emulator is to provide a crutch so that I can continue to maintain all my documents created with RUNOFF while I decide which *real* system I'm going to use later. Those who are in a similar bind, or who have alternate solutions, I'd like to here from you and share ideas.

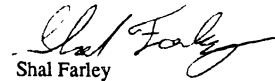
John M. Crowell  
January 13, 1988

I second Mr. Bullock's plea for information about T<sub>E</sub>X or any other software for RT/TSX which supports the typesetting (to say nothing of the graphics) features of my PostScript printer. At present I know of none. All the folks who used to sell PDP-11 word processing packages seem to have gone to the VAX, even those which still sell their RT product haven't updated it to include the typesetting and graphics features they now advertise in their VAX products.

All of which is leading me to conclude that my best bet is to replace my VT-100 with an IBM PC or MacIntosh running T<sub>E</sub>X plus Ventura or Aldus. Of course, that opens up all the terminal emulation, file-transfer and other "networking" issues (besides which, I *hate* those single-tasking kludges that pass themselves off as operating systems). Other than that it's either \$\$\$\$ for the 386 or 68020 systems, or \$\$\$\$\$ for the VAX. Pretty expensive when all I originally wanted was T<sub>E</sub>X, a graphics terminal, and the T<sub>E</sub>X previewer.

On a final note, I think Mr. Bullock's VAX/RT points are well taken. I can see nothing impossible about the production costs of his \$3500 system, there are 386 systems (complete with cabinet, backplane, power supply, and disk drives) available for \$3500, *retail*. I'm not convinced that the silicon in the KA620 should be all that much more expensive than that in the 386. The real question is: how big is the market: could DEC (or anyone else) sell enough of these VAX/RT systems to pay back the development cost. Time will tell.

Sincerely,

  
Shal Farley

## Analysis of the RT-11 Wish List Survey

### 1 INTRODUCTION

The RT-11 Wish List Survey is now over. We have collected all the data, analyzed it, presented results at the Fall DECUS Symposium, and given the results to the RT-11 Development Team. We would like to now present the results of the survey to those of you who were not able to make it the the Fall Symposium. We will not be able to do this in a single issue, so only part of the results will be presented here. The rest will be presented in following issues.

The purpose of the survey was to rank by importance the features the user community would like to see in RT-11, and compare those results with the ease or difficulty of implementing those features. The benefit of such a survey to Digital is that it would allow the RT-11 Development Team to understand what its user community would like to see it working on. The benefit of the survey to the RT-11 users is that it would give us a feeling of shaping the RT-11 of tomorrow.

### 2 RESPONSE

How well did the RT-11 readers respond? 56 forms were returned to us. That doesn't sound like a lot, but it may not be as bad as it seems. There are approximately 50,000 DECUS members, but only a little over 5,000 currently subscribe to the newsletter. Let's make an educated guess that 5 percent of those are active RT-11 users (actually use it to do development, not people who once used RT-11). Then we are only talking about 250 readers who might have an opinion to express. If these numbers are right, then we got better than 20 percent return. Not so bad after all.

Let's look at what this tells us in a different light. We know that Digital has sold a little over 100,000 RT-11 licenses. We don't know how many of these are still active - maybe 20,000-30,000? The problem with these numbers is that many of the currently installed RT-11 systems are not being used for development; they may be buried in a laboratory or inside a piece of equipment, and are just sitting there quietly doing their job. Furthermore, many RT-11 users are really responsible for several systems, so the actual number of active RT-11 system managers who are doing program development may only be a few thousand. Let's say the number is 2,500-5,000. Can we confirm this number in another way? Yes, we can. The number of active FORTRAN-77 users is something like 1,400. Digital has recently informed me that FORTRAN-77 and FORTRAN-IV sell in about equal numbers, so we have about 2,800 FORTRAN users. At a DECUS session a year or so ago I

asked the audience what languages people use. Most use MACRO and FORTRAN, and few use anything else. So the number of active RT-11 users, computed this way is probably around 3,000 to 4,000.

If we believe these numbers, it appears that a little less than 10 percent of the active RT-11 community reads the newsletter. That is only slightly worse than the rate for the entire Digital community, which is just a little over 10 percent. But we would expect the RT-11 readership to be a little worse than average because the typical RT-11 user doesn't have as much money to spend as the typical VAX user.

The numbers above also seem to indicate that we had a slightly better than 1 percent sample of the entire RT-11 community. Although we would have liked to have seen a larger response, we feel that the sample was large enough to be a significant representation of the views of the entire community.

### 3 SCORING

For each item on the wish list we asked the respondents to give us a score as follows:

- 4 = Very important
- 3 = Mildly important
- 2 = Mildly undesirable
- 1 = Very undesirable

Many respondents voted only on those items that they had a strong opinion about, so for each item, in addition to the distribution of 4's, 3's, 2's, and 1's, we had an additional statistic: the number of votes of all kinds for that item.

Summing over all items, there was a total of 4857 votes, which means that the typical respondent voted for (or against) a little less than half of the items. The breakdown of votes is as follows:

2178 fours  
2288 threes  
285 twos  
106 ones

That is, people were generally in favor of the items they voted on, but there was some feeling that some particular items were not desirable.

We wanted to come up with a single number that represented the relative score of an item. For lack of a better idea, we settled on using the average of the four responses, weighted by the response numbers, and normalizing so that the average of all scores was zero. In mathematical terms, we computed

$$\text{SCORE} = (\text{N1} + \text{N22} + \text{N33} + \text{N44}) / (\text{N1} + \text{N2} + \text{N3} + \text{N4})$$

- average reply over all questions

where N1 is the number of 1 responses, N2 is the number of 2 responses, etc., and the average reply over all questions (not counting the non-votes) was computed to be 3.35. Computing the item scores in this way gave us a nice distribution of values such that approximately half the items had positive scores (more desirable than the average), and half the items had negative scores (less desirable than the average).

#### 4 RANKING

Figure 1 shows how the scores were distributed as a function of the number of votes an item received. Notice that there is essentially no correlation between the score and the number of votes (well maybe a little tiny bit). This means that these two quantities are statistically independent. That is, they each express something unique about an item. Perhaps it is best to think of the score as being "Desirability" and the number of votes as being "Importance". Thus, an item with a high score and number of votes is not only very desirable, but also important to many respondents.

We wanted a single measure to rank the items by, where the top of the list contained the items that the respondents clearly felt should be implemented in RT-11, the middle of the list contained items that were not really important, and the bottom of the list contained the items that should not be included in RT-11. Given the way we defined the score, the items can be ranked in this way by defining

$$\text{RANK} = \text{SCORE} * \text{NUMBER OF VOTES}$$

#### 5 THE DIGITAL RATING

We gave the Wish List to the RT-11 Development Team without letting them see any respondent statistics, and asked them to rank each item by the ease or difficulty with which it could be implemented in RT-11. They ranked all the items on the following scale:

- 0 = Already done or easy workaround
- 1 = Very easy
- 2 = Moderately easy
- 3 = Somewhat difficult
- 4 = Very difficult
- 5 = Irrational or Impossible
- 6 = Didn't understand request

Figure 2 shows how the scores were distributed as a function of the

Digital Rating. Notice that most of the items had a Digital Rating of 1, 2, or 3. Each Digital Rating category seems to have a distribution of scores somewhat like the total distribution (approximately Gaussian about zero). That is, there does not seem to be any noticeable correlation between score and Digital Rating.

#### 6 PRESENTATION OF RESULTS

For each item on the Wish List we will give the number of votes, the score, and the Digital rating. Instead of using the Wish List ordering of items, they will be presented in order of rank for each of the Digital rating values. In this way, it is hoped that you will be able to get a quicker feel for which items fared well and which didn't.

If anyone is interested in the complete raw data, please let us know and we will send it to you.

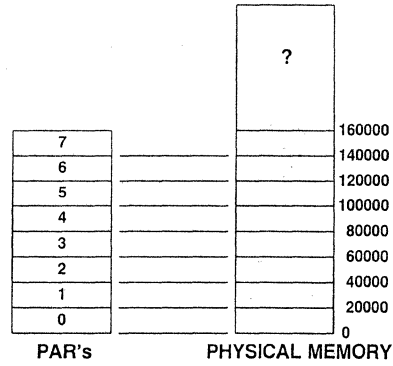
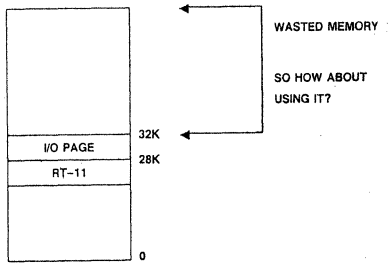
#### 7 0 - THE ITEMS YOU GET FOR FREE

There were only 6 items that fell into the "already done or there is a workaround" category. Unfortunately only one of these items had a positive score. The following table lists these items in order of RANK.

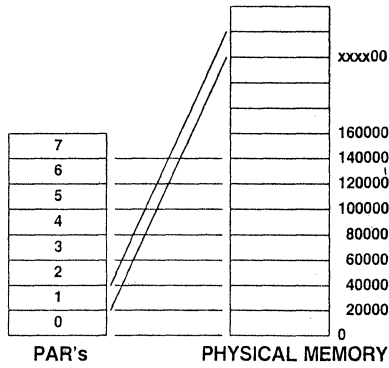
Score	Votes	Item
0.11	26	VTCOM: Restore the packet size after it has been reduced (Coming in Version 5.5)
-0.06	24	Provide EMTs to mount/dismount logical disks (Available now as a special function)
-0.10	24	KED: Provide a way to go to an absolute line number (Can do <gold>7<gold><number>0 now)
-0.12	13	Provide an EMT to return address of channel IOSB (Can be done now with GTJOB + arithmetic with less monitor overhead)
-0.16	21	VTCOM: Provide a way of bypassing halving algorithm
-0.22	15	BUP: Provide /NOVERIFY switch (Coming in Version 5.5)

Due to the page count limit, we will continue this discussion of the wish list analysis in the next issue.

### HANDLERS IN XM



### DEFAULT MAPPING



15 14 13  
0 010 000 000 000 000

### OBTAINING A GLOBAL REGION TO USE

Install code

Must find a global region control block to use

Must save regions characteristics

SEE EXAMPLES

RT-10

### GOAL:

For everyone to take their existing, working XM handler and use extended memory to reduce the amount of low memory needed to implement the handler.

RT-9

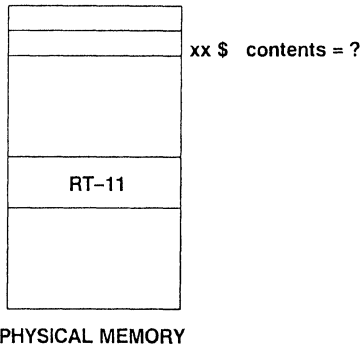
### NON-GOAL OF THIS TALK:

To explain everything about the XM environment that there is to know.

### OVERVIEW

1. Use of GLOBAL REGIONS to hold code and data.
2. Use of the \$REL macro.
3. Use of non-memory resident one-time code.

AFTER INSTALL CODE HAS BEEN EXECUTED,



FIND A GLOBAL REGION

FINDGR

Located at offset -10. From the \$P1EXT entry point

Enter with

R5 -> R5 = address of the region name in 2 words of RADIX 50

Returns with

C-bit = 0  
R1 = size word of associated global region block

or

C-bit = 1  
R1 = address of size word of next available global region block

;CODE TO FIND AN AVAILABLE GLOBAL REGION CONTROL BLOCK

```

MOV     @#SYSPTR,,R4      ; R4 = BASE OF RMON
MOV     MEMPTR(R4),R0     ; R0 = OFFSET TO MEMORY PTR
ADD     R4,R0             ; R0 -> TABLE OF MEMORY PTR
MOV     CORPTX(R0),R5     ; R5 = OFFSET TO FREE LIST
ADD     R4,R5             ; R5 -> FREE LIST
20$:   CMP     #-1,(R5)+   ; END OF LIST ?
       BNE    20$        ; NO, KEEP LOOKING FOR IT!
; R5 -> Start of region control block area
30$:   CMP     #-1,@R5     ; END OF LIST ?
       BEQ    I.BAD      ; YES, BRANCH ; FAILURE
       TST    @R5        ; EMPTY ENTRY ?
       BEQ    40$        ; YES, BRANCH; FOUND AN ENTRY
       ADD     #GR.ESZ,R5 ; POINT TO NEXT ENTRY
       BR     30$        ; REPEAT

MEMPTR =: 430
CORPTX =: 4
GR.SIZ =: 10.
    
```

ROUTINE TO ALLOCATE A GLOBAL REGION

XALLOC

Located at offset -6 from \$P1EXT entry point

Enter with

R2 = Required region size/32

Returns with

c-bit = 0 - region allocated  
R1 = Region address/32  
R2 = Region size/32  
R3 = Random

or

c-bit = 1  
R2 = Size of largest region available

During LOAD/.FETCH CODE:

"Find" the Global Region created during INSTALL code

MOVE data/code into high memory

Resolve addresses, pointers.

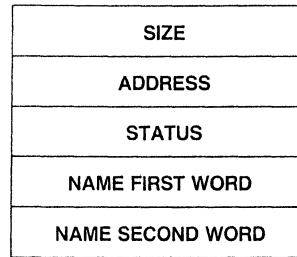
; FIND THE GLOBAL REGION - TO GET THE ADDRESS/32

```

.ADDR   #DUNAME, R5      ; R5 -> RAD50 NAME DU $ GLOBAL
MOV     @#SYSPTR,R4     ; R4 -> BASE OF RMON
MOV     P1EXT(R4),R4     ; R4 = OFFSET TO P1EXT
CALL    FINDGR(R4)      ; GO GET THE CONTROL BLOCK
BCS     GETGBL           ; BRANCH IF NONE
MOV     GR.ADR(R1),P1HIGH-DUBASE(R3) ; STORE THE ADDR/32 OF REGION

PIEXT =: 432
FINDGR =: -12
GR.ADR =: 2
    
```

GLOBAL REGION CONTROL BLOCK



;CODE TO ALLOCATE THE GLOBAL REGION

```

; R4 -> Base of RMON
; R5 -> Entry RCB
40$:   MOV     P1EXT(R4),R0 ; R0 -> EXTERN ROUTINES
       MOV     #MEMDUX,R2  ; R2 = SIZE/32 MEMORY
       CALL    XALLOC(R0)  ; GET MEMORY FROM FREE LIST
       BCS     I.BAD      ; branch if not obtained
; Build RCB
       MOV     R2,(R5)+    ; STORE THE SIZE/32
       MOV     R1,(R5)+    ; STORE THE ADDR/32
       MOV     #GR.PVT,(R5)+ ; STORE STATUS = PRIVATE
       MOV     #DUSNAM,(R5)+ ; STORE NAME 1ST WORD
       MOV     #<RS,@R5    ; STORE NAME 2ND WORD
       RTS     PC          ; RETURN

PIEXT =: 432
XALLOC =: -6
MEMDUX = SIZE/32 FOR REGION
    
```

**.MACRO \$REL LOC VALUE BASE**

```

..... 1 = .
      = Loc
.If IDN <DUX> <BASE>
  .word value - Duxbase + 20000
  .= ..... 1
  .MExit
.Endc ; IDN <DUX> <BASE>

```

**EXAMPLE OF DUX BASE**

```

7404 12705 00046'   MOV     #XDUTAB,R5
7410                 $REL   -2 XDUTAB DUX
7406 20046           .WORD   XDUTAB-DUXDBASE+
                        20000

```

**.MACRO \$REL LOC VALUE BASE**

```

.If IDN <DUR> <BASE>
  DUR.CNT = DUR.CNT+1
  .IRP X <\DUR.CNT>
  DUR'x: .WORD VALUE-DUBASE
  .ENDR
  .= ..... 1
  .MEXIT
.ENDC; IDN <DUR> <BASE>
.ERROR ; UNKNOWN BASE "Base";
.ENDM $REL

```

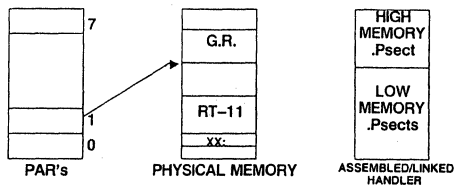
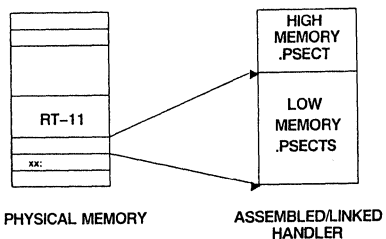
**EXAMPLE OF DUR BASE**

```

12432 137 000470'   JMP     @#LOWONE
12436                 $REL   -2 LOWONE DUR
12434 462           DUR7: .WORD LOWONE-DUBASE
12436

```

RT-14



Read extended memory .Psect into a buffer in the Load/Fetch code.  
Put Global Region Address/32 into PAR1, and then move the .PSECT.

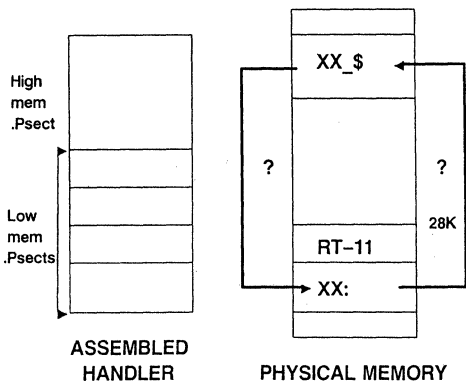
```

R1 = wordcount
R2 -> Input buffer
R5 = 20000
105: MOV (R2)+,(R3)+      : STORE A WORD
      DEC R1              : DONE
      BNE 105             : NO BRANCH

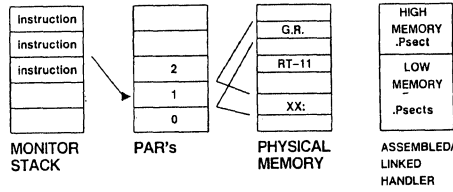
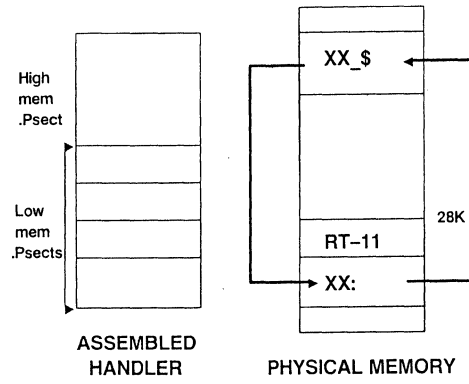
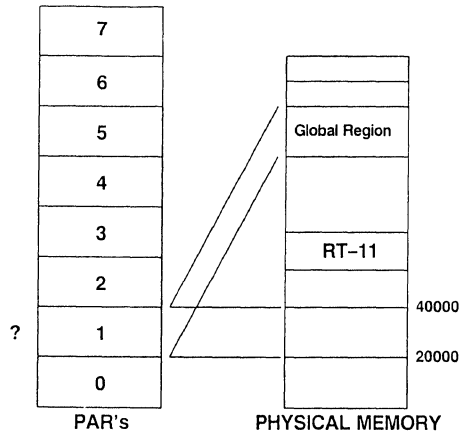
```

How to get the extended memory .PSECT into the Global Region?

RT-13



\$REL



PAR1 EXTERNALIZATION ROUTINE

Puts a small amount of code on the stack and executes it clear of PAR1

```
000137 004650' JMP @#BEGIN
024650 $REL -2 BEGIN DUX
```

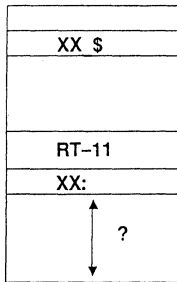
WANT TO DO TWO THINGS SIMULTANEOUSLY:

1. Map to Global Region
2. Jump to BEGIN:

During Assembly:

Need to create a list of occurrences of references to low memory from extended memory

Mark references to be resolved at LOAD time



Physical Memory with LOADED handler

;CREATE TABLE FOR RELOCATION DURING ASSEMBLY

```
DUR.DID=1
DURLST:
    .REPT      DUR.CNT
    .IRP      x <<DUR.DID>
    .WORD    DUR:x
    $REL     -2 DUR:x DUX
    .ENDR
    DUR.DID = DUR.DID+1
    .ENDR
creates:
1700 0005234' .WORD    DUR1
1700 0025234 .WORD    DUR1-DUXBASE+BEAREL
1702 0005016 .WORD    DUR2
1702 0026016 .WORD    DUR2-DUXBASE+BEAREL
```

IN LOAD/FETCH CODE:

;R3 -> Handler Load Address+6  
;Fix the DUR references in DUX

```
.ADDR #DURLST,R0 ;R0 -> Relocation list
10$: MOV (R0)+,R1 ;get next relocation entry
    BEQ 20$ ;branch if done
    ADD R3,@R1 ;relocate value address
    BR 10$ ;and do next
20$:
```

After executing the JMP into high memory code, the stack is as follows:

156 230	24	pre-\$P1EXT
156 226	141634	pre-\$P1EXT
156 224	0	old R0
156 222	200	old PAR1
156 220	200	old R1
156 216	77764	old R2
156 214	207	Return
156 212	24642	instruction
156 210	137	instruction
156 206	156220	stack mark off size
SP → 156 204	150424	return address for \$P1EXT code

MOV 2(SP), SP

156 230	24	pre-\$P1EXT
156 226	141634	pre-\$P1EXT
156 224	0	old R0
156 222	200	old PAR1
SP → 156 220	200	old R1
156 216	77764	old R2
156 214	207	Return
156 212	24642	instruction
156 210	137	instruction
156 206	156220	stack mark off size
156 204	150424	return address for \$P1EXT code

ADD #6, SP

156 230	24	pre-\$P1EXT
SP → 156 226	141634	pre-\$P1EXT
156 224	0	old R0
156 222	200	old PAR1
156 220	200	old R1
156 216	77764	old R2
156 214	207	Return
156 212	24642	instruction
156 210	137	instruction
156 206	156220	stack mark off size
156 204	150424	return address for \$P1EXT code

RESTRICTIONS TO \$P1EXT

Cannot back-reference the handler itself from P1EXT code - handler is outmapped.

Cannot use R0 in instruction list.

Instruction list may not remove or place anything on the stack that would change the stack depth between entry and exit.

Instruction lists >32 words not recommended.

CALLING SEQUENCE FOR MONITOR ROUTINE \$P1EXT

```

JSR      R0, @$P1EXT
.word    <bycnt+2>
; instructions to execute on stack
.
.
.
.word    newpar ; new value for PAR1
    
```

CREATE A MACRO INSIDE YOUR HANDLER

```

.Macro   .P1EXT      newpar, ?loc
MOV      newpar, loc ;save new PAR1 value
JSR      R0, @$P1EXT ;execute PAR1 routine
.word    loc- ;# of instructions + 2
.Macro   .P1END
Loc:     .word      0 ;value 0 for now
.endm
.Endm    .P1EXT ;end .P1EXT
    
```

EXAMPLE OF .P1EXT

```

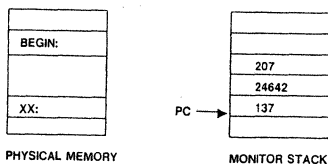
ACROSS:  MOV      @/#Kisar1,R1
.P1EXT   P1high

000137 000642  JMP      @/#Begin
024642   $REL    -2 Begin DUX
        .word   Begin-Duxbase + 20000
        .P1end
    
```

REMEMBER TO CLEAN UP THE STACK AFTER EXECUTING \$P1EXT CODE.

```

MOV      2(SP),SP
ADD      #6,SP
    
```





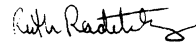
# DIASONICS MRI DIVISION

533 Cabot Road  
South San Francisco, CA 94080  
(415) 872-2722

John M. Crowell  
Rt-11 Newsletter Editor  
Multiware, Inc.  
2121-B Second St. Suite 107  
Davis, CA 95616

Dear John:

Here's the bug I mentioned at DECUS. Sorry it took so long to send it to you. It slipped through the cracks.



### Problem Statement:

This happens with RT11SJ v5.4 and FORTRAN IV 2.6 and 2.8. If you read a file with a READ statement that has an ERR= but no END= branch and you try to read past the end of file, the ERR branch is taken and the program takes the proper path. However, the previous mode changes from kernel to user, which totally destroys all subsequent virtual array accesses.

C demonstration that handling end of file with an ERR branch clobbers C the PSW previous mode, ~~and~~ not to mention any virtual arrays.

```

virtual ivir(10)
integer ivir
byte b(133)

*   open (unit=1, name='sy:test.fil', access= 'SEQUENTIAL',
      type = 'OLD', READONLY)

      ivir(1) = 17

      type 99, ipeek("177776), ivir(1)

10  continue
      read (1,79, err=100) n, (b(i), i=1,n)
      type 99, ipeek("177776), ivir(1)
      format(q, 132 al)
      goto 10

79  close (unit=1)
      type 99, ipeek("177776), ivir(1)

99  format (o, i)

      end

```

SY:TEST.FIL:

this is a test of that  
veird bug in logical arrays.  
it only occurs with sequential reads.

output:    30010    17  
             30010    17  
             30010    17  
             30010    17  
             10        16384

RT-20

AFTER EXECUTING HIGH MEMORY CODE,  
HOW DO I GET BACK DOWN TO LOW MEMORY?

Basically execute same routine (\$P1EXT) but this time  
give "old" low memory PARR1 value.

```

.Macro .HP1EX      oldpar, ?loc
MOV    oldpar, loc
JSR    R0, @HP1EX
.word  loc-
.Macro .HP1EN
.word  0
.ENDm .HP1EX

```

HP1EX            Contains entry point of \$P1EXT.  
                 It's the high memory copy of the pointer.  
                 Stored during LOAD/FETCH code.

RT-19

### CONCLUSION

1. Allocate Global Region during Install code
2. "Find" Global Region during LOAD/FETCH code and store code/data in high memory
3. Resolve addresses, pointers during LOAD/FETCH
4. Done

Formed on 1 January, 1988, by  
merger of the previous  
Division of Textile Industry  
Division of Textile Physics, and  
Division of Protein Chemistry (Wool and Leather Sections)

A Division of the Institute of Industrial Technology

338 Baxland Road, Ryde, NSW 2112  
Telephone (02) 80 0211 Telex AA 70827  
Facsimile (02) 807 3565

Our Ref: PAH006

18th January 1988

John M. Crowell,  
RT-11 Newsletter Editor,  
Multiware Inc.,  
2121-B Second St, Suite 107,  
DAVIS, CA 95616, USA.

Dear Mr Crowell,

This may add some information to the letter from Robert Schor (December 1987, p RT-15). He describes an interaction between the Single Line Editor (SL) of RT-11 V5.4 and the .GTLIN macro.

Two alternative ways to display a prompt and get a reply are:  
.PRINT #prompt ; ask the question  
.GTLIN #reply ; get the answer

or

.GTLIN #reply,#prompt ; do both at once

If the prompt string is terminated with a null (.ASCIZ) these sequences function identically. However, if the prompt string is terminated with <200> to inhibit CR-LF, and the Single Line Editor is enabled, no prompt is displayed by the first sequence.

The explanation is that the Single Line Editor always clears the line before it accepts input. If a prompt from a .GTLIN is on the same line, the Single Line Editor only clears the line past the end of the prompt. However, if the prompt is produced by a separate .PRINT, the Single Line Editor doesn't know there is text on the line that should not be cleared.

The problem could be fixed in SL but it would take memory and SL is already uncomfortably large.

The "fix" proposed has a problem. The Programmer's Reference Manual states that the .CTRL0 request should be issued after any change to the JSW. This allows the monitor to update its internal status information. I know from experience that you can sometimes get away without doing this. However, the program may not work with a new monitor version, etc.

A way of avoiding these problems while allowing a variety of prompts chosen at run-time is:

2

```
MOV #prmp1,prompt ; select prompt 1
BR 1$
...
MOV #prmp2,prompt ; select prompt 2
BR 1$
...
```

1\$: .GTLIN #reply,prompt ; ask for reply with chosen prompt  
This also has the advantage of leaving SL available for editing the reply.

Regarding the last point about documentation for the .MODULE macro, there is some available. Appendix B of the Programmer's Reference Manual (AA-H378C-TC for RT-11 V5.1) lists the System Macro Library. The comments for .MODULE give enough information to be able to use it and the associated macros.

Yours sincerely,

*P. A. Heuer*

Powell A. Heuer,  
EXPERIMENTAL SCIENTIST.

\_DUA1:[MULTIWARE.BOB.DCS]DCS019.TXT;1 20-JAN-1988 09:42

D E C U S - I N T E R O F F I C E M E M O R A N D U M

Date: 15-Jan-1988 12:46pm EST  
From: N. A. (Nick) Bourgeois  
BOURGEOIS  
Tel No: 505-298-2346

Subject: F77 "FEATURE"

I have just discovered a difference between FORTRAN IV and FORTRAN 77. There are no doubt many more differences. But this one is what I would call a GOTCHA. The following program illustrates this one:

```
CALL ITSLIN (IRET)
TYPE *,IRET
IRET = ITSLIN ()
TYPE *,IRET
END
```

The program works OK when built under FORTRAN IV, but gives an odd address trap on the function call to ITSLIN under FORTRAN 77. The following table illustrates the difference between the two compilers:

	Arg Lst	Subr Call	Func Call
F4	(R5) 2(R5)	000001 IRET addr	000000 N/A
F77	(R5) 2(R5)	000001 IRET addr	000001 177777

In short, F4 is saying that no arguments are passed in the function call, and F77 that one null argument is passed.

The ITSLIN routine is in TSXLIB. The MACRO code within the ITSLIN routine is as follows:

```
2$:
TSTB (R5) ; function call?
BEQ 2$ ; yes
MOV R0 ,@2(R5) ; no, subroutine call
```

This MACRO code sequence appears in several other places TSXLIB.

Is this a bug to be fixed or a difference that should be cited in the documentation?

Nick

\_DUA1:[MULTIWARE.BOB.DCS]NICK.TXT;1 20-JAN-1988 09:41

The argument passing problem you have pointed out is an inconsistency in FORTRAN IV that has been corrected in FORTRAN 77. Argument passing should be done in an entirely consistent manner. Unfortunately, FORTRAN IV does not make a distinction between

```
CALL ITSLIN
and
CALL ITSLIN ()
```

(The latter should look the same as I = ITSLIN() to the routine being called, since the routine should not have to interpret the argument list differently if it is called as a function rather than a subroutine.)

In the first case there is no argument, whereas in the second case there is one argument whose value just happens to be missing. FORTRAN IV incorrectly says there is no argument in the second case. To convince yourself that this is so, look at the code generated by

```
CALL ITSLIN (,)
```

FORTRAN IV correctly interprets this as a call with two arguments, both of which are missing.

See the FORTRAN-77 User's Guide, p 3-5 and the FORTRAN-IV User's Guide, p 2-10 for a discussion on argument passing. Notice that the FORTRAN-IV User's Guide says that -1 is stored in the argument list as the address of ANY null argument. I don't know if the problem that occurs with one null argument is actually a bug in the FORTRAN IV compiler or a discrepancy in the FORTRAN IV language standard.

For the code in TSXLIB to work correctly (I do not mean correctly for FORTRAN 77, because CALL ITSLIN (,IRET) will cause your routine to blow up in FORTRAN IV), you should change it to look like this:

```
2$:
TSTB (R5) ; No argument?
BEQ 2$ ; yes
CMP 2(R5),#-1 ; Missing argument?
BEQ 2$ ; yes
MOV R0,@2(R5) ; no, subroutine call
```

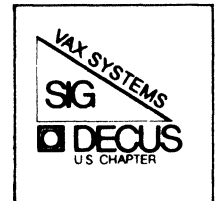


# NEWSLETTER OF THE VAX SYSTEMS SIG



*Our Mascot*

# Pageswapper



## Table of Contents

Editor's Workfile . . . . .	VAX-3
Another Classic Moment in Support . . . . .	VAX-3
Far Out VAX/VMS Futures . . . . .	VAX-5
LUG News . . . . .	VAX-7
IOCASE: An I/O Function Code Dispatch Macro . . . . .	VAX-8
Network Security Working Group Formed . . . . .	VAX-12
Digital Responds to the Fall 1987 SIR Ballot . . . . .	VAX-14
A Daily Maintenance Procedure . . . . .	VAX-23
VAX/VMS Security . . . . .	VAX-27
INPUT/OUTPUT . . . . .	VAX-29

### Forms at the End

System Improvement Request Submission Form . . . . .	OU-23
VAX Systems SIG Spring 1988 SIR Ballot . . . . .	OU-25

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Preference is given to material submitted as machine-readable text (best is Runoff source). Line length should not exceed 64 characters and the number of text lines per page should not exceed 48 (these limits are particularly important for sample commands, etc. where simple text justification will not produce a meaningful result).

Please do not submit program source, as that is better distributed on the VAX SIG tape.

Please do not submit "slides" from DECUS Symposia presentations (or other meetings) as they are generally a very incomplete treatment for those readers of the Pageswapper who are not so fortunate as to be able to travel to Symposia. Please DO write articles based on such slides to get the content across to a wider audience than is able to attend.

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Attention: Publications Department  
249 Northboro Road (BPO2)  
Marlborough, MA 01752  
USA

Only if discrepancies of the mailing system are reported can they be analyzed and corrected.

## Editor's Workfile

SIR Voting Time

April 8 is the deadline for voting on the Spring 1988 System Improvement Request ballot. If you really are reading this issue the first day of March, there might be a chance that you will get around to reading the April issue in time to be reminded, but don't count on it. Vote now -- the form is in this issue, but you will have to go to the February issue for the text of SIRs (SIR voting can also be done on-line by those with Pageswapper submission accounts).

## Another Classic Moment in Support

=====  
Note 888.0                      Another SPR classic                      2 replies  
"Kevin Angley"    18 lines    25-JAN-1988 13:10  
=====

I submitted an SPR recently that the status of a volume shadowed disk returned by GETDVI sometimes was incorrect.

The answer that I got (from the "screening" team) was:

The GETDVI lexical and GETDVI system service does not work on a cluster. More specifically, NO function of GETDVI is supported on a cluster.

It is an "undocumented restriction".

That this system service doesn't work is "the intended behaviour".

They will "consider my suggestion" that a very critical and commonly used system service be fixed.

Your software support dollars at work!

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604

## Far Out VAX/VMS Futures

By  
Ray Kaplan  
PIVOTAL, Inc.  
P.O. Box 32647  
Tucson, Arizona 85751-32647

```
=====
Note 888.1          Another SPR classic          1 of 2
"Steve Duff"              4 lines  26-JAN-1988 01:02
-----
```

Is that to mean that \$GETDVI isn't supported when -used- in a cluster, or "merely" that \$GETDVI isn't supported for cluster devices? In either case, one is certainly to wonder what all those cluster-info item codes are doing in \$GETDVI .

Steve Duff  
Software Factory  
2401 E. 17th St.  
Suite 190  
Santa Ana, Ca. 92701

```
=====
Note 888.2          Another SPR classic          2 of 2
"Kevin Angley"              11 lines  26-JAN-1988 15:36
-< What she said was >-
-----
```

I tried to get them to say that what they really meant was that GETDVI would not work ACROSS a cluster (i.e. to tell you information about a device attached to another node). But she reiterated ... GETDVI is not supported on a system that is part of a cluster.

Obviously, they could refine this restriction. But since they are DEC and we are just customers, and they are not going to document this restriction anyway, why lift a finger to help out the software support customer who is shelling out dollars (but not for long)?

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604

VMS Engineering at DEC has a new advanced development group. As you might guess, they are interested in what DECUS has to say about where VMS might be in the far distant future. Here is your chance to give 'em some ideas.

This is not the stuff that System Improvement Requests (SIRs) are made of, as typically SIRs are more "short term" in nature. The advanced development group is interested in where VMS should be in a few years, and not interested in what new qualifiers and utilities anyone wants for the next minor or major release.

If you have not taken the time to fill out an SIR form, please take a moment now to locate it in the back of this issue of the newsletter and consider filling it out with your ideas for what VMS should be in the short term. Recently, one of the VMS product managers came to a national Symposium to report that well over 85% of the SIRs had been implemented over the years. This means that WE (as users of the VAX SIG's SIR process) really do have an impact on the future of VMS. Mark Oakley (Battelle in Columbus Ohio) does a bang up job of managing the SIR process. He can't do it by himself though! Pitch in and give him some input, won't you?

But what of the VMS advanced development group's interests in where VMS should be in 1992? Toward the end of developing a flow good ideas into the group, I got a Birds of Feather session scheduled at the just past Anaheim Symposium. We started off just brainstorming around the idea that whatever was presented should be as far reaching in its effect on VMS as VAXclusters have just as much architectural significance to VMS. I guess that the thought here is that it takes years to integrate a major new architectural concept into VMS.

Further clarifying our objectives, we came up with several categories to help us think about things that make sense for long term VMS directions. Here are the categories that we discussed and some of the things that we came up for each one:

Architectural refinements that were discussed included things like better definitions of layers and classes, "de-PDP-11-izing" things, associative memory support, high level languages that produce processor-specific microcode, and better I/O processing like DECnet on a board and file servers.

Problem spaces (problems yet to be solved) included mention of addressing the challenge of the 2 or 3 order of magnitude increase in the number of VAXes out there, and better realtime support.

Solution spaces (solutions waiting to be applied) included discussion of support for object oriented and database primitives and for distributed operating system support.

In the "what to build" category there were things like checkpointing support, transaction oriented primitive support, movable process contexts (network and cluster) and a timely Internals and Data Structures Manual.

Perhaps you can use these ideas a guide when you consider ideas about where VMS might go in the future. Please take some time to think about where VMS might go in the future and take a moment to mail them to me (address at the top of this article).

We agreed that there should be a Pageswapper article and that we should schedule a Symposium session for Cincinnati. This is the Pageswapper article, and the session that we submitted for Cincinnati has the title of "VMS Architectural Suggestions". The rest is up to you. Mail your suggestions or come to the Cincinnati session, but don't just do nothing! (How's that for a double negative? At least, I got your attention?)

## LUG News

Meeting topics for March - from respective LUG Newsletters

St Louis Local User's Group

Second Tuesday of every month  
at the Salad Bowl Restaurant  
3949 Lindell Boulevard

5:30 pm - social time  
6:00 pm - dinner  
7:00 pm - program

March - Workstations - Tom Kelly, Digital

MIVAXLUG

Lawrence Institute of Technology  
Management Building, Room M336  
10-Mile Road  
Southfield, MI

6:15 Open Steering Committee meeting  
7:00 Main Meeting

March 8 - Security

The January 1988 issue of the MIVAXLUG Newsletter reports that of the 7100 people attending the Fall Symposium in Anaheim, 30 had an IBM affiliation.

DFWLUG

TDIndustries  
Stemmons Freeway  
Dallas, Texas  
7:00 pm

March 8

Andrea Arthur of Software Conversion Systems in Milford, Connecticut will discuss "On-Line Transaction Processing with a Hint of ACMS".



## IOCASE: An I/O Function Code Dispatch Macro

Lawrence M. Baker  
U. S. Geological Survey  
345 Middlefield Road MS977  
Menlo Park, CA 94025

In the course of modifying DEC's XADRIVER, I have found it useful to be able to dispatch to the appropriate Start I/O entry points using a CASE instruction in place of several CMPB...BEQL or CMPB...BNEQ...BRW instruction sequences. I found the overhead for the CASE instruction to be equivalent to about three or four comparisons in the dispatching code sequence -- roughly the same as before making the change. The main benefit is improved appearance and easier modification of the driver (since I was no longer forced to modify the dispatching code when CMPB...BEQL's no longer reached their destination).

It was still a pain to look up the values for the I/O Function Codes I needed, and to build the CASE branch table by hand, so I wrote a macro, IOCASE, which does all the work for me. It takes a source operand for use as an index into a branch table (using word context, by default), which is built from a list of <I/O Function Code,destination> pairs, similar to those used in the Function Decision Table entry point macro, FUNCTAB, at the top of a device driver. The macro also automatically detects illegal and duplicate I/O Function Codes. The branch table is built using the fewest possible entries, and control passes to the instruction following IOCASE if the source operand does not correspond to one of the I/O Function Codes specified.

### Disclaimer

Although this program has been tested by the Geological Survey, United States Department of the Interior, no warranty, expressed or implied, is made by the Geological Survey as to the accuracy and functioning of the program and related program material nor shall the fact of distribution constitute any such warranty, and no responsibility is assumed by the Geological Survey in connection therewith.

IOCase.mar

```
.Title IOCase
.Ident /V1.0/
;
; IOCase.mar implements a CASE construct indexed by I/O Function
; Code. It is particularly useful in the Start I/O section of a
; device driver.
;
; (Note: IOCase requires that the $IODEf macro be specified to
; define the I/O Function Codes at assembly time, rather than at
; link time.)
;
; IOCase src,addrlist[,type=W]
;
; src
; Source of the index value to be used with the CASE
; instruction.
;
; addrlist
; A list containing one or more specifications of the
; following format:
;
; <I/O Function Code,destination>
;
; For each pair, destination specifies the address to
; which control is to be transferred, depending on the
; value of the I/O Function Code.
;
; [type=W]
; Data type of src (B, W, or L).
;
; For example, the following code excerpt:
;
; EXTZV #IO$V_FCODE,#IO$$_FCODE,- ; Extract I/O function
; IRP$W_FUNC(R3),R2 ; code(sans modifiers)
; CMPB #IO$_READPBLK,R2 ; Read request?
; BEQL DO_READPBLK
; CMPB #IO$_WRITEPBLK,R2 ; Write request?
; BEQL DO_WRITEPBLK
; BRW DO_SETCHAR ; Must be set
; ; characteristics
;
; can be replaced with:
;
; EXTZV #IO$V_FCODE,#IO$$_FCODE,- ; Extract I/O function
```

```
;
;   IRP$W_FUNC(R3),R2          ; code(sans modifiers)
;   IOCASE R2,<-
;   <READPBLK,DO_READPBLK>,-  ; Read request
;   <WRITEPBLK,DO_WRITEPBLK>,-; Write request
;   <SETCHAR,DO_SETCHAR>-    ; Set characteristics
;   >,B
;
```

```
.Macro IOCase,Src,AddrList,Type=W,?Base,?Top
```

```
; Validate_IOFunc first checks that the I/O function code is in
; range, makes sure there are no duplicates, then updates the
; minimum and maximum I/O function codes found
```

```
.Macro Validate_IOFunc,IOFunc,Dest
.IIf LT, <IO$M_FCode-IO$_'IOFunc>,-
  .Error ; Invalid I/O function code
  .If GE 31-IO$_'IOFunc
IOFunc_Mask = 1@IO$_'IOFunc
.IIf NE, <Valid_IOFunc Lo&IOFunc_Mask>,-
  .Error ; Duplicate I/O function code
Valid_IOFunc_Lo = Valid_IOFunc_Lo ! IOFunc_Mask
  .IfF ; GE 31-IO$_'IOFunc
IOFunc_Mask = 1@<IO$_'IOFunc-32>
.IIf NE, <Valid_IOFunc_Hi&IOFunc_Mask>,-
  .Error ; Duplicate I/O function code
Valid_IOFunc_Hi = Valid_IOFunc_Hi ! IOFunc_Mask
  .EndC ; GE 31-IO$_'IOFunc
.IIf GT, <Min_IOFunc - IO$_'IOFunc>, Min_IOFunc = IO$_'IOFunc
.IIf LT, <Max_IOFunc - IO$_'IOFunc>, Max_IOFunc = IO$_'IOFunc
.EndM
```

```
; IOFunc_Slot inserts the signed word offset to the destination
; address into the CASE instruction branch table, indexed by the
; offset of the I/O function code from the minimum I/O function
; code found
```

```
.Macro IOFunc_Slot,IOFunc,Dest
. = 2*<IO$_'IOFunc-Min_IOFunc> + Base
  .Signed_Word Dest-Base
  .EndM
```

```
; Initialize the duplicate I/O function code bitmaps, and the
; minimum and maximum I/O function codes found
```

```
Valid_IOFunc_Lo = 0
Valid_IOFunc_Hi = 0
```

```
Min_IOFunc = IO$M_FCode
Max_IOFunc = 0
```

```
; For each I/O function code/destination pair, validate the
; I/O function code and update the minimum and maximum I/O
; function codes found
```

```
.IRp Pair,<AddrList>
  Validate_IOFunc Pair
  .EndR
```

```
; Emit a CASE instruction with the appropriate operand access,
; followed by a branch table pre-filled to fall through if src
; is an unspecified I/O function code
```

```
Case' Type      Src,#Min_IOFunc,#Max_IOFunc
Base:
  .Rept Max_IOFunc - Min_IOFunc + 1
  .Signed_Word Top-Base ; Pre-fill the table to fall
                        ; through
  .EndR
Top:
  .IRp Pair,<AddrList>
  IOFunc_Slot Pair ; Fill in the table entries
                  ; specified
  .EndR
. = Top
.EndM
```

## Network Security Working Group Formed

By  
Ray Kaplan  
PIVOTAL, Inc.  
P.O. Box 32647  
Tucson, Arizona 85751-32647

During the VAX SIG Security Working Group meeting at the Nashville Symposia, several of us decided that we would like to see a Pre-Symposium seminar on network security. Ken Coar and I went off and created such a seminar, and successfully presented it at the Anaheim Symposium. It is entitled "An Introduction to DECnet-VAX Security". While it was a little rough, it did meet its objectives in providing complete coverage of the subject. At this writing, we are planning to continue to offer the seminar and to improve it as we can. We hope to get it together to take advantage of DEC's kind offer of a demo system in Cincinnati. As it was in Anaheim, we couldn't get it together to do anything but a few simple demos like MAIL and PHONE network object abuses. J.D. (Dave) MacPherson (DECUS NLC Southwest Regional LUG Coordinator) joined us in our efforts to demonstrate active and passive tapping, but we just didn't have it together to take advantage of DEC's kind offer of help. We hope to demonstrate both active and passive tapping in Cincinnati.

After several months of poking around inside of DECUS leadership to find a home for this interest in network security, I gave up hunting and hung it inside of the VAX SIG for the time being. In Anaheim we had a Network Security Working Group formation meeting that was attended by a handful of interested folks, but no one from the Network SIG came.

There has been considerable interest in network security of late, especially since the German computer club break-ins over the SPAN network. Interestingly enough, the attendance at the meeting was well balanced between DEC, commercial enterprises, not-for-profit enterprises, and the Department of Defense. The combined attendance was energetic in defining several things that it wanted to see happen.

We identified two more Pre-Symposium seminars that we want to see. They are "X.25 and Internet Security", and "Trusted Networks". Due to the short time deadline for getting things submitted for Cincinnati and DECUS politics we could not get them going just yet. Maybe for Anaheim (Fall 1988).

We identified several Symposium sessions, and have submitted them for scheduling. They include "You think you've been hit, now what?", and "How to protect your DECnet" and "Trusted networks, the Red Book". We were unsuccessful in getting a panel discussion between the DOD, DEC, and some users of various types (commercial and non-commercial) submitted for scheduling this time. Maybe next time.

Several people signed up to work on a newsletter article on some aspect of network security, and a one-person task force has been signed up to seek out liaisons with security officers at various sites for the purposes of starting up a dialog with them about network security.

We even want to start a network security war story collection.

As you can see, we did a lot given that we only have a handful of people there. As you might guess, it all will grind to a halt unless folks like you pitch in and participate. At this writing, Ken Coar, some of the folks who came to the working group meeting and myself are planning to do the DECnet-VAX PRE-SYMPOSIUM SEMINAR again in Cincinnati. Several people have volunteered to work on the Symposium sessions that we are going to try to do for Cincinnati. Beyond that, everything else that happens is going to be a direct result of people like you getting actively involved. I plan to make at least one mailing to everyone whose name I have between now and Cincinnati. Beyond all of the above, I can't do much more to get things going.

If you want to be on the mailing list, drop me a line. If you have an interest in getting involved with anything specific, please drop me a line. Again, if we don't have help to make this little "interest area" active then it will just wither away.

### Digital Responds to the Fall 1987 SIR Ballot

Mark Oakley  
SIR Coordinator  
and  
Ron Shaefer  
VMS Engineering

At the Anaheim Symposium, Digital responded to the VAX SIG's most recent System Improvement Request ballot. The ballot was originally published in the July, 1987 issue of the Pageswapper and the results can be found in the January, 1988 issue. Below is a summary of the top 10 items followed by Digital's response, as presented by Ron Shaefer.

SIR: F87-28 Position: 1 Points: 173

Abstract: Enhance SHOW PROCESS command to display open files and information about subprocesses.

Description: Some form of identification is needed for the SHOW PROCESS command to make tracing subprocess trees easier, possibly of the form SHOW PROCESS/SUBPROCESS/ID=<pid>. If a user has two processes running in a batch queue or even from two terminals, and each process has a subprocess it is very difficult to determine which subprocess is owned by which parent. The ability to show the files that a specified process has open is needed. SHOW DEVICE/FILES on one drive systems with many installed images provides too much output. If this feature could also show the current location within each file, then estimating what portion of a file had been processed by a program would be significantly easier.

Response: There are three parts to this request:

1. Subprocess information: VMS expects to remove the current restriction in a future major release.
2. Open file information: VMS will investigate the implementation of this function in a future major release.

3. Current file positioning information: VMS considers it extremely unlikely that VMS will ever implement this function.

SIR: F87-24 Position: 2 Points: 146

Abstract: Add the capability to capture an interactive session exactly as it happens.

Description: In many cases VMS users need to produce a disk file with the transcript of a terminal session. The need for this is to produce documentation for manuals or turn in as homework for class. The SET HOST/LOG does not completely emulate the terminal output, especially when CR/LF output is suppressed to allow the user to respond to a question on the same line. Also if the SET HOST command has been removed for a user this feature becomes nonexistent. Some command such as SET LOGGING TO <filespec> is needed to provide this feature. The UNIX script utility would provide a good model for this. Obviously if the captured file contained graphics escape sequences or other non-printable characters it would be the users responsibility to handle them. The ability to record escape sequences into a file might also be a useful debugging tool for some users.

Response: This capability is provided by the VAX-11 DEC/Test Manager layered product.

At the present time we have no plans to enhance the base capability of VMS. However, based on this SIR, we will evaluate including additional capabilities in this area in the base system.

SIR: F87-67 Position: 3 Points: 124

Abstract: Enhance AUTHORIZE to work on a selection or subset of all users according to selection criteria. Subsequent commands should apply to these criteria.

Description: It would be useful to construct a subset of all users and have AUTHORIZE operate only on this subset. This feature might look like:

```
UAF> SELECT * /ACCOUNT = PROJECT1  
UAF> MODIFY * /SELECTION /WSQUOTA = 1000
```

```
UAF> LIST * /SELECTION
UAF> .
UAF> .
UAF> .
UAF> SELECT * /((ENQLM < 20) .AND. (ACCOUNT =
DATABASE))
UAF> MODIFY * /SELECTION /ENQLM = 50
UAF> LIST * /SELECTION
```

Response: As part of the continuing VMS strategy to improve the management tools available for VMS, we intend to address this problem.

However, while we expect to provide a solution to this problem, it may not take the form suggested by this SIR.

SIR: F87-13 Position: 4 Points: 97

Abstract: All utilities should use a standard format for printable output.

Description: Printable output generated by VAX utilities and compilers comes in a great variety of record formats and carriage control conventions. A particularly awkward convention is the use of embedded ASCII control characters to generate multiple print lines from a single record. There appears to be no standard for this or any other mechanism. As a result it is very difficult to print "printable" output on non-DEC printers or transmit it through heterogeneous networks. Digital should document a standard record format and carriage control convention and modify all facilities to conform to this convention. As an alternative, Digital should provide a utility which converts all currently used formats into a standard format. It seems that this functionality currently exists, distributed between the print symbiont, device driver, and "DEC standard" printers.

Response: VMS does have a standard set of file formats for printable data. Unfortunately there is more than one format and complete consistency is not present.

Achieving better consistency would involve incompatible changes to existing utilities which are not planned. Providing a conversion utility WOULD help although complete consistency is not possible without human intervention. We have no current plans to provide such a partial tool.

DIGITAL anticipates that future standardized document interfaces and more sophisticated printing capabilities will provide a full solution to this problem in the future.

SIR: F87-15 Position: 5 Points: 92

Abstract: Enhance BACKUP to provide first and last file names logged for each volume of storage media and an incremental restore capability for a directory structure.

Description: BACKUP should log the first and last file on each volume to assist in choosing tapes for restoration.

Directories or entire directory trees sometimes become unusable. To aid in recovery, BACKUP should support the following procedure:

1. Delete the structure(s) affected
2. Restore that structure from the last image mode backup
3. Restore the selected structure(s) in incremental mode.

Response: We believe that you are asking BACKUP to be able to perform incremental restoration on entities smaller than volumes; namely directory trees. We agree that this would be useful and we will keep it high on our priority list for the future of BACKUP.

SIR: F87-26 Position: 6 Points: 91

Abstract: Enhance VMSSMail.

Description: VMSSMail should be enhanced in the following ways:

1. Allow a user to retract a sent mail message. This could be limited to the last message sent. This would be very useful to retract that nasty undelivered mail message sent to the SYSTEM MANAGER before it is read and you end up with mandatory 32 character one time passwords!

2. Provide a facility to append comments to a received mail message and redistribute it.
3. Provide some form of return receipt when the recipient has read your mail message.
4. Provide a facility to allow users to configure the default printer orientation for printed mail messages. Most mail messages are oriented to portrait mode, and not the default landscape mode found on most programmers printers.
5. DEFINE/KEY in mail should support /ERASE in the same way that the DCL DEFINE/KEY does.

Response: In general, DIGITAL considers these requests to be beyond the scope of VMSmail. Advanced mail features can be found in mail products which DIGITAL sells.

In an upcoming major release of VMS, VMSmail provides a number of enhancements, including:

1. A facility to allow users to configure the default printer queue and form for printed mail messages.
2. A Carbon Copy capability.

SIR: F87-11 Position: 7 Points: 89

Abstract: Enhance the ALLOCATE services to allow requests to be queued.

Description: Enhance the ALLOCATE services to enable a user to optionally queue the allocation request when all qualifying devices are busy. Device allocation should be handled by a queue manager similar to the VMS V4.0 print queue manager, and the allocation request queues should be made cluster wide to support cluster-visible devices.

User functions should include the ability to specify characteristics required of a generic device, the automatic notification of allocation, the ability to delete an allocation request, the ability to examine the allocation request queue, and the ability to do other interactive processing while waiting for an allocation request to be

granted.

Operator functions should include the ability to mark failing devices as unavailable and the ability to force a deallocate. Manager functions should include the ability to define device characteristics and specify physical devices as possessing those characteristics.

Device allocation and deallocation should place records in the accounting file so that charge back accounting can be done for allocated devices.

A mechanism for avoiding deadlocks when multiple devices are allocated should be provided.

Examples:

```
$ ALLOCATE/QUEUED/WAIT TAPE$CLASS:-  
/CHARACTERISTICS=(DENSITY:6250) LOGICAL_TAPE
```

(Queue an allocation request for a tape drive with 6250 bpi capability and wait until the allocation has completed.)

```
$ ALLOCATE/QUEUED/NOWAIT/NOTIFY DISK$CLASS:-  
/CHARACTERISTICS=(RA60) MY_DISK_PACK
```

(Queue an allocation request for an RA60 disk drive and return control to my terminal. Notify me when the allocation has completed.)

```
$ ALLOCATE/NOQUEUED TERMINAL$CLASS:-  
/CHAR=(AUTODIAL,BAUD:1200 DIAL_OUT_MODEM
```

(Allocate a terminal device with a 1200 baud autodial modem but don't queue the request. Give an error if all such devices are allocated.) The queueing capability might be implemented via a symbiont. The queueing capability should also be provided for the MOUNT services.

Response: The entire area of resource scheduling and resource queuing is of significant interest for VMS as a production environment computer system. The allocation queuing of devices and allocation of devices based on generalized characteristics are specific components of this basic capability.

We hope to address this entire area incrementally in future

major releases of VMS.

SIR: F87-71 Position: 8 Points: 89

Abstract: Provide accounting information about terminal servers.

Description: Currently, accounting information does not capture the port number and terminal server name for interactive session that login via LAT's. Port number and terminal server name information is extremely useful for trouble-shooting and determining terminal usage.

Response: The recording of LAT port number and terminal server name would provide a useful piece of accounting data and we intend to provide this enhancement in a future release of VAX/VMS.

Please recognize, however, that the LAT port number and terminal server name are not necessarily constants for the life of an interactive session, and that our determination of when to record these data may or may not agree with a given site's interpretation of the "correct" data.

SIR: F87-2 Position: 9 Points: 83

Abstract: Implement cluster accessible tape drives.

Description: Tape drives connected to individual VAXes in a VAXcluster should be usable by all nodes of the cluster. For VAXcluster configurations, the ability to use a tape drive local to another VAX would be very beneficial. Because Local Area VAXclusters cannot have tapes on HSC's, a tape drive has to be configured on every VAXcluster node or the process accessing the tape drive must be on the VAX with the tape drive. Other configurations with only local tape drives would also benefit.

Response: Although it is on our wishlist, we have not considered a TMSCP server a high priority item and it will not be in the next major release of VMS. We will re-evaluate the priority of this SIR request for a future major release of VMS.

SIR: F87-14 Position: 10 Points: 78

Abstract: Provide support for simple project accounting.

Description: The Spring 1985 VAX SIR Ballot contained a request for project accounting in VMS. Digital's response was "We also feel that project accounting is very important...We feel that this is a reasonably complex area and, as such, some of the enhancements that we intend to make in this area will appear over time."

Project accounting is something that is desperately needed at large sites. In its simplest form, project accounting should provide a SET PROJECT command that would write a process accounting record, and start recording a new record with a new account string specified by the user. The account string should be verified before these actions take place. The system manager should be allowed to set up a file which specifies which UIC's are permitted to use individual account strings.

Many sites have immediate government or internal security requirements for "one username per user" level of accountability. DEC should provide this form of project accounting until their full-blown system is available.

Response: We concur that project based accounting would be an extremely desirable feature for many of our customers. However, issues of integration with VMS security features make for complications which invalidate the use of the simple model proposed by this SIR.

A general solution for this area, that addresses these security issues, allows for compatibility, and provides for the needs of the entire VAX/VMS community, requires fundamental changes to several areas of VAX/VMS.

The enhancements that we will provide as part of the base VAX/VMS system that will address this area will appear in future releases of VAX/VMS.

SIR: F87-54 Position: 11 Points: 78

**Abstract:** There should be more Digital developers at DECUS Symposia.

**Description:** With the enormous increase in VAX software provided by Digital over the years, there is an accompanying complexity. The limited number of software developers who are sent to Symposia try valiantly to "cover" for software which is not their own, but it is difficult. Since DECUS symposia are the only way for the user community to engage in a dialog with Digital software developers, there should be a considerable increase in the number of developers who are sent. This could be done by reducing the number of marketers who are not able to provide technical details. The Exhibit Hall could also be reduced to not include "seen-before" hardware.

**Response:** DIGITAL needs assistance in determining what kinds of technical support are needed. Resources do not necessarily increase in proportion to software offerings and complexity. Specifics of uncovered areas would be invaluable in better determining how to apply those resources.

DIGITAL is open to new ideas for applying technology to technical support and questions. For example, could better use be made of VAXnotes conferences, VMSmail, tele-conferencing, video-conferencing? Is on-site attendance always required?

DIGITAL looks to DECUS for help in developing creative alternatives.

## A Daily Maintenance Procedure

Bob De Wolf  
Fullerton, CA 92635

Often it is desirable to perform a maintenance function once a day, such as purging a scratch area, monitoring disk space usage, etc. The DAILY.COM procedure listed in Figure 1 can be used to run a DCL procedure on command the first time you login in each day.

A daily job can also be run using a batch job that re-submits itself every day, but if every account on a large cluster does this, the queue will become quite cluttered. Also, it is highly desirable to run maintenance procedures at the first login because this is the time when it is most unlikely that something else is running. If you ran a long batch job, for example, it would have to run all night to still be running at the first login of the day.

```
$ !DAILY - Runs a DCL command at first login of the day.  
$ IF F$MODE() .NES. "INTERACTIVE" THEN EXIT  
$ DIRECTORY/MODIFIED/SINCE="TODAY" 'P1'/OUTPUT=NL:  
$ IF $STATUS .NE. %X10018290 THEN EXIT !Once a day only.  
$ SET PROTECTION 'P1' !Modify it.  
$ 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8'  
$ EXIT
```

Figure 1: DAILY.COM Procedure

DAILY.COM uses the modification date of a file to record the time that the maintenance procedure was last run. Before running DAILY, you must create a file in your top level directory to save the modification date. This can be done as follows:

```
$ CREATE DAILY.FILE
```



Next you need to add a line to your LOGIN.COM file to run DAILY.COM. For example:

```
$ @<path>DAILY DAILY.FILE @PURSCR TODAY-3-:
```

The file PURSCR.COM is in the top level directory and will be run at the first login each day. PURSCR is a procedure to delete files from the scratch area. By default VMS assigns the logical name SYS\$SCRATCH to the login directory. Commands and programs use SYS\$SCRATCH as a path to a directory to create temporary files that are used for a short while and then, if everything goes well, deleted. A problem arises when everything does not go well!

If a program or the system crashes, strange unrecognized files may be left in your scratch directory. That's not bad, but things can go even less well. In some cases, errors can occur when scratch files are being deleted that results in non-scratch files being deleted from the scratch directory. Therefore it is highly desirable to create your own scratch directory which will contain only scratch files, and change the assignment of SYS\$SCRATCH so that it points to a dedicated scratch directory.

The file PURSCR.COM contains a procedure to delete old files from the scratch directory. Figure 2 is contains a listing of PURSCR.COM.

```
$ SINCE DATE="YESTERDAY-23::"  
$ IF P1_.NES. "" THEN SINCE_DATE:=""'P1'  
$ !  
$ IF F$PARSE("SYS$SCRATCH:") .EQS. F$PARSE("SYS$LOGIN:") -  
  THEN EXIT  
$ SAVE_DEF=F$ENVIRONMENT("DEFAULT")  
$ SET DEFAULT SYS$SCRATCH:  
$ SET NOON  
$ DELETE/MODIFIED/BEFORE=""'SINCE_DATE'"/LOG/EXCLUDE=*.DIR.*-  
  [...]*.*.*  
$ IF F$CVTIME(F$TIME(),,"WEEKDAY") .NES. "Friday" -  
  THEN GOTO NOT_FRIDAY  
$   SET PROTECTION/LOG [...]*.*.*  
$   DELETE [...]*.DIR.* /LOG  
$ NOT FRIDAY:  
$ SET DEFAULT 'SAVE_DEF'  
$ EXIT
```

Figure 2: PURSCR.COM Procedure

PURSCR deletes files last modified before a relative date specified as the first parameter. This allows files to exist for a specified length of time in the scratch directory. Every Friday PURSCR changes the protection on files in the scratch directory and attempts to delete directory files. Directories containing files will not be removed because VMS will detect this and prevent it. For additional safety, PURSCR verifies that SYS\$SCRATCH is not assigned to SYS\$LOGIN as this might result unwanted deletions.

A scratch directory can also be a place where files are moved to be deleted later. The preliminary moving step is a precaution designed to prevent accidental deletion of files. It allows you to decide to delete a file, but do it at a later time for additional safety. If you decide to use the scratch directory in this way, be sure to SET PROTECTION on the files that you move into the scratch directory. This updates the modification date for the file and insures that the full time delay will pass before they are deleted. Figure 3 contains a listing of the DELETE.COM procedure which is an example of a procedure to implement a 'protected delete' that moves files to a scratch directory where they will actually be deleted after several days. One minor difference between DELETE.COM and the DELETE command is that DELETE.COM will work if the version of the file is not specified, while the DELETE command requires that the version be specified.

```
$ ! DELETE.COM - Protected delete procedure.  
$ ! This procedure works only for files that  
$ ! exist on the default device.  
$ SET PROTECTION 'P1'  
$ RENAME 'P1' SYS$SCRATCH:
```

Figure 3: DELETE.COM Procedure

The following is the complete DCL to add scratch directory maintenance and the customized delete procedure to your LOGIN.COM:

```
$ SET DEFAULT [.SCRATCH]  
$ ASSIGN 'F$ENVIRONMENT("DEFAULT") SYS$SCRATCH  
$ SET DEFAULT [-]  
$ @<path-spec>DAILY DAILY.FILE @PURSCR TODAY-3-:  
$ DEL=="@<path-spec>DELETE"
```

These commands assume that you have created a SCRATCH subdirectory below your main login directory. The command that runs DAILY specifies that scratch files will have a lifetime of three days. If you type DEL the DELETE.COM procedure will be run. If a longer abbreviation of the DELETE command is used the normal DCL DELETE command will be executed. PURSCR can be replaced with a user tailored procedure to do odds and ends at the start of the day. This might include checking disks to determine if the space is low, generating daily reports, etc.

## VAX/VMS Security

Number next in a series

By  
Ray Kaplan  
PIVOTAL, Inc.  
P.O. Box 32647  
Tucson, Arizona 85751-32647

Viruses, Worms and Trojan Horses -  
A System Manager's Worst Enemy

For two Symposia now, Robert Clyde (Clyde Digital, Provo Utah) and I have given a session with the same name as this article. If it gets scheduled again for the Cincinnati Symposium, we will present part three of our current series of sessions.

So far, our two presentations have introduced the threat that these beasts represent to our systems, what makes them tick, and how to protect our systems against them. Since we can't talk in exacting detail about them, we have combined a careful look at exactly what they are (sans examples) and some general system management advice with an definite eye to helping people protect their systems.

The problem, of course, is in talking in detail about what they are and exactly how they work using examples. So far, everyone that I see making presentations about these nasty security threats (including us) are not willing to talk in detail about them by presenting examples. The theory is that if detailed examples are presented, "the bad guys" might get hold of them and use them against improperly protected systems.

Good argument for being very careful in the presentation of such information, but some how, not completely convincing. I wonder if there is an analogy to AIDS and sex education in here somewhere. With AIDS the idea is that if we talk openly about the mechanisms of sex and how they work (using examples), then we can talk about how to prevent the transmission of AIDS. Yes, I know that there is a logical error in now moving to the conclusion that we can prevent damage by viruses, worms and trojan horses with education. But, I still am ALMOST comfortable with a frank and open discussion of these insidious security problems.

The only thing that is holding me back is this vivid image I have. See, there is this naive system manager showing me where their system got attacked using one of the "nasty little beasties" that I used in an open discussion of this type of security threat.

So, where to from here?

Well, how about if we start the process of gathering a collection of war stories and actual samples of these beasts? At the very least, this will allow us to develop the next step in the presentation process that Robert Clyde and I are doing. That is, we can begin to dichotomize them into groups of attack categories and develop specific protection scenarios to recommend. To the end of moving toward the point where we can talk openly about these beasts, this seems like a good first step.

If you have a virus, worm, trojan horse or a war story that you'd like to contribute to our efforts - please send it along to me at the above address.

As always, your comments are welcome, until next time,

Happy VAXing!

## INPUT/OUTPUT

A SIG Information Interchange

Mail written I/O submissions (no special form required) to:

Larry Kilgallen, PAGESWAPPER Editor  
Box 81, MIT Station  
Cambridge, MA 02139-0901  
USA

To register for on-line submission to the Pageswapper dial:

(617) 262-6830

(in the United States) using a 1200 baud modem and log in with the username PAGESWAPPER.

```
=====
Note 760.31      VMS 4.6 Installation Experiences      31 of 31
"Harry Herman"          32 lines      7-JAN-1988 22:27
-< Got burnt once with VMSINSTAL OPTION G >-
-----
```

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 5 (December, 1987)

RE: 760.22

I once restored a backup set using VMSINSTAL's option G that created a backup set on my disk with bad data. The KITINSTAL.COM file was corrupt. I had also used OPTION L (logs BACKUP, DELETE, RENAME, COPY, etc. commands, and noticed that it does not verify when it extracts all the files from the tape's save set into its work directory, but does verify when it creates the new backup set in the destination directory from all the files in the work directory.

After calling the appropriate development group and saying I had a bad tape (it was a field test), I tried using COPY to copy the save sets off of the TK50 instead of using VMSINSTAL's OPTION G. This time the kit installed w/o a problem. So I called the team back and said false alarm.

Since then I have always used COPY instead of BACKUP, and have yet to have a corrupt backup set.

I originally used VMSINSTAL's OPTION G to rebuild a new save set on disk because I was used to RSTS BACKUP which writes file attributes for the backup save set differently depending on whether the output medium is tape or disk, and you could not just copy a RSTS BACKUP set off of tape to disk and access it on disk. I was afraid VMS BACKUP might do something similar, so I used VMSINSTAL to re-create the backup set. However, after COPYING backup sets off of tape and using them to restore files, etc., I know now that tape backup sets can be used when copied to disk, so I do not waste my time with VMSINSTAL OPTION G.

Harry Herman  
Corpne Industries  
10100 Bluegrass Parkway  
Louisville, KY 40299  
(502) 491-4433

```
=====
Note 784.29          In search of a modem          29 of 31 |
"Tim Sagstetter"    16 lines      5-JAN-1988 18:58 |
                   -< To Brian >-
```

```
-----
Antecedent IO(s) published in:
Pageswapper Volume 9 Number 5 (December, 1987)
through
Pageswapper Volume 9 Number 6 (January, 1988)
```

I would like to cast my vote the MicroCom AX/9624c, also. Although we too got 5 bad modems before getting a good one, a little research showed all the bad modems to have been manufactured almost a year ago. A call to the factory confirmed that MicroCom had some problems a while back. Two factory fresh modems worked on the first try and are still in service.

I certainly have had my share of the frustration everyone has mentioned, but once a new modem learned, it is pretty much a plug-and-go proposition.

We are also using our AX/9624c's with DECnet. However, since flow control must be disabled, if the line throughput drops below that of the async port due to fallback on a noisy line, our DECnet circuit goes down. We tried RTS/CTS flow control, but DECnet doesn't like it. Brian, are you seeing this too or

are we doing something wrong?

Tim Sagstetter  
WAUSAU group  
2801 North 7th Street  
Wausau, WI 54402-1746  
(715) 847-6784

```
=====
Note 784.31          In search of a modem          31 of 31
"Brian Tillman, Smiths Industries." 16 lines      6-JAN-1988 15:32
                   -< No fallback so far. >-
```

```
-----
Antecedent IO(s) published in:
Pageswapper Volume 9 Number 5 (December, 1987)
through
Pageswapper Volume 9 Number 6 (January, 1988)
```

RE: < Note 784.29 by NODE::US108735 "Tim Sagstetter" >  
-< To Brian >-

We tried RTS/CTS flow control, but DECnet doesn't like it. Brian, are you seeing this too or are we doing something wrong?

We also had to disable RTS/CTS and found DECnet wouldn't work at all with ANY kind of flow control. We have not yet had a problem with the modems falling back to a lower speed due to noisy lines (just lucky I guess). We have one connection to Pope AIR FORCE BASE in North Carolina that runs consistently well at 9600 bps (although the effective speed is significantly less. I don't know why). We have another link to New Zealand that we've only been able to get working at 1200 bps so far. Before dedicating these AX modems to DECnet, we used them as dial outs and were VERY pleased.

Brian Tillman  
Lear Siegler, Inc.  
4141 Eastern Ave. MS121  
Grand Rapids, MI 49518-8727  
(616) 241-8425

=====  
Note 799.4            Anyone with RAF experience?            4 of 13  
"Tim Sagstetter"            9 lines    5-JAN-1988 19:14  
                              -< RAF Experience >-  
=====

We have been using RAF for about a year now. The current version is still copy protected and seems to have a correct emulation of a VT220. The functionality we have used has been excellent. We move Lotus 1-2-3 binary files to VAX and back pretty successfully. That is, using an async connection through a terminal server works up to files sizes of about 130,000 bytes. Datability says they have some problem supporting the server. We have not used the product over an Ethernet connection.

Tim Sagstetter  
WAUSAU group  
2801 North 7th Street  
Wausau, WI 54402-1746  
(715) 847-6784

=====  
Note 799.5            Anyone with RAF experience?            5 of 13  
"M. Erik Husby"            69 lines    18-JAN-1988 13:49  
                              -< A short report on RAF >-  
=====

A short report on my experiences with RAF.

We ordered the trial copy and installed it on a PC and my VAXmate. It worked correctly on both machines.

However, on the VAXmate it would not use the keyboard in VT220 mode, only in IBM PC mode which makes the terminal emulation difficult to use. I use a VAXmate because I did not want to learn another keyboard -- I also have a VT220 on my desk.

Individual file transfers seemed to be faster than the Digital PCFS. However, directory lookups were significantly slower. I ran a compilation and link using the Microsoft MAKE utility and it took twice as long using RAF as it did using PCFS.

RAF attempts to dynamically determine if the file being transferred from the PC to the VAX is text or binary. If the file is text, it writes it as a STREAM mode file otherwise it writes it as FIXED 512 BYTES. The test for text versus binary is:

File is binary if it contains any character whose value is larger than 127.

For us that means any source code that contains a graphic drawing character. There is no way in RAF to force text mode.

I did not have this kind of problem with PCFS as it writes all files as STREAM LF files.

Because of the way RAF and PCFS differ over file formats prevents them from sharing anything except source files. Object files produced by Microsoft C using PCFS are not readable by the Microsoft Linker using RAF.

On our PC's we use a program called EASYPATH to give the VMS equivalents of search lists. When RAF was used, the EASYPATH search lists were used. However, one could not run the EASYPATH controlling program when a RAF virtual disk was the current disk. Sometimes it is necessary to turn the search lists on and off.

Positive aspects of RAF.

Each PC gets its own file server. With PCFS, there is one server for all PC's.

Because each PC is logged on as a VMS user with a terminal, RAF can intercept broadcast messages and display them on the PC even if the PC is NOT in terminal emulation mode.

Because each PC is logged on as a VMS user, RAF can define a PC program that calls up a VMS program. Thus it is possible to define a PC program which drops into VMS MAIL. The PC user does not need to see a VMS \$ to execute VMS programs.

In spite of the good parts, I am still looking for a networking product. RAF does not seem to be fast enough for our purposes.

Note: One reason we are not looking at PCFS is that it only runs on true IBM PC's. As we have numerous clones, we would have to buy new cpu's to use PCFS.

M. Erik Husby  
Project Software & Development  
14 Story St.  
Cambridge, MA. 02138  
(617)-661-1666

```
=====
Note 799.6      Anyone with RAF experience?      6 of 13
"Dale E. Coy (505) 667-3270"      8 lines 18-JAN-1988 19:33
-< Comparative trials are very helpful >-
-----
```

I'm glad to see you analysis, based on comparative trial. That's a real help.

I presume that you have actually tried PCFS with your "clones", rather than just assuming it won't work. We have tried it with several clones, and it worked with all except the AT&Ts. It might be helpful to others if you would contribute your list of "what clones do and don't work with PCFS".

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

```
=====
Note 799.8      Anyone with RAF experience?      8 of 13
"Brian Tillman, Smiths Industries." 8 lines 19-JAN-1988 12:06
-< Are you sure? >-
-----
```

RE: < Note 799.5 by NODE::US110737 "M. Erik Husby" >  
-< A short report on RAF >-

Note: One reason we are not looking at PCFS is that it only runs on true IBM PC's. As we have numerous clones, we would have to buy new cpu's to use PCFS.

We run PCFS on Compaq 386s.

Brian Tillman  
Lear Siegler, Inc.  
4141 Eastern Ave. MS121  
Grand Rapids, MI 49518-8727  
(616)241-8425

```
=====
Note 799.9      Anyone with RAF experience?      9 of 13
"John Osudar"      6 lines 20-JAN-1988 15:26
-< PCFS works on clones >-
-----
```

And we run PCFS on AST 286's. I think the impression that it works only on real PC's comes from the fact that you have to install PCFS from some strange combination of hardware and PC-DOS version. (I didn't do the installation here, so I don't recall specific details...) It certainly DOES work with (at least some) clones.

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

```
=====
Note 799.10     Anyone with RAF experience?      10 of 13
"M. Erik Husby" 42 lines 26-JAN-1988 12:25
-< PCFS, RAF, and clones >-
-----
```

I tried DECnet-DOS on a PC LIMITED 286 with a 3COM board and it failed. Contacting Digital telephone support returned the answer that "We only support real IBM PC's". Have not tried putting a DEPCA in the PC LIMITED 286 so can not say if it would work.

We have not done extensive analysis, but running one of our applications with PCFS on an IBM PC was slower than on a VAXmate.

Crude performance results:

Transferring a 550 block file.

VAXmate PCFS From VAX to PC memory drive 12 seconds.  
VAXmate RAF From VAX to PC memory drive 7 seconds.

We will most likely go with RAF because:

Throughput is faster.

Works with Clones and 3COM boards (existing hardware).

Currently runs on PS/2 machines in DOS mode (3com and Ungerman Bass boards).

Will almost assuredly run under OS/2 -- Datability has the OS/2 developers kits but is not saying when.

Can do some nice things with it such as defining a PC command that invokes a VAX program without needing to know control has transferred to the VAX.

Not using PCFS because:

Would have to replace all 3COM boards with depca's. Turns out to be more expensive even with our discount.

Throughput is not sufficient.

M. Erik Husby  
Project Software & Development  
14 Story St.  
Cambridge, MA. 02138  
(617)-661-1666

=====  
Note 799.11                      Anyone with RAF experience?                      11 of 13  
"Bill Mayhew"                      12 lines                      26-JAN-1988 22:46  
-----

Bear in mind that Digital has made an unusual public announcement of what's expected to be in V2 of PCSA, and it addresses almost all of your concerns: supporting non-DEC Ethernet boards (3Com and Microm-Interlan, I believe), much improved performance, a promise of future OS/2 support. My reading is that DEC is very serious about this product, much as the first release might lead you to think otherwise. However, all things that are not yet real products are of course subject to change, though DEC has at least put this info about V2 in "writing". DEC has not put forth any info yet about dates and prices. There are some other claims and promises made, but I don't recall them off hand.

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 804.0                      Using TDMS & CMS                      3 replies  
"Ken Robinson"                      14 lines                      29-OCT-1987 16:36  
-----

We use CMS to store sources for the product we are producing here. We are having a problem keeping track of TDMS forms using CMS. It seems once a TDMS form is created in the CDD, there is no way extracting the form from CDD in a format that can be stored in CMS and then used to recreate the form automatically.

If anyone has any suggestions, they will be much appreciated.

Ken Robinson  
Bell Communications Research  
444 Hoes Lane, Room 4d449  
Piscataway, N.J. 08854  
(201) 699-8796

```
=====
Note 804.1                Using TDMS & CMS                1 of 3
"Mark N. Katz"            12 lines   5-JAN-1988 09:59
    -< Some thoughts on storing forms in CMS >-
-----
```

No real help but I did stress the need for some sort of forms definition language to a DEC TDMS person at Anaheim.

All you can do currently is do an FDU LIST and store the listing for reference. You can't recreate the form from the listing but you can tel if the form you recreated by hand matches the one whose listing is controlled in CMS. The new binary file capability in CMS v3.0 won't really help much since the stuff is in CDD, not a file.

But.. maybe using DMU backup and restore along with binary files in CMS, you might be able to work out a scheme.

Mark N. Katz  
GTE Government Systems  
100 First Ave. MS:1240  
Waltham MA 02154

```
=====
Note 804.2                Using TDMS & CMS                2 of 3
"Bob Hassinger"          0 lines   5-JAN-1988 10:55
    -< It sounds like FMS wins again on this one... >-
-----
```

Bob Hassinger  
Liberty Mutual Research Center  
71 Frankland Road  
Hopkinton, MA 01748  
617-435-9061

```
=====
Note 804.3                Using TDMS & CMS                3 of 3
"Ken Robinson"           7 lines   6-JAN-1988 11:40
    -< FMS definitely wins! :-> >-
-----
```

Actually the DMU backup file format is compatible with CMS 2.3. We have thought of using that, but the limitations on DMU Restore are causing problems. For example, DMU restore will NOT restore if what you are restoring is already there (it won't even create a new version!)

Ken Robinson  
Bell Communications Research  
444 Hoes Lane, Room 4d449  
Piscataway, N.J. 08854  
(201) 699-8796

```
=====
Note 806.29              Memory help, please.            29 of 30
"John Osudar"            36 lines  20-JAN-1988 15:11
    -< SMBSRVSHR patch for $PURGWS >-
-----
```

I heard someone at the Anaheim DECUS say that the page activity of the print symbiont can be much improved by patching out the three places where it does a \$PURGWS - to prevent it from bularemerically binging and purging on memory. Haven't had time to try it yet, but it sounds reasonable enough.

Yes, I was the one who brought that up in Anaheim. I patched SMBSRVSHR to eliminate those \$PURGWS references.

There are three places in the code (address dependent upon version of VMS, of course -- in V4.4 the addresses were 000047F8, 00004A63, and 00007342) where SMBSRVSHR does a PUSHAB of an argument followed by a CALLS #1,@#7FFEDFB0 (which was the P1 entry to \$PURGWS). Using PATCH, you can replace these two instructions with a NOP. The effect of this patch is to prevent the frequent working set purging done by the symbiont code. This will cause your dormant symbiont processes to retain fairly large working sets (e.g. on our system they are typically in the 600 to 700 page range) but will prevent the fluctuations seen otherwise. (Of course, you can control working set size through queue parameters and system defaults, so you can tailor



the dormant size to your system's needs.) I took a brief look at the possibility of leaving one or two of the \$PURGWS calls, and targeting the one(s) that cause the most trouble; it didn't seem worthwhile to me, and the code was complex enough that I didn't want to waste time figuring it out.

One other thing you can do, assuming your printers aren't extremely busy, is to patch PRTSMB.EXE to increase the number of streams (i.e. queues) it can handle. (This, of course, only applies to queues handled by the default symbiont.) The longword at 00000200 in PRTSMB is the number of streams; replace the default value of 16 (00000010) with any number up to 32 (00000020). (You can also reduce this number if you like, e.g. if you have some particularly busy printers and the symbiont isn't keeping up.) Doing this can reduce the number of symbiont processes on your system, and in combination with the \$PURGWS patch, it can reduce the amount of paging (and number of pages) required to support your symbionts.

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

```
=====
Note 830.4           Looking for TeX Driver           4 of 6
"Bill Hoelzer"           8 lines  11-JAN-1988 16:43
                        -< HP LaserJet+ >-
-----
```

We are looking for a driver for an HP LaserJet+. Any information would be appreciated.

Bill Hoelzer  
Quorum Systems  
5165 Campus Drive  
Plymouth Meeting, PA 19462

```
=====
Note 830.5           Looking for TeX Driver           5 of 6
"Lynn D. Crockett"       12 lines  27-JAN-1988 02:18
                        -< TeX Driver for Terminals??? >-
-----
```

I am looking for TeX driver to view .DVI files on any DEC Graphics Terminals. We have developed a primitive one but were curious if better ones are available.

Lynn D. Crockett  
Rose-Hulman Institute of Technology  
5500 Wabash Avenue  
Box 1367  
Terre Haute, IN 47803-3999  
(812) 877-1511 Ext 239

```
=====
Note 830.6           Looking for TeX Driver           6 of 6
"Kevin Angley"           12 lines  27-JAN-1988 11:52
                        -< LN01 drivers >-
-----
```

The 1988 Spring Symposium Proceedings Information packet lists the following information:

LN01 driver for VMS: Louisiana State Univ  
Neil Stoltzfus  
504-388-1570

LN01 driver for UNIX: Univ.of Washington  
Pierre MacKay  
206-543-2386

There are no listings for HP or graphics terminals.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604  
(919) 890-1416

=====  
Note 833.17                   LAT problems                   17 of 19  
"Bob Hassinger"               7 lines   15-JAN-1988 09:53  
    -< Reported status of DS200 V2.0 release... >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

On October 21 CSC Network Services (Colorado telephone support) told me the V2.0 release for the DECserver 200 would be out in "a couple of months". When I followed up this week they told me "a month". I don't like this rate of progress very well but I do think the release is not too far off now.

Bob Hassinger  
Liberty Mutual Research Center  
71 Frankland Road  
Hopkinton, MA 01748  
617-435-9061

=====  
Note 855.2                   Hook into VMSMAIL send function           2 of 3  
"Mark Schell (919) 773-7040"               5 lines   1-JAN-1988 15:08  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

I'd be careful about implementing anything like this in the near future. I wouldn't be surprised if many of the "undocumented" features disappear in "an upcoming major release" of VMS.

Mark Schell  
DIGITAL EQUIPMENT CORPORATION  
8025 NORTH POINT BLVD  
SUITE 100 WEST  
WINSTON SALEM NC 27106

=====  
Note 855.3                   Hook into VMSMAIL send function           3 of 3  
"John Osudar"               13 lines   12-JAN-1988 20:41  
    -< yes >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

I'd be careful about implementing anything like this in the near future. I wouldn't be surprised if many of the "undocumented" features disappear in "an upcoming major release" of VMS.

Right. DEC has stated (officially or unofficially) that VMS V5 MAIL will have a supported, documented callable interface that will take the place of the unsupported, undocumented foreign protocol interface. However, I suspect that the job of writing a foreign protocol mail program for VMS V4 will be very similar to the job of writing the same program to use callable mail in V5, so it may be worth doing (conversion might be fairly straightforward -- but no guarantees!) And, of course, there's no telling when the first stable point release of V5 (V5.2?!) will appear! ;-)

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 857.5                   Printing Bar Codes on an LA100           5 of 5  
"Tim Sagstetter"               7 lines   5-JAN-1988 18:06  
    -< CIE Terminals Font Cartridge >-  
-----

Thank you all for your help. I will pursue the leads you have offered. However, as luck would have it, the LA210 compatible printers we are using are CIE Terminal's CI-3500 and CI-4000's and CIET has just introduced a bar code font cartridge for them. In midstream, just switch fonts, send attributes and data, switch back to LA210 and continue. Currently, the cartridge only supports LA210 (LA100, LA120) and code 39, but the cost is only

Tim Sagstetter  
WAUSAU group  
2801 North 7th Street  
Wausau, WI 54402-1746  
(715) 847-6784

=====  
Note 858.11 Just got SPEARed 11 of 17  
"Rytis T. Balciunas" 10 lines 4-JAN-1988 08:55  
-< more on SPEAR and VAXsim >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

SPEAR, in its various forms, has been around on my systems for a little over a year -while Field Circus says it is useful, I have removed it because the user's copies have none of the "expert system" error analysis, whereas Colorado does have it.

VAXsim is ok to have around, though with VMS 4.6, all it does is give pretty pictures and cryptic error codes. I stick with ANALYZE/ERROR, which gives me the most info. Our Field Service is about as useful as gasoline on a burning building...so I look upon their "gifts" with a very cynical eye...

RYTIS T. BALCIUNAS  
CALGON CARBON CORPORATION  
PO BOX 717  
PITTSBURGH PA 15230-0717  
(412)787-6784

=====  
Note 858.12 Just got SPEARed 12 of 17  
"Seton Droppers, PBS, (703)739-5100" 19 lines 7-JAN-1988 12:09  
-< Other VAXsim like products soon??? >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

SPEAR:

Never worked, never used it. SPEAR seemed to be harder to use than ANALYZE/ERROR.

VAXsim:

This "product" appears to be a way for you to do more of your own error monitoring with less hassle. We had it for a bit, but I must admit I never used it that much, it was just an easier way to look at error history for a particular device. When we moved to third party maintenance, Field Service removed both SPEAR and VAXsim. Our new maintenance vendor seems to be the same thing as VAXsim, but by hand -- they log in every day or two and check out the error logs (more than DEC EVER did...). I spoke with our new maintenance vendor about VAXsim and they said to wait a bit (maybe this spring was the indication) and some third party software should be available that makes VAXsim look old and archaic.

Seton R. Droppers  
Public Broadcasting Service  
1320 Braddock Place  
Alexandria, VA 22314  
(703)739-5100

=====  
Note 858.13 Just got SPEARed 13 of 17  
"Kevin Angley" 8 lines 7-JAN-1988 16:29  
-< In defense of VAXsim >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

As I said previously, I like VAXsim. Not only does it give me recent errors at a glance (for all nodes in the cluster and the network!), but it automatically sends me mail at predetermined thresholds.

You still need ANALYZE/ERROR eventually, but automatic notification is nice.

By the way, our DEC field engineer does call in periodically to check for errors.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604

(919) 890-1416

```
=====
Note 858.14          Just got SPEARed          14 of 17
"Rytis T. Balciunas"      8 lines 16-JAN-1988 09:08
-< Offensive field service.. >-
-----
```

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

From what I've seen in this note, some of you folks have the "cream of the crop" for field service - is this what the DECERVICE level is supposed to be about??? Hell, I'm lucky that the Pittsburgh field service CALLS me to see how things are going, let alone come in and check error logs! I even have to call THEM to remind them of the quarterly PM! Hmmm...maybe "Field Service - what you pay for and what you get" should be a whole new topic!?!?

RYTIS T. BALCIUNAS  
CALGON CARBON CORPORATION  
PO BOX 717  
PITTSBURGH PA 15230-0717  
(412) 787-6784

```
=====
Note 858.15          Just got SPEARed          15 of 17
"Kevin Angley"          16 lines 24-JAN-1988 23:01
-< A negative for VAXsim >-
-----
```

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

My previous comments about VAXsim have been mostly positive, so let me throw in a negative. We have third party tape controllers/drives that report soft errors for a lot of really soft reasons ... anyway, the default thresholds for automatic notification of severe problems with the "TS11" is set way too low in VAXsim.

So I, or rather the trusty DEC field engineer, types "VAXSIM MODIFY THRESHOLD" or some such, and it says, "Password?". No, it's not looking for the FIELD password. No, we did not set a password for VAXsim when we installed it. No, its not in the documentation.

Best part .. "they" won't even tell the DEC guy what it is .. says he has no business changing the thresholds ..

Gosh, I remember when it was our system.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604  
(919) 890-1416

```
=====
Note 858.16          Just got SPEARed          16 of 17
"Terry Kennedy"          17 lines 25-JAN-1988 02:04
-< DEC not honoring VAXsim licenses >-
-----
```

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

| Best part .. "they" won't even tell the DEC guy what it is ..  
| says he has no business changing the thresholds ..

Yep - sounds like the "new DEC" to me. We just went 3rd-party service, accelerated by our DECrep erasing the RA81 (not just the data, either - he blew the format, too...) on one of our other systems.

Now for the interesting part - We bought a VAXsim license when it first came out (I think the part # is Q%060). DEC REFUSES to honor or even acknowledge that we have this license, and is demanding back the VAXsim tapes we paid for!

Well, anyway, our new Sorbus service representative says that they will have something by this fall "that blows VAXsim out of the water". We shall see...

Terry Kennedy  
95 Mohawk Trail  
Ringwood, N.J. 07456  
(201) 435-1890

=====  
Note 858.17                   Just got SPEARed                   17 of 17  
"Stuart Renes"                   8 lines   25-JAN-1988 15:20  
      -< You think \*YOU got SPEARED? >-  
-----

Antecedent IO(s) published in:  
Pageswapper Volume 9 Number 7 (February, 1988)

Speaking of Field Service (we were, weren't we?), I just got Rev. 30 of the VAXPAX diagnostics on my 8530. Guess DEC is serious about unlicensed sites getting their software as Rev. 30 Diagnostic Supervisor wouldn't even run... (my field engineer had no knowledge of this apparent change)... still no resolution! ...hmmmm... shades of VMS 5.0 which \*MAY\* have layered software licensing protection!

Stuart Renes  
AT&T Technologies, Inc.  
Mail Stop: 2793  
3000 Skyline Dr.  
Mesquite, TX 75149  
(214) 288-2286

=====  
Note 859.7                   Has anybody used the SIDRIVER                   7 of 11  
"gerson cohen"                   5 lines   14-JAN-1988 13:52  
      -< Don't believe all that you read! >-  
-----

I just talked with software support in CO about the SIDRIVER and the sample program in the driver manual. Don't expect the program to work. It is a known and they are waiting for the development team to respond. They have no comments at this time about the integrity of the driver.

gerson cohen  
nih  
bldg 2 rm 312  
bethesda md 20205  
301-496-4295

=====  
Note 859.8                   Has anybody used the SIDRIVER                   8 of 11  
"Jonathan M. Prigot"                   13 lines   14-JAN-1988 15:58  
-----

This may or may not have some bearing on the subject at hand. DEC has just announced a new 2000 lpm printer (LP29). In the announcement are the following two paragraphs.

"A new revision of the DMB32 VAXBI communications controller, (sic) is required to support the LP29 on Digital VAX systems",

and

"The DMB32 has been enhanced to support 2000 lpm. It is important to note that all orders for new DMB32s must request Revision J".

Jonathan M. Prigot  
W.R. Grace & Company  
55 Hayden Avenue  
Lexington, MA 02173  
617-861-6600 x2148

=====  
Note 859.11                   Has anybody used the SIDRIVER                   11 of 11  
"GREG P. SCHULZ"                   10 lines   24-JAN-1988 11:38  
      -< IT WORKS (KIND OF!!!) >-  
-----

We have the SIDRIVER installed on a couple of our systems. We have it on a 8530 and 8200. The 8200 copy is working (DO NOT TRY UTEP..) as we are using VMS/SNA to communicate with our SNA network. An interesting note is that in order for VMS/SNA to work, DEC supplies a new version of SIDRIVER with the distribution for VMS/SNA. Does DEC known something???

GREG P. SCHULZ  
BURLINGTON NORTHERN RR  
ISS LOC 3  
176 E 5TH ST  
ST. PAUL, MN 55164  
612 298-7344

=====

Note 863.0	SET HOST: RSX <--> VMS	5 replies
"Bill Mayhew"	53 lines	31-DEC-1987 00:17

-----

Anybody out there using, or attempting to use, DECnet/VMS and DECnet/RSX together with each other, in particular doing SET HOSTs from one system to the other? I seem to be having a whole bunch of problems...

Configuration: 11/73 running MicroRSX 3.1 (virtually M-Plus) and MicroRSX DECnet V1.0 (a new release has just, or is about to, make it to the SDC, I understand), and a MicroVAX 2000 running VMS 4.5 and DECnet 4.5 (4.4? Well, the latest one, not counting 4.6).

A static asynchronous line is used to connect the two systems, since the 11/73 has no Ethernet hardware (yet, but will never if this is the best behavior I can expect...).

Symptoms include:

SET HOST from RSX to VMS:

- a. Drops linefeeds in some situations, e.g. user-written VAX C code that reads from standard input -- use hits Return, gets a CR but no LF, so multiple interaction-prompts overwrite each other on the screen.
- b. Loses support for VMS DCL line-editing: uparrow, leftarrow, etc. to DCL are all treated like uparrow; ^H is placed in the command line as a data character; ^E does nothing I could determine (may also be being treated as data). This latter one may be related to the fact that you can't do a SET TERM /ESCAPE on a VMS RTn: line, though /LINE\_EDIT and /INSERT are both set.
- c. REALLY weird things happen if you try to use VMS Kermit or SET HOST/DTE to call another system via another serial port through the MicroVAX: anything that generates significant output to you "hangs" after about 40 or 50 characters, and requires that you type some other character on your keyboard to get it to complete. There is one communications program, though, HOST32 (developed for use with CompuServe but usable for

general purposes), which works fine, and which is known to do totally single-byte I/O.

SET HOST from VMS to RSX:

- a. Can't set /TYPEAHEAD on RSX's RTn: line. Attempting to do typeahead gets your terminal hung in interesting ways unless you're set to /FULL\_DUPLEX (^C echoes two \$ prompts, nothing else echoes anything or does anything); /FULL\_DUPLEX still "loses" the typeahead data, and won't echo any normal commands you type from then forward, until you do a ^C at which point things are back to normal.
- b. Some RSX programs which normally handle escape sequences from an LK201 keyboard break and die when the input is coming from an RT: instead of a TT:, though this appears to be simply an unfortunate implementation decision by the application developers since I think a restriction along these lines, based on one specific QIO variant, is noted in the RSX documentation. (Yes, of course, they're DEC applications!)

These problems appear to me to be so serious and so fundamental that it's hard to believe they're real. Comments?

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

```
=====
Note 863.1          SET HOST: RSX <--> VMS          1 of 5
"Dale E. Coy (505) 667-3270"      15 lines  31-DEC-1987 18:57
-< A confirmation >-
-----
```

I haven't done all the testing you have, but I've seen the following: SET HOST from RSX to VMS. Then, using VAXNet to dial out from the VAX, the "echo" is precisely one character behind what is "typed". Tried using Set Host/DTE, and the "echo" was 3 characters behind (I think - a little hard to tell).

In 5 separate sessions at DECUS, I tried to get an answer to the problem. Nobody would postulate whether it is in RSX, DECnet RSX, DECnet VMS, VMS, or.... At least there wasn't a lot of finger pointing. All the advice was along the lines of "SPR Everything".

There is obviously a problem somewhere. I, too, would like to solicit any ideas (even for further diagnostics).

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

```
=====
Note 863.3          SET HOST: RSX <--> VMS          3 of 5
"Joe Sewell"        16 lines  4-JAN-1988 12:08
-< Yes, it IS a mess >-
-----
```

I used to work on a similar setup ... terminal tied to an 11/73 running RSX-11M+ 2.1E or something (we never upgraded to 3.0) going via Ethernet to a 11/750 running VMS 4.1. I, too, experienced many of the same problems. The best I could come up with was that there was something inherently incompatible with RMTACP and the RT: driver on the PDP side and DECnet-VAX and the RT driver on the VAX side.

I did, however, find a solution to Dale's problem, which was also happening to us. It works better if the terminal on the PDP side is set to full duplex. In our case we had the full duplex driver installed, but every terminal was still /HDX. Doing a SET /HDX=TI: (I always preferred MCR) took care of the echo problems. What was happening was that the echo operation (the QIO write operation) was being held back on the PDP side by an outstanding read.

Joe Sewell  
Level Five Research  
503 Fifth Avenue  
Indialantic, FL 32903  
(305) 729-9046

```
=====
Note 863.4          SET HOST: RSX <--> VMS          4 of 5
"Bill Mayhew"       6 lines  4-JAN-1988 22:38
-< One down? >-
-----
```

Thanks very much for pointing out that obvious problem. Of course I had checked to make sure my RTn: port was set to /FULL, but I forgot all about the outgoing TTn: port to the modem!! I'll have to try that... {red-faced grin}

Of course that only solves one of the problems...

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 863.5                    SET HOST: RSX <--> VMS                    5 of 5  
"Harry Herman"                    63 lines    12-JAN-1988 23:15  
-< Comments on RSX <--> VMS from occasional user >-  
-----

Re: .0

I use SET HOST fairly frequently to go from RSX to VMS and occasionally to go from VMS to RSX. We have an 11/73 running RSX-11M+ V4.0 and M+ DECNET V4.0. We also used DECNET V3.0 and have not seen any changes between DECNET 3.0 and DECNET 4.0 talking to a MicroVAX II running MicroVMS V4.5. In response to your comments:

RSX to VMS

- a) I have never noticed any problems with prompts overwriting each other, but never used C, so do not know if it is unique to C or not.
- b) Line editing on VMS uses a non-standard CTERM protocol that is unique to VMS. Apparently it has not been made part of the CTERM standard, so I do not know if any other operating system will implement it. Apparently if going VMS to VMS, typing the up-arrow goes across as a normal CTERM packet, but then both VAXes switch to a private protocol to handle the left/right arrows, ^E, ^H, etc. RSX does not know the protocol so sends the left/right arrows, ^E, ^H, etc. as normal characters, which VMS rejects for line editing
- c) I have never had problems with output hanging until a character is typed, although that does sound similar to something I have seen using LAT lines from a terminal server or a VAXmate. Seems that the line hangs periodically, but will clear after 5-20 seconds, but on occasion has hung longer and then cleared after a character or two is typed.

VMS to RSX:

- a) I have never changed the RT: /TYPEAHEAD from its default of /NOTYPEAHEAD, as a matter of fact, I did not know the default was /NOTYPEAHEAD until I read your note! I therefore have not seen the double ^C problem you mentioned, although I have seen it written up on either the RSX QAR system or the DECNET QAR system, so maybe it will be fixed some day. {grin}
- b) I have never had problems with screen editing over RT: lines, but do not use any other applications that do escape sequence input over RT: lines.

One thing I have seen doing either VMS to RSX or RSX to RSX (I can't remember which), is that ^Z does not get properly passed over the link. For example, I have tried to run ACNT over an RT: line, but it does not recognize ^Z, and since the only way out of ACNT is to type ^Z, I end up having to type:

^C  
ABO ACNT

(I too prefer MCR), and then unlock the account file.

Harry Herman  
Corpane Industries  
10100 Bluegrass Parkway  
Louisville, KY 40299  
(502) 491-4433

=====  
Note 864.0                    Security Blanket                    3 replies  
"G. Del Merritt"                    13 lines    4-JAN-1988 17:23  
-----

Why do some of the security tools require more than just the SECURITY privilege to work? I am thinking in particular about SHOW INTRUSION, and that it requires CMKRNL to do it's job. I got the impression that the security manager did not \*have\* to be the system manager, but it looks like that person indeed must be at least as technically trustworthy as s/he is "need-to-know" trustworthy.



Wouldn't it make more sense for the SECURITY privilege to be enough for all security oriented tools? That way the responsibility for security management could be delegated without much worry about the accidents that can happen through unintentional overuse of privilege. Is this something that is to be/has been addressed in the new system management architecture?

J. Del Merritt  
55 Walkers Brook Drive  
Reading, MA 01867

=====  
Note 864.1 Security Blanket 1 of 3  
"John Osudar" 7 lines 12-JAN-1988 20:47  
-----

Just guessing -- but it may be hard to get around requiring CMKRNL if a particular piece of software has to access kernel mode code/data. If something requires other than CMKRNL (or CMEXEC) privilege, then I would question it. But needing CMKRNL would seem to make sense. (If you really want the security manager to not have CMKRNL, you have to install the image with privilege. Not sure if that's a good idea or a bad one...)

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 864.2 Security Blanket 2 of 3  
"Larry Kilgallen" 8 lines 12-JAN-1988 21:36  
-----

Installing an image with CMKRNL only really produces the desired effect if DEC has taken that into account in their coding -- by retracting CMKRNL unless SECURITY is held by the user. That is what I see as the nature of the request, to be able to grant a logical privilege and have it do what it needs to do with CMKRNL only in pursuit of valid security goals. Sounds like an excellent SIR for next time if made more general. Submit it now, Cincinnati is too late!

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

=====  
Note 864.3 Security Blanket 3 of 3  
"John Osudar" 3 lines 13-JAN-1988 15:31  
-----

I agree; I wasn't arguing with the intent of the original question, just speculating about the (presumably technical) reasons for things being as they are.

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 865.0 terminal server delay on dial up? 5 replies  
"DAVID JENSEN" 14 lines 4-JAN-1988 20:09  
-----

Does anyone else experience a 3 second delay before you can autobaud a terminal server through a dialup.

Since speed and alternate speed do not work, you must leave autobaud enabled on the terminal server (which does work), but before you can press carriage return you must wait approximately 3 seconds or any input before then is ignored, not received.

Or is there something that I may/may not be doing correctly???

DAVID JENSEN  
COORS PACKAGING COMPANY  
PO BOX 1501  
GOLDEN, CO 80401

```
=====
Note 865.1      terminal server delay on dial up?      1 of 5
"Bill Mayhew"      13 lines      4-JAN-1988 22:46
-< Possibly a chatty modem? >-
-----
```

-----  
This is an off-the-wall, I-don't-have-modems-on-a-DECserver  
response, but...

I have sometimes seen the same behavior with some modems on  
"direct" dialup lines (non-DECservered ... non-DECservered?  
whatever)... if the modem is not configured for "quiet"  
operation. That is, if the modem is putting out any kind of  
text to say "hi, I just got a carrier and this incoming call is  
ready for you guys" to the CPU, autobaud would not work for a  
few seconds, since that text was being treated as autobaud  
characters by the CPU.

You may, or may not, have the same problem with a non-quiet  
modem on a DECserver. (Also unfortunately, not all modems can  
be put into "quiet" mode to begin with.)

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

```
=====
Note 865.2      terminal server delay on dial up?      2 of 5
"Chris Erskine"    9 lines      5-JAN-1988 06:58
-< 1 cause of delay >-
-----
```

I have a delay of 3 to 5 seconds after connecting to the modem  
but in my case I know what and why the problem is. I use R-V  
2400 baud modems with MNP. After connection and carrier  
present, the modem goes through MNP startup sequence which takes  
3-5 seconds even if the remote modem does not have MNP.

Chris

Chris Erskine  
23 S Holcomb  
Clarkston, MI 48016

(313) 524-8836

```
=====
Note 865.3      terminal server delay on dial up?      3 of 5
"Tony Carter"      6 lines      8-JAN-1988 15:16
-< Rainbow connect delay >-
-----
```

I'm note sure if this is a similar case, but, I use a Rainbow as  
my terminal which is connected to a Decserver 200. After  
powering it on and typing T (to enter terminal emulation mode)  
the WAIT light comes on and I have to wait 2-3 seconds before I  
can talk to the terminal server. It has never bothered me  
enough to investigate it further, but there may be a connection  
here.

Tony Carter  
P.O. Box 846  
Middleton, MA 01949  
(617) 245-6600

```
=====
Note 865.4      terminal server delay on dial up?      4 of 5
"John K. Doyle, Jr." 21 lines      8-JAN-1988 22:57
-< DF224 *IS* Chatty >-
-----
```

Are you using a DF224 (DEC scholar or variant) modem? This one  
IS a "chatty" modem as mentioned in .1. When it answers a phone  
call, it sends one of several text string to the device it is  
attached to (in your case the terminal server). If the incoming  
phone call is at the speed to which the DF224 has as ITS  
default, it will send "Attached" to the terminal server. If the  
phone call is coming in at a speed different than the DF224's  
default, it also sends "Speed: 1200" or some such to the  
terminal server AT THE DEFAULT SPEED. AFTER it has sent this,  
it then switches to the speed of the incoming call. There is no  
way to disable this behavior as far as I can tell. Our DF224 is  
connected to a DECSA-style terminal server. Actually, I amazed  
that the auto-baud works considering what the DF224 is doing.  
However, since it WORK I count myself lucky as this is one of  
the few situations where the DF224 has NOT taken a large bite  
out of me. By the way, I think the reason that it DOES work is  
that the Terminal Server "default" speed for auto-baud lines is  
9600. Because of this, the terminal server must see the

"ATTACHED" and "SPEED" messages coming in at either 300,1200, or 2400 as just garbage. I guess the terminal server is either looking for successive carriage returns or a carriage return that is fairly well isolated in time from OTHER characters.

John K. Doyle, Jr.  
Steiner, Levi & Co.  
2550 Mercantile Drive Suite C  
Rancho Cordova, CA 95670  
(916) 638-2600

=====  
Note 865.5 terminal server delay on dial up? 5 of 5  
"Bill Mayhew" 10 lines 9-JAN-1988 17:31  
-< Quieting down a DF224 >-  
-----

One way to reduce the problem mentioned in .4 with the DF224 is to put it in "abbreviated response" mode. This is selected through the modem's Soft Select menu; connect from your VAX outbound to the modem, or plug a terminal into it temporarily instead, type ^B % Return, and follow the bouncing ball.

This doesn't completely solve the problem by any means, but it does reduce it by changing "Attached" to a simple "A" ("a"?), the speed message to "s:1200" etc.

There's no way I know of to gag it altogether, either.

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 866.0 VMS 4.7 is here! 49 replies  
"George Merriman CCA/NY" 5 lines 5-JAN-1988 21:07  
-----

VMS 4.7 came into a client's site today. I updated a 4.6 system running on a MicroVAX II in about 45 min., not including backups. I'll keep you posted if I run into any problems.

George Merriman  
Cambridge Computer Associates  
56 Beaver Street 3rd Floor  
New York NY 10004  
212-425-5830

=====  
Note 866.6 VMS 4.7 is here! 6 of 49  
"Brian Tillman, Smiths Industries." 1 line 8-JAN-1988 13:33  
-< Here also. >-  
-----

V4.7 arrived in Grand Rapids, Michigan 1/8/88.

Brian Tillman  
Lear Siegler, Inc.  
4141 Eastern Ave. MS121  
Grand Rapids, MI 49518-8727  
(616)241-8425

=====  
Note 866.12 VMS 4.7 is here! 12 of 49  
"Larry Kilgallen" 7 lines 11-JAN-1988 10:00  
-< On the subject of Microfiche >-  
-----

| By the way, cover letter says fiche is now a separate (read:  
| YOU PAY) item...

Oh, yes, it has been a separate item since VMS V4.4. The point is that those who pay expect to get, and V4.7 has not really "arrived" until all components required by a site (i.e., those they ordered) have arrived.

Larry Kilgallen

Box 81, MIT Station  
Cambridge, MA 02139-0901

Houston TX 77098  
713/528-1859

=====  
Note 866.13                   VMS 4.7 is here!                   13 of 49  
"Bob Hassinger"                   12 lines 11-JAN-1988 10:17  
                  -< RIGHT! Need SIG action. >-  
-----

.. The point is that those who pay expect to get, and V4.7 has not really "arrived" until all components required by a site (i.e., those they ordered) have arrived.

CORRECT Larry. This is really getting out of hand!

What is the VAX SIG going to do at the Spring Symposium (or elsewhere) to focus attention and get action on this fiche problem?

Bob H

Bob Hassinger  
Liberty Mutual Research Center  
71 Frankland Road  
Hopkinton, MA 01748  
617-435-9061

=====  
Note 866.14                   VMS 4.7 is here!                   14 of 49  
"Lee K. Gleason"                   14 lines 11-JAN-1988 13:10  
                  -< It could be worse... >-  
-----

This is really getting out of hand!

My DEC salesman is trying to convince my management that in order to get the microfiche, we will have to order the VMS source kit (\$20K plus)!!!

Has anyone else come across this little bit of disinformation at their DEC office?

Lee K. Gleason  
Control-G Consultants  
2416 Branard #D

=====  
Note 866.15                   VMS 4.7 is here!                   15 of 49  
"Terry Kennedy"                   13 lines 11-JAN-1988 17:05  
                  -< Hogwash! >-  
-----

My DEC salesman is trying to convince my management that in order to get the microfiche, we will have to order the VMS source kit (\$20K plus)!!!

Don't believe it! The order code for a fiche license is QL001-FR and it costs \$500.00.

Terry Kennedy  
95 Mohawk Trail  
Ringwood, N.J. 07456  
(201) 435-1890

=====  
Note 866.16                   VMS 4.7 is here!                   16 of 49  
"JEFF KILLEEN"                   6 lines 11-JAN-1988 17:45  
                  -< BE CAREFUL WHAT YOU ASK FOR >-  
-----

What is the VAX SIG going to do at the Spring Symposium (or elsewhere) to focus attention and get action on this fiche problem?

DEC could solve this problem very easily. Hold up the VMS FCS till the fiche kits are ready to go. Be careful what you ask for - you might get it!

JEFF KILLEEN  
31 HOPEDALE ST.  
HOPEDALE, MA. 01747  
617-478-8098

```
=====
Note 866.19          VMS 4.7 is here!          19 of 49
"JIM PALMER"        25 lines 12-JAN-1988 17:30
                    -< Fiche is a layered product >-
-----
```

The issue of late fiche with respect to software releases is very serious problem. Much like yesterdays newspaper, the value of the fiche is severely diminished if its received just before the next release.

If anything, I would like to see EARLY release of the fiche. This would serve as a kind of preview of coming attractions and would aid planning at my site immensely. With clusters, complex networks, and 3rd party layered products that do not follow any standardized method of installation or method of operation, knowing about the underlying O/S support is a must!!!!. I believe this will become a major issue with V5.0.

JIM PALMER  
3 BROOKDALE  
IRVINE, CA. 92714-3338  
(714) 458-3028

```
=====
Note 866.20          VMS 4.7 is here!          20 of 49
"Stuart Renes"      5 lines 12-JAN-1988 19:00
                    -< V4.7 here in Big D! >-
-----
```

Received 4.7 here in Dallas area on Monday, January 11th.

NO installation problems so far on an 8530, VAXstation 2000 and 11/725!

Stuart Renes  
AT&T Technologies, Inc.  
Mail Stop: 2793  
3000 Skyline Dr.  
Mesquite, TX 75149  
(214) 288-2286

```
=====
Note 866.21          VMS 4.7 is here!          21 of 49
"Larry Kilgallen"  16 lines 12-JAN-1988 19:21
-----
```

.19

I don't recall if the price is bound to the CPU type. (we have 750's). A quick look at our maintenance contract indicates that the order number is QL001-KR.

The "L" in the second position means a CPU model independent item.

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

```
=====
Note 866.24          VMS 4.7 is here!          24 of 49
"Alan E. Frisbie"   0 lines 13-JAN-1988 01:03
                    -< And MicroVMS 4.7 still hasn't arrived in Los Angeles >-
-----
```

Alan E. Frisbie  
Flying Disk Systems, Inc.  
4759 Round Top Drive  
Los Angeles, CA 90065

```
=====
Note 866.25          VMS 4.7 is here!          25 of 49
"John Osudar"      25 lines 13-JAN-1988 15:21
                    -< re: 866.16 -< BE CAREFUL WHAT YOU ASK FOR >- >-
-----
```

What is the VAX SIG going to do at the Spring Symposium (or elsewhere) to focus attention and get action on this fiche problem?

For a lot of people, particularly those who need the fiche (to modify components, either DEC-supplied or third party, that they require in order to run VMS), the VMS distribution kit is next to useless unless they DO have the fiche. So, while it would be nice to get the kit as soon as it's ready to ship, it would really make more sense to have the fiche ready to go when the kit is shipped. What I'd like to know is, what is the source of the delay in getting the fiche shipped? Is it a production problem? Certainly, if the software is going out the door, the listings for that software should be available for transfer to fiche. If it's just a production problem, it would seem that DEC ought to find a way to solve it. (Maybe we couldn't justify complaining about it when the fiche came with the software; but now that we are paying for it, I think we have cause to scream loudly when it takes weeks/months to get the fiche.)

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 866.28                   VMS 4.7 is here!                   28 of 49  
"Bob Hassinger"                   15 lines 14-JAN-1988 11:36  
-----  
                  -< before we started paying... >-  
-----

.. (Maybe we couldn't justify complaining about it when the fiche came with the software; but now that we are paying for it, I think we have cause to scream loudly when it takes weeks/months to get the fiche.)

Odd... it seems as if \*before\* we started paying for the fiche, it did come \*with\* the software kits most of the time...

Jeff's warning notwithstanding, I agree strongly with John and I think the SIG should attack the issue at the Spring Symposium.

Bob Hassinger  
Liberty Mutual Research Center  
71 Frankland Road  
Hopkinton, MA 01748  
617-435-9061

=====  
Note 866.30                   VMS 4.7 is here!                   30 of 49  
"Alan E. Frisbie"                   3 lines 14-JAN-1988 21:09  
                  -< Finally! >-  
-----

|                   -< And MicroVMS 4.7 still hasn't arrived in Los Angeles >-

It just showed up about an hour ago via UPS.

Alan E. Frisbie  
Flying Disk Systems, Inc.  
4759 Round Top Drive  
Los Angeles, CA 90065

=====  
Note 866.33                   VMS 4.7 is here!                   33 of 49  
"Jamie Hanrahan"                   6 lines 15-JAN-1988 18:57  
                  -< DHV11 DMA bug fixed >-  
-----

The 4.6 YFDRIVER bug, which caused DHV11's (and, by some reports, DHU11's) with /DMA enabled to hang upon ^Y, ^O, etc., under 4.6, is fixed via a patch in 4.7. So all of you who replaced your 4.6 YFDRIVER with the one from 4.5 should put the 4.6 edition back before applying the 4.7 update.

Jamie Hanrahan  
Simpact Associates  
9210 Sky Park Court  
San Diego, CA 92123  
619-565-1865

=====  
Note 866.41                   VMS 4.7 is here!                   41 of 49  
"Stuart Renes"                   15 lines   25-JAN-1988 15:06  
                  -< V4.7 experiences at AT&T >-  
-----

VMS 4.7 comes with a \*NEW\* TTDRIVER.EXE image which was supposed to fix problems with windowing software on VFW software.

In fact, the new TTDRIVER broke a pseudo-terminal driver that had been working just fine and dandy till 4.7!

Also, I notice that my DECserver terminal lines don't come up as /DIALUP or /MODEM as with earlier releases of the LAT.

I haven't had any luck in making the LAT Qio interface work, however.

All I get is "Device timeout" from the server....

Anybody have better luck?

Stuart Renes  
AT&T Technologies, Inc.  
Mail Stop: 2793  
3000 Skyline Dr.  
Mesquite, TX 75149  
(214) 288-2286

=====  
Note 866.42                   VMS 4.7 is here!                   42 of 49  
"Larry Kilgallen"                   2 lines   25-JAN-1988 16:54  
                  -< Do you have any specifics on TTDRIVER change? >-  
-----

In fact, the new TTDRIVER broke a pseudo-terminal driver that had been working just fine and dandy till 4.7!

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

=====  
Note 866.44                   VMS 4.7 is here!                   44 of 49  
"Bill Mayhew"                   5 lines   26-JAN-1988 22:48  
                  -< re: .43... "work correctly?" >-  
-----

Can you be more specific about "work correctly"... what problems are supposed to be fixed? (I use terminal emulator windows heavily on my 4.5, now 4.6, VAXstation 2000 and have not had any problems I could blame on the emulator or TTDRIVER.)

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 866.45                   VMS 4.7 is here!                   45 of 49  
"Frank J. Nagy"                   10 lines   27-JAN-1988 08:18  
                  -< Using LAT \$QIO under V4.6 OK >-  
-----

< Note 866.41 by NODE::US108249 "Stuart Renes" >

|  
| I haven't had any luck in making the LAT Qio interface work,  
| however. All I get is "Device timeout" from the server....  
| Anybody have better luck?

I gotten the "undocumented" \$QIO function which returns the server name and port name associated with an LTAn terminal to work just fine. (By "undocumented", I mean that Digital did not document this function in the V4.6 Release Notes, but the I/O function is in the \$IODEF macro and include files for FORTRAN, etc.).

Frank J. Nagy  
Fermilab  
PO Box 500 MS/220  
Batavia, IL 60510  
(312) 840-4935

=====  
Note 866.48                   VMS 4.7 is here!                   48 of 49  
"Stuart Renes"                                   11 lines 28-JAN-1988 11:50  
      -< VMS V4.7 TTDRIVER manifestations >-  
-----

My pseudo-terminal port driver now returns me DATA OVERRUN errors during long bursts of output, even though the QIO's are single character. Worked fine for months till 4.7.

Also, under VWS, I \*NOW\* have a problem with some WT: windowing stuff that worked ok before... specifically trying to abort some of the demo displays in the [VWSDEMO] area of the VAXstation 2000 system disk...window now gets hung... ..this may only be superficial evidence, however.

Stuart Renes  
AT&T Technologies, Inc.  
Mail Stop: 2793  
3000 Skyline Dr.  
Mesquite, TX 75149  
(214) 288-2286

=====  
Note 868.0                   CAI's, where are you?                   2 replies  
"G. Del Merritt"                               7 lines 8-JAN-1988 10:48  
-----

Are VMSCAI and EDTCAI (shudder) still available? If so, have they been updated to reflect 4.x and other changes? Is there a TPUCAI? Is there a Library submission that does it better than the old CAI's?

I have a gaggle of new-from-big-blue's users about to descend on my VAX, and would like to give them a head start whilst I gather notes together for a quick 1/2 day intro...

G. Del Merritt  
55 Walkers Brook Drive  
Reading, MA 01867

=====  
Note 868.1                   CAI's, where are you?                   1 of 2  
"Jonathan M. Prigot"                           6 lines 8-JAN-1988 11:24  
      -< Self-Paced Instruction >-  
-----

They (or similar, at least) are available from DEC Educational Services. They have Self-Paced instruction courses on Utilities and Commands (text and media course) and Intro to EVE (CAI). I just got the new catalogue for these and other Self-Paced instruction courses. Call 1-800-332-5656 Ext 106 for details.

Jonathan M. Prigot  
W.R. Grace & Company  
55 Hayden Avenue  
Lexington, MA 02173  
617-861-6600 x2148

=====  
Note 868.2                   CAI's, where are you?                   2 of 2  
"Rytis T. Balciunas"                           6 lines 25-JAN-1988 07:58  
      -< Proceed with caution.. >-  
-----

Proceed with caution: I ordered VAX BASIC programming from Ed Services, they told me it was at or near the latest rev (3.1). What I got was 1.5 inches of booklets that were for BASIC 2.4. The old VMS and EDT CAIs were for version 4.0 when I got them a year or so ago...

RYTIS T. BALCIUNAS  
CALGON CARBON CORPORATION  
PO BOX 717  
PITTSBURGH PA 15230-0717  
(412)787-6784



=====  
Note 869.1 Has VMS Services for DECnet-DOS been fixed? 1 of 4  
"Jack Patteeuw" 3 lines 12-JAN-1988 13:17  
-< Same subject, different question >-  
-----

Several months ago DEC announced that VMS Service for MS-DOS would be bundled with DECNET-VMS. Can anyone confirm this with VMS/DECNET V4.7 ?

Jack Patteeuw  
Ford Motor Co.  
Electrical and Electronics Division  
31630 Wyoming  
Livonia, MI 48150  
313-323-8643

=====  
Note 869.3 Has VMS Services for DECnet-DOS been fixed? 3 of 4  
"Mark Schell (919) 773-7040" 16 lines 17-JAN-1988 22:10  
-< License free - media, pay! >-  
-----

Being a Digital person, (but certainly not speaking for the entire corporation!), here's the current situation as I understand it:

As of VMS 4.6, the license for VMS services was bundled with the DECnet license. This means that if you bought DECnet, you also bought VMS Services. You still have to buy the media for your VAX in order to have the actual software.

You still need to buy the client kit for IBM PC's, but the VAXmate client kit comes with the server media and doc kit.

I've heard nothing about this changing in the future.

Mark Schell  
DIGITAL EQUIPMENT CORPORATION  
8025 NORTH POINT BLVD  
SUITE 100 WEST  
WINSTON SALEM NC 27106

=====  
Note 870.0 LAVc functionality and constraints 18 replies  
"Bill Mayhew" 10 lines 12-JAN-1988 19:17  
-----

I have two questions about LAVCs:

1. Considering the way LAVCs are marketed, and the ways satellites are configured typically-- does the LAVc software do anything to deal with the current BACKUP restriction that prevents doing backups directly to tape across the network?

2. Anybody know just why it is that LAVc requires a minimum of an RD54 on the boot member... and, assuming it does, is there any reason why a MicroVAX 2000 equipped with an RD54 couldn't work as a boot member? (Technical, not marketing, reasons please {grin})

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 870.1 LAVc functionality and constraints 1 of 18  
"Larry Kilgallen" 31 lines 12-JAN-1988 19:35  
-< LAVC backup should be no problem >-  
-----

The obvious way to do backup in LAVc or other clusters is to run the Backup image on the CPU which has the tape drive and mount the disk so that it is accessible from that cpu. In the LAVc case there are only two possible backup problems I can envision:

1. Node with tape drive has a weak CPU

Typical configurations would make the boot node no less powerful than any satellite (unless one is trying to use up left-over Comets), so this should not be a problem. (The node with the tape drive, and therefore the Backup process, is the one doing the CRC's.

2. Cannot backup a served system disk

at least not without leaving it mounted, which true paranoids would never do. This should not be a problem if your boot node is the one with the tape drive.

Served user disks can be dismounted with the system running, unless you are using them for page and swap files. In that case, you could have an alternate boot configuration which did not use the local page and swap files, just for the purpose of backing up that disk. (Obviously if you used the local disk \*only\* for page and swap we would not be discussing this).

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

=====  
Note 870.2 LAVc functionality and constraints 2 of 18  
"Dale E. Coy (505) 667-3270" 12 lines 12-JAN-1988 22:33  
-< The RD54 restriction is artificial >-  
-----

The RD54 "minimum" for LAVC is a totally artificial restriction enforced by KITINSTAL, and can be hacked out of KITINSTAL with very little effort. I can't see any reason a 2000 wouldn't work. Of course, the artificial restriction is based on DEC's computations of minimum size for VMS plus page and swap files for at least 2 CPUs plus something for the users (if any). There's no way to avoid having minimal page and swap files for a 2nd CPU on the boot node, during the brief time you're bringing up the satellite for the first time (as far as I can see, anyway). How small can you make VMS? Now add just a few thousand blocks, and go for LAVC.

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

=====  
Note 870.3 LAVc functionality and constraints 3 of 18  
"John Osudar" 5 lines 13-JAN-1988 15:29  
-< Problem may be RD53 is too small >-  
-----

All I know is, I run a VAXstation 2000 satellite that has copies of most of the VMS system files on its local disk (for performance considerations). The local disk is an RD53, and it has under 15000 free blocks left. Can't see how you could run a reasonable boot member from an RD53...

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 870.4 LAVc functionality and constraints 4 of 18  
"gerson cohen" 8 lines 13-JAN-1988 16:11  
-< BACKUP on LAVC is good >-  
-----

Having just gotten up an LAVC (see 813.\*), I can attest to the functionality of backup to tape. I backed up approx 612,000 blocks from a served RA81 on a satellite to a TU81+ on my 8530 in about 1 hour, 15 min. This included verification and used two tapes at 6250 with group=25. This timing is significantly better than I have experienced previously with a straight DECNET copy or a backup across DECNET into a remote saveset. Fortunately, my good drive is on an 8530!

gerson cohen  
nih  
bldg 2 rm 312  
bethesda md 20205  
301-496-4295

=====  
Note 870.5 LAVc functionality and constraints 5 of 18  
"Bill Mayhew" 23 lines 14-JAN-1988 20:36  
-< Room to maneuver on an RD32 >-  
-----

re .3:

In a number of situations, one does not need full-tilt VMS. My VAXstation runs stand-alone on an RD32 and MicroVMS takes up somewhere between 15 and 20 Mb, leaving 40-50,000 blocks for a couple or three layered products and my own work (mostly software development in C). Not exactly spacious, but it works. I have some end-user (vs. programmer) installations that are even better off. This all depends on careful selection of installed MicroVMS options, at the "option" (not Kit) level, and pruning back page and swap files to their smallest usable sizes, of course.

Mixing NOTES topics, this area of pruning the system is what concerns me most about attempting to use a full-VMS update kit on a MicroVMS system -- is full VMS shipped in about 25 or 30 save sets, like MicroVMS, or would one have to "get down and dirty" and strip out what isn't needed, one file at a time?

(It also is an area that concerns me about the pending "formal" merger of VMS and MicroVMS, and the predictions that the facilities provided will involve installing everything and then removing what isn't required. It seems likely that a 40Mb disk may well not cut it in that scenario... further pricing VMS-based systems out of the small-business marketplace.)

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 870.6 LAVc functionality and constraints 6 of 18  
"Larry Kilgallen" 13 lines 14-JAN-1988 20:55  
-< VMS V5 Tailoring Design Center is "Tailor-off" >-  
-----

(It also is an area that concerns me about the pending "formal" merger of VMS and MicroVMS, and the predictions that the facilities provided will involve installing everything and then removing what isn't required.

The latest I heard (on a tape from Anaheim) is that the subject phrase means that tailor-off (where you have space to hold it all during installation) will be \*easier\*, but tailor-on (where you do not have that space) will still be possible.

It may be that they want you to modify son-of-vmsimages.dat in order to tailor-on.

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

=====  
Note 870.7 LAVc functionality and constraints 7 of 18  
"Dale E. Coy (505) 667-3270" 9 lines 14-JAN-1988 23:39  
-< But who knows about 5.0? >-  
-----

VMS 4.6 shipped as 4 save sets:

VMS046.A  
REQUIRED.  
LIBRARY.  
OPTIONAL.  
(Plus the mandatory update which was .A, .B, .C)

VMS 4.7 shipped as 3 save sets:

VMS047.A, VMS047.B, and VMS047.C

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957

LOS ALAMOS, NM 87545  
505-667-3270

=====  
Note 870.8 LAVc functionality and constraints 8 of 18  
"Kevin Angley" 3 lines 15-JAN-1988 17:12  
-----  
-< RE: .7 >-

Re: .7 - the difference of course is that 4.6 was a full kit  
that you could install from scratch with. 4.7 is an update  
only. A new user would get both kits.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604  
(919) 890-1416

=====  
Note 870.9 LAVc functionality and constraints 9 of 18  
"Bill Mayhew" 6 lines 15-JAN-1988 21:36  
-----

Re: .7, .8, et possibly al...

It sounds to me then that one could not reasonably use a VMS  
update kit to upgrade a MicroVMS system that was (intentionally)  
"incomplete" ... short of digging into the KITINSTAL or  
whatever and dealing with the "useful" parts, by hand. Yes?

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

=====  
Note 870.10 LAVc functionality and constraints 10 of 18  
"Dale E. Coy (505) 667-3270" 5 lines 16-JAN-1988 00:59  
-----  
-< Odd releases, maybe? >-

The "odd" releases (4.7) would almost work as you'd like. The  
patches would gripe about stuff not being there, but wouldn't  
crumble. The 20 .EXES would be added to your system if not  
already there (4.7 example), but most of them are probably  
there, anyway.

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

=====  
Note 870.12 LAVc functionality and constraints 12 of 18  
"John Azzoli" 5 lines 17-JAN-1988 12:20  
-----  
-< 4.7 Save sets >-

The release notes for 4.7 mention that saveset .B is used for  
VMS upgrades and .C is used for MicroVMS.

John Azzoli  
Hoechst Celanese Research Division  
86 Morris Avenue  
Summit, NJ 07901  
(201) 522-7980

```
=====
Note 870.13      LAVc functionality and constraints      13 of 18
"Kevin Angley"   6 lines 17-JAN-1988 14:00
-< But it is still the same kit, isn't it? >-
-----
```

The \*only\* thing VMS047.C contributes is a modification to WELCOME.TXT to say MicroVMS. Now, if this is the only difference between upgrading VMS and MicroVMS to version 4.7, it sure would make life a lot easier if Digital would admit it.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604  
(919) 890-1416

```
=====
Note 870.14      LAVc functionality and constraints      14 of 18
"Mark Schell (919) 773-7040" 19 lines 17-JAN-1988 22:23
-----
```

Couple of issues:

I would expect that a MicroVAX 2000 with a RD54 would work just fine, however, I'd wonder about the performance. As the 2000's are a busless machine, the Ethernet/disk performance would be the critical issue in it being a boot node. It could probably support only 1 other node. Is that useful?

Remember that VMS is required for an LAVC - don't count blocks required by MicroVMS and multiply by 2. VMS takes much more, although you could probably tailor it.

From what I've heard about the merger, VMS will unload itself in a certain order, and when it runs out of space, it will quit, and then let you decide what you want. I'd expect that a RD53 might be the minimum, tho I suppose a RD32 would be nice for a low end system.

Mark Schell  
DIGITAL EQUIPMENT CORPORATION  
8025 NORTH POINT BLVD  
SUITE 100 WEST  
WINSTON SALEM NC 27106

```
=====
Note 870.15      LAVc functionality and constraints      15 of 18
"Bill Mayhew"    20 lines 18-JAN-1988 15:53
-----
```

Regarding the performance of a hypothetical 2000/RD54-booted LAVc, I'm considering a situation where the satellites would definitely have their own local disks, but simply that the entire system wants to be managed (in all senses of that word) like one system rather than n. Overall, the amount of traffic on the Ethernet should be low, and similarly the demand on the boot member should be relatively low.

If things "go well" I may get the opportunity to test all this out in the next few months, and will report back. I just wanted to have some assurance that I wasn't overlooking anything really stupid in contemplating this move.

"Remember that VMS is required for an LAVC"... brings up another interesting question. Exactly why is VMS required, i.e. what does it have that MicroVMS doesn't that LAVCs need?

I really wish that when Digital announces "you gotta have x and y to run z" they would give at least some semblance of a technical explanation as to why... sometimes the constraints that Digital thinks are constraints don't apply, in certain real-world situations (e.g. the MicroVAX 2000 as an LAVc boot member, or for that matter an RD53-based MicroVAX II). Sigh...

Bill Mayhew  
Village Systems Workshop Inc  
PO Box 642  
Natick MA 01760  
617-237-0238

```
=====
Note 870.16      LAVc functionality and constraints      16 of 18
"Dale E. Coy (505) 667-3270"          8 lines  18-JAN-1988 18:59
-< Don't forget temporary Page and Swap files >-
-----
```

That's what I thought you were thinking of, Bill. When you do your disk space computations, remember that you do need a temporary, minimal size set of files on the boot node in order to initially boot the satellite. These temporary files go away when the page and swap files are established on the satellite node. Can't imagine you would run things to where there weren't a few thousand blocks of "scratch space", but it is a consideration.

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

```
=====
Note 870.17      LAVc functionality and constraints      17 of 18
"John Osudar"          7 lines  20-JAN-1988 14:48
-< no cluster support >-
-----
```

"Remember that VMS is required for an LAVC"... brings up another interesting question. Exactly why is VMS required, i.e. what does it have that MicroVMS doesn't that LAVCs need?

As I recall, MicroVMS does not include any form of cluster support. (i.e. some of the code required to support any type of cluster is missing from MicroVMS)

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

```
=====
Note 871.0RA60 and the art of avoiding 220 volt power 18 replies
"Larry Kilgallen"          20 lines  13-JAN-1988 10:06
-----
```

I am interested in the possibility of running an RA60 disk drive at a site which does not have 220 volt electrical service. At a site which \*does\* have 220 volts and a single RA60, the arrangement is as follows:

H9CAB-AA cabinet contains an RA60 with a 110 volt power cord plugged into an 874-D device at the bottom rear of the cabinet. 874-D has a 220 volt cord plugged into the appropriate external socket.

So what is the function of the 874-D with only one drive? I realize it probably balances the load of 110 volt RA60's across the 220 volt supply if one has a cabinet-full, but in the single drive configuration would plugging the RA60 directly into a wall outlet work?

Is there any chance that DEC would support it? (I realize I am asking for guesstimates here. I don't require Ken Olsen's signature, just some hope that Field Service would not turn their back on the site when they saw the arrangement).

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

```
=====
Note 871.4 RA60 and the art of avoiding 220 volt power 4 of 18
"Dale E. Coy (505) 667-3270"          12 lines  14-JAN-1988 00:30
-< I wouldn't have a doubt >-
-----
```

We had several (3, I think) RA-81s plugged into regular sockets (instead of the power controller in the rack) for over a year before we finally got around to doing it "right". There was no detectable difference in reliability between these and the other bunch which was done "right" from the start. We have full DEC maintenance, and they never said a word. In fact, they even hooked up the power sequencing cables so all the drives wouldn't start at once.

Of course, your field service mileage may vary...

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

=====  
Note 871.5 RA60 and the art of avoiding 220 volt power 5 of 18  
"Terry Kennedy" 31 lines 14-JAN-1988 03:40  
-< Power sermonette... >-  
-----

- 1) I have a cabinet with 2 RA60's in it (ordered & delivered from DEC) which has a 30-amp 110 volt plug on it (L5-30P). This is the same twist-lock plug that DEC uses on 11/44's, etc. If you want a DEC power controller in this configuration, give me a call at (201) 435-0252.
- 2) If (and ONLY if) the equipment wants 220 volt power and does NOT use 110 for ANYTHING, you can use two of the three phase legs to run it. This is normal practice for IBM gear, by the way. The giveaway is that the power cord wires are black, red and green, not black, white and green. In theory, anything with a white wire wants 110, anything without is either 220 or multiphase. In 3-phase power, there are two kinds, Delta and Wye. With one there is 208 between the any two phase leads, and 110 between a phase lead and neutral. With the other, you still have 208 between phases, but the voltage to neutral is up in the low 200's as well.
- 3) Regarding experimenting with 2), be \*sure\* that the cabinet is grounded. [green wire]
- 4) DEC power cords are generally color-coded blue, brown, green/yellow spiral. That is the international standard because the US concept of one side of the AC line (neutral) being at the same voltage reference as ground is not universal. Again, note that 'at the same voltage reference' should not be construed as 'is connected to'...

Terry Kennedy  
95 Mohawk Trail  
Ringwood, N.J. 07456  
(201) 435-1890

=====  
Note 871.6 RA60 and the art of avoiding 220 volt power 6 of 18  
"Robert Gerber" 11 lines 14-JAN-1988 09:16  
-< Wall outlet ok...but .... >-  
-----

I too have run an RA60 plugged straight into a standard wall socket because electrical work had been delayed.

The three high cabinet requires 110 Volts/ 30 AMPS grounded. The four high cabinet wants three phase power, but each drive only sees one hot leg along with the neutral and ground wires. --> Therefore if you have strange electrical problems, you would want to get three high cabinets....

However if you ever plan to get a VAX on the larger end - you will need the three phase service to make it run.

Robert Gerber  
Gillette Co  
Tech Services Dept 4U-3  
1 Gillette Park  
Boston, MA 02106  
617/463-3636

=====  
Note 871.7 RA60 and the art of avoiding 220 volt power 7 of 18  
"George Merriman CCA/NY" 45 lines 14-JAN-1988 15:24  
-< more power notes >-  
-----

| In theory, anything with a white wire wants 110, anything  
| without is either 220 or multiphase.

In fact, anything with a white wire wants this wire to be connected to the neutral leg of the service. It has nothing to do with the service voltage.

| In 3-phase power, there are two kinds, Delta and Wye. With one  
| there is 208 between the any two phase leads, and 110 between a

phase lead and neutral. With the other, you still have 208 between phases, but the voltage to neutral is up in the low 200's as well.

The connection scheme (Delta or Wye) has nothing to do with the service voltage. A common primary distribution scheme uses 4160V delta connected three phase. In a computer room in a commercial or industrial space you are most likely to run into a 120/208V nominal three phase four wire (Wye-connected) service. The exact voltage will vary across installations and with time, but ought to be within about 5% of the nominal under load most of the time. True delta connected services are usually found with heavy electrical equipment in factories or building HVAC rooms.

There is NO neutral with most delta connected services -- any voltage you measure between a phase and some neutral somewhere is actually a residual potential to earth. Sometimes three phase four wire is distributed without the neutral when it is not needed by the connected equipment. I doubt (and hope) you will ever find this in a computer room. If you do, however, resist the urge to pick up another neutral or earth connection to get 120V -- it is very bad practice and not code. Sometimes one phase of a three phase delta connected service is bonded to earth. I don't have my NEC handy, but I think that in this case the earthed phase is color-coded white and might be termed a neutral. I have never seen such a service. I have been warned by people who have seen it not to confuse it with single phase three wire because the box looks just the same inside -- two fused and one unfused legs.

Once again, if your equipment REALLY MUST have 110 or 220 volts I expect you will have to invest in some transformers unless you are on a rural domestic service. In most cases what you will find is 120V and 208V.

George Merriman  
Cambridge Computer Associates  
56 Beaver Street 3rd Floor  
New York NY 10004  
212-425-5830

=====  
Note 871.8 RA60 and the art of avoiding 220 volt power 8 of 18  
"Terry Kennedy" 30 lines 15-JAN-1988 01:55

-< Take 2 >-

-----  
In theory, anything with a white wire wants 110, anything without is either 220 or multiphase.

In fact, anything with a white wire wants this wire to be connected to the neutral leg of the service. It has nothing to do with the service voltage.

As you point out further on in your reply, 110 is normally only found between a phase leg and neutral. Therefore, if neutral is used, it will be white (in the US).

In 3-phase power, there are two kinds, Delta and Wye...

The connection scheme (Delta or Wye) has nothing to do with the service voltage...

Agreed. However, it is important to be aware of the differences between them if one is looking for 110 somewhere.

I doubt (and hope) you will ever find this in a computer room. If you do, however, resist the urge to pick up another neutral or earth connection to get 120V -- it is very bad practice and not code.

You'd be surprised what some electricians do... They see 'three-phase four wire' and take a guess at the fourth wire. I've seen neutral, ground, and an unrelated leg from a different transformer (for 110) all put on the fourth connector.

Terry Kennedy  
95 Mohawk Trail  
Ringwood, N.J. 07456  
(201) 435-1890



=====  
Note 871.13 RA60 and the art of avoiding 220 volt power 13 of 18  
"Jack Patteeuw" 15 lines 18-JAN-1988 12:08  
-< One caution >-  
-----

The only thing to watch out for is the starting current, which can be MUCH higher than the running current. This is especially true for multiple drives plugged into the same "circuit".

My field engineer told me that the main purpose of the power distribution panel in the bottom is to "sequence" the power up, especially after the building loses and then regains power.

I know one site at Ford that had a RA81 on a roll-away cart so they could move it from one system to another. The note on the front said "Please lock wheels before spinning up drive."

Now that's scary !!

Jack Patteeuw  
Ford Motor Co.  
Electrical and Electronics Division  
31630 Wyoming  
Livonia, MI 48150  
313-323-8643

=====  
Note 871.18 RA60 and the art of avoiding 220 volt power 18 of 18  
"Jack Patteeuw" 20 lines 27-JAN-1988 17:59  
-< more power stories >-  
-----

We just installed a LPS40 which, according to all the site prep info, requires a 220v single phase from a L6-15R receptacle. I was told by our electricians that we could only get 208v 3 phase.

This was no problem for DEC however.

When the Field Service Engineer came to install the unit she (yes, I said "she") merely opened up the back and changed a jumper (presumably on the main transformer) from "220" to "200". I noticed several taps all the way up to "250". The VT220 console get it's power from the LPS40 and all she did there was

flip the switch from 110 to 220 !!

I also know another site that cut the "third prong" off of the power cable from their MicroVAX, flipped the switch to 220 and are running off of 208 because their data acquisition lab has "grounding" problems !

Now that's scary !!!

Jack Patteeuw  
Ford Motor Co.  
Electrical and Electronics Division  
31630 Wyoming  
Livonia, MI 48150  
313-323-8643

=====  
Note 873.0 Trapping expiring passwords 5 replies  
"FRANK W. CROFT" 5 lines 14-JAN-1988 13:26  
-----

All our passwords expire after 180 days. We have >1500 accounts including All-In-1 and VMS. They all forget to update their passwords when advised by the system to do so at LOGIN time. How can I capture the signal that tells the user it is time to reset the password so I can force him into a SET PASSWORD procedure?

FRANK W. CROFT  
E. I. DuPont  
P. O. Box 2042  
Wilmington, NC 28402  
(919) 371-4071

```
=====
Note 873.1      Trapping expiring passwords      1 of 5
"Dale E. Coy (505) 667-3270"      21 lines 14-JAN-1988 23:26
      -< One way >-
-----
```

If none of the Gurus come up with a way to do the capture, this would work:

Once a week (or day or whatever), run something which figures out what users have passwords due to expire in the next week. Could be done with a program or a .COM file - several things on the VAX SIG tape would provide prototypes.

This program then sets some sort of flag (we tend to do this by putting an oddly-named, zero-length file in the user's LOGIN directory).

SYLOGIN checks for the flag, and puts the user in SET PASSWORD (or your own method).

It's not perfect, because the user can get out without setting his/her password - but you know they know you know.

If all of your users are ALL-IN-1 users, there is some stuff on the OA SIG tape which might help, also.

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

```
=====
Note 873.2      Trapping expiring passwords      2 of 5
"Kevin Angley"      4 lines 15-JAN-1988 17:06
      -< Will this help you? >-
-----
```

Dave Moore has written a little guy that runs from SYLOGIN that sets the symbol PWD\_EXPIRED true or false depending on whether the password has expired or not. I will ask him to upload it next week if there is interest. It is written in PASCAL.

Kevin Angley  
3301 Terminal Drive  
Raleigh, NC 27604  
(919) 890-1416

```
=====
Note 873.3      Trapping expiring passwords      3 of 5
"John Osudar"      3 lines 15-JAN-1988 22:42
      -< how patient are you??? >-
-----
```

Or, you can wait for VMS V5.0, which allegedly has the capability to require users to do a SET PASSWORD before completing login. (that information is from my Anaheim DECUS notes)

John Osudar  
Argonne National Laboratory  
9700 S. Cass Ave.  
Bldg. 205 A-051  
Argonne, IL 60439-4837  
(312) 972-7505

=====  
Note 873.5 Trapping expiring passwords 5 of 5  
'Dale E. Coy (505) 667-3270" 8 lines 16-JAN-1988 19:34  
-< From the SIG Tapes >-  
-----

There is some applicable stuff on the DECUS VAX SIG tapes. Take a look at the following:

On the VAX87A (Nashville) tape:

[VAX87A.BATTELLE.CHECK\_PWEXP] (By Mark Oakley).

On the VAX84D tape:

[KMSKIT.SYSMGR.COMFILE]

DALE E. COY  
LOS ALAMOS NATIONAL LAB  
PO BOX 1663, MS J957  
LOS ALAMOS, NM 87545  
505-667-3270

=====  
Note 874.0 Fix for PHY\_IO requirement in BACKUP 3 replies  
"gerson cohen" 6 lines 17-JAN-1988 10:05  
-----

A fix to BACKUP is now being distributed by DEC to those who submitted SPRs. With 4.6, BACKUP has required PHY\_IO to write to TU81+ drives. The 4.7 patches do not contain this fix and it seems that 5.0 may also lack it. (I am not actually sure whether the fix will be to BACKUP or to TUDRIVER, but the symptom seem only to involve BACKUP). Get your SPRs in now to receive the fix if you may need it!

gerson cohen  
nih  
bldg 2 rm 312  
bethesda md 20205  
301-496-4295

=====  
Note 874.1 Fix for PHY\_IO requirement in BACKUP 1 of 3  
"G. Del Merritt" 2 lines 20-JAN-1988 10:46  
-< sigh >-  
-----

geesh. They said at the advanced Q&A in Anaheim that this had been addressed in 4.7! bummer...

G. Del Merritt  
55 Walkers Brook Drive  
Reading, MA 01867

=====  
Note 876.0 Anyone with experience with MOBIUS? No replies  
"M. Erik Husby" 12 lines 18-JAN-1988 13:31  
-----

Anyone out there with experience using MOBIUS?

Mobius is PC-VAX file server product. I am looking at it for the same reasons I am looking at RAF (see NOTE 799).

M. Erik Husby  
Project Software & Development  
14 Story St.  
Cambridge, MA. 02138  
(617)-661-1666

=====  
Note 879.0 DECserver 100 session limit bug No replies  
"Brian Tillman, Smiths Industries." 13 lines 19-JAN-1988 12:13  
-----

There's a problem with version 1.3 of the DECserver 100 software I'd like to share with you.

If you are running DECserver 100 V1.3, BL12, you will experience error 724, "Service node session limit reached" when you have only a few sessions on the server if your server has been up for about 320 days. There is a patch for this available from CSC. It replaces the SYS\$SYSROOT:[DECSEVER]PS0801ENG.SYS image with another that is BL15. We just started seeing this problem last week.

A work around would be to just boot your DECserver 100s every 300 days.

Brian Tillman  
Lear Siegler, Inc.  
4141 Eastern Ave. MS121  
Grand Rapids, MI 49518-8727  
(616)241-8425

```
=====
Note 880.0                Insects abound !                4 replies
"Jack Patteeuw"          29 lines  19-JAN-1988 17:19
-----
```

I have recently come across a "bug" in both DECSPELL and DECalc that is very interesting. Others (especially those who write code for a living) should watch out that they do not get bitten the same way DEC has !!

DECSPELL, immediately upon start up, creates an output file and by default it has the same name as the input file with the next generation number. (DECalc automatically creates its output file as soon as you issue any Storage Command (\S).)

This all well and good until the following scenario.

- 1) The user has set the generation retention count to 1 (Don't ask me why but some people do this !)
- 2) Nothing is written to the output file.
- 3) The output file is closed and deleted (because we never wrote to it anyway). (ie. you didn't spell anything wrong in DECSPELL (obviously not me) or you were trying to read something with DECalc (\ST).)
- 4) Your input file has been deleted (because of the generation

retention count) and you have no output either !!

The moral of the story is "Don't even CREATE the output file until you are really certain that you have something to put in it !"

Jack Patteeuw

Ford Motor Co.  
Electrical and Electronics Division  
31630 Wyoming  
Livonia, MI 48150  
313-323-8643

```
=====
Note 880.1                Insects abound !                1 of 4
"Larry Kilgallen"       8 lines  19-JAN-1988 17:57
-< I'm not sure I like that solution, though... >-
-----
```

The moral of the story is "Don't even CREATE the output file until you are really certain that you have something to put in it !"

But it would be impolite to make the user go to a lot of work creating data for (potential) output only to discover that when they EXIT (as distinguished from QUIT) there is no disk quota.

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

```
=====
Note 880.2                Insects abound !                2 of 4
"Jack Patteeuw"       13 lines  20-JAN-1988 06:31
-< But what about ... >-
-----
```

re: .1 Good point, Larry !

This leads me to the question: Can any explain to me how the VMS Diskquota OVERDRAFT works ?

In the old days, under TOPS, there was a similar concept, but it worked more or less the way you would expect. You could create files above your permanent quota and they could be closed and saved until you tried to log out. Log out would "fail" if you were over your quota and "just hanging up" would cause the system to delete .BAK files !

Gee, why isn't VMS more like TOPS ! :-}

Jack Patteeuw  
Ford Motor Co.  
Electrical and Electronics Division  
31630 Wyoming  
Livonia, MI 48150  
313-323-8643

```
=====
Note 880.3                Insects abound !                3 of 4
"Larry Kilgallen"        41 lines  20-JAN-1988 08:13
  -< The Workings of VMS Overdraft Disk Quotas >-
-----
```

If a program receives status indicating that an open file cannot be extended due to quota limits, it merely makes the same request again, and that time it works if the overdraft quota permits. Note that this does not work for creating new files.

I would characterize the implementation of this in the file system calls as sufficient and the use of it by typical programs (from all sources) as highly sporadic.

it worked more or less the way you would expect. You could create files above your permanent quota and they could be closed and saved until you tried to log out. Log out would "fail" if you were over you quota and "just hanging up" would cause the system to delete .BAK files !

In VMS the STOP/ID command (or \$DELPRC system service from another process) provides no context in which unfavored files can be deleted. There are also considerably more questions about which files and where they are on what disks. Since VMS is not restricted to the simplistic association between directories and quotas, such an approach would be quite foreign. In the example which started this topic, for instance, one would not want to have VMS decide that due to circumstances beyond your control (line drop) older versions (the one containing your data) would be deleted and newer versions (the previously discussed \*empty file\*) would be preserved.

Gee, why isn't VMS more like TOPS ! :-}

As I remember it from TOPS-10, the idea of separate logged-out and logged-in quotas had conceptual problems even there. VMS has replaced that conceptual problem with a more up-to-date conceptual problem -- which physical terminal should get written into the process termination accounting record in the face of DISCONNECT and CONNECT commands. ;-)

Larry Kilgallen  
Box 81, MIT Station  
Cambridge, MA 02139-0901

```
=====
Note 880.4                Insects abound !                4 of 4
"G. Del Merritt"        11 lines  20-JAN-1988 11:18
  -< LOGFAIL to the 'rescue' >-
-----
```

As I remember it from TOPS-10, the idea of separate logged-out and logged-in quotas had conceptual problems even there. VMS has replaced that conceptual problem with a more up-to-date conceptual problem -- which physical terminal should get written into the process termination accounting record in the face of DISCONNECT and CONNECT commands. ;-)

but isn't that why you get a LOGFAIL record every time someone chooses the disco process over a new one? 8-)

G. Del Merritt  
55 Walkers Brook Drive  
Reading, MA 01867

```
=====
Note 885.0 VAX DEBUG V4.6-9 Bug on VAX 8550 Processors 4 replies
"Offline Submission"    70 lines  22-JAN-1988 14:15
-----
```

There is a bug encountered running VAX DEBUG V4.6-9 as shown in the example below. At my site this bug only occurs running on an 8550. I have tried it also on a VAX 11/780, VAX 8600 and MicroVAX II. ONLY the 8550 exhibits the problem.

After using the DEBUG constructs: "STEP/RETURN" or "SET BREAK/RETURN", when the breakpoint at the RET instruction is reached, the AP machine register has been prematurely restored from the stack.

With a "bad" AP register, DEBUG is now unable to examine properly the values that have been passed as arguments.

-----

\$ macro /debug /object=ret-bug sys\$input:

```
.entry ret_bug,^m<> ;  
movl 4(ap),r0 ; return our argument as result  
ret ;
```

```
.entry main,^m<> ;
```

```
pushl #1 ; call ret_bug with argument 1  
calls #1,ret_bug ;  
ret ;
```

```
.end main ;
```

```
$ link /debug ret-bug  
$ run /debug ret-bug
```

VAX DEBUG Version V4.6-9

```
%DEBUG-I-INITIAL, language is MACRO, module set to .MAIN.  
SET BREAK RET_BUG  
GO  
break at routine .MAIN.\RET_BUG: MOVL B^04(AP),R0  
EXAMINE %AP, @(%AP) + 4 ! correct ...  
.MAIN.\RET_BUG\%AP: 7FF2557C  
7FF25580: 00000001
```

```
STEP/RETURN  
stepped on return from routine .MAIN.\RET_BUG
```

```
to .MAIN.\RET_BUG+6: RET  
! RET instruction has "not been executed",  
! but the %AP has been restored from the  
! stack frame giving a bad result for  
! examining parameters passed to a routine...  
EXAMINE %AP, @(%AP) + 4  
.MAIN.\RET_BUG\%AP: 7FF255CC
```

7FF255D0: 7FFE6440

EXIT  
\$

Michael G. Mulligan  
Saddlebrook Corporation  
101 Main Street  
Cambridge, MA 02142

Date: January 19, 1988

RT-11 DUCM/DYC GRAF11 DEL DIR PLOT-10 IMAGE LIBED FSTATS MS/DOS TIC-TAC-TOE QIX VAX-LIB-DATMAN/VAX EDTPlus SPICE2 TREEDUPL LISPEX MCLS TYPE PLUS MINC DISK USE FRAG EDTEX PORT LOCATOR TECO CHPLOT NANNY DIR11-W WATCHDOG INACTIVE ACCOUNTS IMGSPICE ICE TEX EDITOR VAX-LIB-4 GRAPHIC UTILITIES SETAUX.ARC STATPK FIGure KERMIT Distribution TENBACKU JUICER VTEDIT 2022 VAX-LIB-3 VISTA EDITOR MTU TDE RSTSOPEN DRAWTREE WATCHDOG PRM-1 SMARTMAILER TEN SPELL DECPoint of Sale JUICER PARALLEL Library V2 RTMULTI and Addo SMARTMAILER for RSTS/E CU FILTRA Spring 86 RT-11 SIG CP/M KERMIT S Invasion for PRO Bonner La SPLICE RUNOFF VAX-LIB-3 VAX-LIB-2 IMAGE SPELL TURBOCOM FNDFIL PC-8088 Collection #10 VT20 TOOLKIT PLATOOLS SMARTMAILER DEPROC LaTeX KERMIT-11 FANCY FONTS XMIT CU ReGis to HPG CED International RUNITOFF JP5-JP6 FODT PASCAL-OS/8 ANISMT WPSIM PARALLEL LIBRARY DECSYSTEM-20 SIG Spring 85 CAMERA DELPHIN HACK BIBENTRY APFELN DIGITIZING Acid Docume Generator VAX-LIB-2 AMAR-10 AMAR-20 DATMAN/VAX IMAGE RT-11 DUCM/DYC GRAF11 DEL DIR PLOT-1 IMAGE LIBED FSTATS MS/DOS TIC-TAC-TOE QIX VAX-LIB-5 DATMAN/VAX EDTPlus SPICE2 TREEDUP LISPEX MCLS TYPE PLUS AMAR-20 DISK USE FRAG EDTEX PORT LOCATOR TECO CHPLOT NANN DIR11-W WATCHDOG INACTIVE ACCOUNTS IMGSPICE ICE TEXT EDITOR VAX-LIB-4 GRAPHIC UTILITIE SETAUX.ARC STATPK FIGure KERMIT Distribution TENBACKUP JUICER VTEDIT 2022 VAX-LIB-3 VIST EDITOR MTU TDE RSTSOPEN DRAWTREE WATCHDOG PRM-11 SMARTMAILER TEN SPELL DECPoint of Sa JUICER PARALLEL Library V2 RTMULTI and Addons SMARTMAILER for RSTS/E CU FILTRA Spring 86 RT-1 SIG CP/M KERMIT S Invasion for PRO Bonner Labs APFELN RUNOFF VAX-LIB-3 VAX-LIB-2 IMAGE SPEL TURBOCOM FNDFIL PC-8088 Collection #10 VT200 TOOLKIT PLATOOLS SMARTMAILER DEPROC LaTe KERMIT-11 FANCY FONTS XMIT CU ReGis to HPGL CED International RUNITOFF JP5-JP6 FODT PASCAL-OS/ ANISMT TECO WPSIM DECSYSTEM-20 SIG Spring 85 CAMERA DELPHIN HACK BIBENTRY APFELN KERMI S DIGITIZING Acid Document Generator VAX-LIB-2 AMAR-10 AMAR-20 DATMAN/VAX IMAGE VT200 TOOLKI COMPRO EVENTS PC8088 Collection #9 TECO Cherry Tree Workstation Bookings System EXPORT Data Inputt Generator CMSBROWSE PERSONNEL INVENTORY MS/DOS COMMS Selection Electronic Grade Book CP/ KERMIT LaTeX JUICER SPELL PORTACALC DPRINT DUNGEON MINC BUDGET BUG CALC C Langua System DPROC "DEP" DECENC DECmate II OS/278 DIAL DTC GAMMA-11 GDADL LISP for RSX-11 MEM KERMIT S VAX-LIB-6 SPICE 3A6 VT200 TOOLKIT RUNOFF SPLICE SPY:RSX TCOPY SPELL VT-200 COMPR EVENTS CMSBROWSE UNDELETE DIAL BLOCKER SCAN CODER BITMAP DTC/PC ADDRESS BOO LaserWriter PORTACALC SPICE 3A6 PRO/Smart Mailer CBASIC2 Accts JP5-JP6 Payable/Receivable McGraw-Hi Payroll SEDT: EDT/WPS Screen CLNDRS:A Calendar Program INDEX AKCOUNT CORPHONE E-Systems Grab Ba RGT RDG PLTXSMB ICON DEVICES DATATRIEVE Library Collection CMSBROWSE EXPERT FPaint IMAG DBMS/Spreadsheet for MS/DOS AMAR-10 AMAR-20 RDIR/SQMAP PC-8088 Collection #11 UP TIME REPORTE RT-11 DUCM/DYC GRAF11 DEL DIR PLOT-10 IMAGE LIBED FSTATS MS/DOS TIC-TAC-TOE QIX VAX-LIB-DATMAN/VAX EDTPlus SPICE2 TREEDUPL LISPEX MCLS TYPE PLUS EXPORT DISK USE FRAG EDTEX PORT LOCATOR TECO CHPLOT NANNY DIR11-W WATCHDOG INACTIVE ACCOUNTS IMGSPICE ICE TEX EDITOR VAX-LIB-4 GRAPHIC UTILITIES SETAUX.ARC STATPK FIGure KERMIT Distribution TENBACKU JUICER VTEDIT 2022 VAX-LIB-3 VISTA EDITOR MTU TDE RSTSOPEN DRAWTREE WATCHDOG PRM-1 SMARTMAILER TEN SPELL DECPoint of Sale JUICER PARALLEL Library V2 RTMULTI and Addo SMARTMAILER for RSTS/E CU GRAPHKIT FILTRA Spring 86 RT-11 SIG CP/M KERMIT S Invasion for PR Bonner Labs RUNOFF VAX-LIB-3 VAX-LIB-2 IMAGE SPELL TURBOCOM FNDFIL PC-8088 Collection #10 VT2 TOOLKIT PLATOOLS SMARTMAILER DEPROC LaTeX KERMIT-11 FANCY FONTS XMIT MEMO ReGis to HPG CED International RUNITOFF JP5-JP6 FODT PASCAL-OS/8 ANISMT CODER WPSIM DECSYSTEM-20 SIG Sprin 85 CAMERA DELPHIN HACK BIBENTRY APFELN REPORTER DIGITIZING Acid Document Generator VAX-LIB-AMAR-10 AMAR-20 DATMAN/VAX IMAGE VT200 TOOLKIT COMPRO EVENTS PC8088 Collection #9 TECO Cher Tree Workstation Bookings System EXPORT Data Inputter Generator CMSBROWSE PERSONNEL INVENTOR MS/DOS COMMS Selection Electronic Grade Book CP/M KERMIT LaTeX JUICER SPELL PORTACALC DPRIN DUNGEON MINC BUDGET BUG CALC C Language System DPROC "DEP" DECENC DECmate II OS/278 DIA DTC GAMMA-11 GDADL LISP for RSX-11 MEMO PORTACALC VAX-LIB-6 SPICE 3A6 VT200 TOOLKI RUNOFF SPLICE SPY:RSX TCOPY SPELL VT-200 COMPRO EVENTS CMSBROWSE UNDELETE DIA BLOCKER SCAN CODER BITMAP DTC/PC ADDRESS BOOK LaserWriter PORTACALC SPICE 3A6 PRO/Sma Mailer CBASIC2 Accts TREEDUPL Payable/Receivable McGraw-Hi Payroll SEDT: EDT/WPS Screen CLNDRS: Calendar Program INDEX AKCOUNT CORPHONE E-Systems Grab Ba RGT RDG PLTXSMB ICON DEVIC DATATRIEVE Library Collection CMSBROWSE EXPERT FPaint IMAGE DBMS/Spreadsheet for MS/DOS AMAR-1 AMAR-20 RDIR/SQMAP PC-8088 Collection #11 UP TIME REPORTER RT-11 DUCM/DYC GRAF11 DEL DIR PLO 10 IMAGE LIBED FSTATS MS/DOS TIC-TAC-TOE QIX VAX-LIB-5 DATMAN/VAX SPICE2 RT-11 DUCM/DYC G



# DECUS

## Program Library

# SOFTWARE ABSTRACTS

# "A Solution with a Future"

LIB

# DECUS PROGRAM LIBRARY

## DECUS Program Library Catalog Changes:

The following corrections are to be made to the 1987/1988 Software Catalog.

Please add the following line to the end of the "Notes:" section in the abstract, DECUS Program No. PRO-123, Title: BASIC, PASCAL PortaCalc, KERMIT and a Desk Top Calendar.

"Some of the documentation for these programs are not available in hardcopy, but rather are included on the respective magnetic media."

## NEW LIBRARY PROGRAMS AVAILABLE FOR THE VAX/VMS FAMILY OF COMPUTERS

**DECUS No:** VAX-284 **Title:** Terminator **Version:** 1, November 1987

**Submitted by:** Wayne Bruzek, New Jersey Turnpike Authority, New Brunswick, NJ

**Operating System:** VAX/VMS V4.5 **Source Language:** VAX FORTRAN **Keywords:** System Management - VMS, Utilities - VMS

**Abstract:** Terminator is a FORTRAN program that monitors the processes running on a VAX system, stopping those which have been idle (accruing no CPU time) for a specified amount of time. The default allowed idle time is thirty minutes, but may be modified for each user by entering the user's UIC and his allowable time in a parameter file. A log of terminated users is also kept by the program. Processes whose UIC group number is less than sixty-four will not be affected by the program.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VAX/ANSI

**DECUS No:** VAX-288 **Title:** REPORT WRITER **Version:** 1, November 1987

**Submitted by:** David Cohen, Security Pacific Automation Company

**Operating System:** VAX/VMS V4.5 **Source Language:** DCL, VAX COBOL **Keywords:** Tools - Applications Development

**Abstract:** REPORT WRITER generates a COBOL program, using as input four user-supplied files which define the report and the data file record. Handles up to four levels of control breaks, with totals available for each level. Each control group can have the following options:

- . "At bottom"
- . "At top"

Other REPORT WRITER options include:

- . "New-page"
- . "At top of Page"
- . "At bottom of Report"

(All quoted terms in this abstract have the same meaning as in DATATRIEVE). Grand totals are available. Grand totals and "At Bottom of Report" are in addition to the four allowable control breaks. Report column positions are computed automatically, from Layout Chart created by the user, in any editor. Output program can be edited and modified, if desired. User instructions included.

**Notes:** Operating System VAX/VMS V4.0 or later is required.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VMS/BACKUP

**DECUS No:** VAX-289 **Title:** Tomei Universal Engineering System Bench Test **Version:** November 1987

**Submitted by:** J. Tomei, Water Survey of Canada

**Operating System:** RSX-11M-PLUS V3.1, VAX/VMS V4.3 **Source Language:** FORTRAN 77, VAX FORTRAN **Memory Required:** Virtual Software **Required:** FORTRAN 77 **Keywords:** Tools - Applications Development

**Abstract:** The Tomei Universal Engineering System Bench Test is intended to test the major aspects of a system's architecture from the typical applications algorithms (very low level) point of view. Of necessity this is coded in FORTRAN to address the "engineering" environment. This does not preclude its use in other areas, since its design is aimed at identifying underlying capabilities and shortcomings and "attempts" to side-step FORTRAN optimizing compiler peculiarities.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VAX/ANSI

**DECUS No:** VAX-290 **Title:** LABELS **Version:** 4.0, December 1987

**Submitted by:** Rick Stacks, Arkansas Department of Pollution Control, Little Rock, AR

**Operating System:** VAX/VMS V4.4 **Source Language:** FORTRAN 77 **Hardware Required:** Terminal defined for use with SMG routines **Keywords:** Mail

**Abstract:** LABELS is designed to allow the user to keep track of mailing label information (names, addresses, zip codes, etc.) and to be able to generate mailing labels from that information.

Currently the user can separate label information into 99 different "lists" within a single file. When generating labels the program allows for single or multiple lists to be included on the output. All output is sorted by zip code (up to ten digits xxxxx-xxxxx) for mailing purposes. Mailing label information consists of the following:

FIELD	LENGTH
. List number	2
. Sequence number	8
. Name field 1	28
. Name field 2	28
. Address	28
. City	20
. State	2
. Zip code	10

Output is set up for three-across labels measuring 7/16" high by 3 1/2" wide. The program uses SMG routines for screen-mode of data entry and is fairly easy to modify to suit individual needs. A logical, LBL\$FILE, is used to denote the name and location of the data file so different users can use different files.

LABELS should be "installed" for multiple users. No special privileges are required. See the source code for more information.

**Notes:** Operating system VAX/VMS V4.4 or later is required. Documentation is included as part of the source code.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VMS/BACKUP

**DECUS No:** VAX-291 **Title:** SYSTAT **Version:** 1.2, December 1987

**Submitted by:** Rick Stacks, Ark. Dept of Pollution Control & Ecology, Little Rock, AR

**Operating System:** VAX/VMS V4.4 **Source Language:** VAX FORTRAN **Hardware Required:** VT-100 terminal, VT-2XX terminal or terminal defined for use by SMG routines **Keywords:** System Management - VMS

**Abstract:** SYSTAT is a system status monitoring program set up similar to the old DECsystem-10 SYSTAT program. SYSTAT utilizes SMG routines to access and paint the screens. Help is on-line within the program by pressing the "H" key. A brief synopsis of the program is outlined below.

SYSTAT monitors the jobs, both interactive and batch, that are running on the system and displays the status of each job, including information regarding process name, pid, working set size, current/base priority, currently executing program name, direct I/O count, buffered I/O count, percentage of CPU used during last update interval, and the terminal which the process is currently logged-on.

The normal display, that which appears by running the program, is set for a fifteen second auto update, which can be changed by the user from one second to sixty seconds. A no-auto-update feature is also available. Be advised that the faster update intervals result in greater CPU demand, fifteen seconds seems to be an acceptable interval on our VAX running 6MB of memory and averaging 20-30 interactive users.

Other displays and options are available to the user. See program and source code for more information.

**Notes:** Should be "Installed" for best response. If "installed", Link/Notraceback and Install/priv = world/open/header/shared. Operating system VAX/VMS V4.4 or later is required.

Documentation not available.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VMS/BACKUP

**DECUS No:** VAX-292 **Title:** VFE - VMS File Editor **Version:** 3.0, December 1987

**Submitted by:** Ward Condit, Maricopa Community Colleges, Phoenix, AZ

**Operating System:** VAX/VMS V4.5 **Source Language:** MACRO-11 **Keywords:** Editors

**Abstract:** VFE is a type-insensitive editor that can edit user disk files in block or record mode, and disk devices and FOREIGN-mounted tapes in block mode. Data can be displayed in ASCII, EBCDIC, hex, integer and binary format. User-defined sections of data from single records and single or multiple contiguous blocks can be changed, compared, and transferred within a file

or between files. Records within RMS files can be changed, added or deleted, regardless of application data format. A very fast search is provided which can target a string, hex or integer constant. All or part of a terminal session can be logged to a sequential file for later lineprinter output.

Release notes are distributed with each order.

**Notes:** Must be relinked if operating system VAX/VMS is less than V4.5.

**Assoc. Documentation:** Fall 1987 VAX SIG Session Notes, pp. 467-476.

**Media (Service Charge Code):** User's Manual (EA), 600' Magnetic Tape (MA) Format: VMS/BACKUP

**DECUS No:** VAX-293 **Title:** VMS Performance Monitoring **Version:** December 1987

**Submitted by:** Samuel Charles Spriggs, E.I. DuPont, Wilmington, DE

**Operating System:** VAX/VMS **Source Language:** DCL **Software Required:** DATATRIEVE **Keywords:** System Management - VMS

**Abstract:** The VMS Performance Monitoring System provides a high-level overview of system "health", giving management information in the form of DATATRIEVE graphs. The graphs show trends in:

- . System response time (service level).
- . Users logged in.
- . Page faulting.
- . Disk capacity.
- . Disk I/O.
- . CPU idle time.

The data are current up to the last four-hour period.

The system can be used to raise flags to system management as to when tuning or additional capacity may be needed. The system requires minimum effort to install and support, and it uses very little system resource.

**Notes:** Operating system VAX/VMS V4.0 or higher is required.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VMS/BACKUP

**DECUS No:** VAX-294 **Title:** WEB Pack **Version:** 1.0, November 1987

**Submitted by:** E.W. Sewell, E-Systems, Garland Division, Dallas, TX

**Operating System:** VAX/VMS V4.5 **Source Language:** Modula-2, PASCAL **WEB Software Required:** DECUS Program No. V-SP-58, "LaTeX V2.09, TeX V2.0", PASCAL compiler, and Modula-2 compiler **Hardware Required:** Bitmapped printer for WEB listings and an appropriate TeX driver **Keywords:** PASCAL

**Abstract:** This package consists of programs based on Donald Knuth's WEB System of Structured Documentation, which is the programming methodology used to develop the TeX document compiler, the METAFONT typeface compiler, and all of the support programs for both.



The package is composed of the following:

- . MWEBEA variation of the WEB system which has been adapted to the Modula-2 Language (regular WEB uses PASCAL as its programming language).
- . WEBMERGE A program to merge multiple change files together (change files are used to make implementation-dependent changes to an implementation-independent base WEB file--the WEB processors allow only one change file per WEB file).
- . SCANTEX/  
SCANWEAVE Programs to strip out the parts of a WEB listing which have not been modified by a change file.
- . LaTeX The LaTeX sources for the slides used in Session LT005 (Literate Programming: The WEB System of Structured Documentation) at the DECUS Fall 1987 Symposium in Anaheim, CA, with the sample program used in the session.

WEB itself is not included in this submission. It is normally bundled with TeX and is available as DECUS Program No. V-SP-58,

"LaTeX V2.09, TeX V2.0", through the DECUS Program Library. TeX is required to use the system properly. WEB is included with it.

All of the documentation for these programs is in LaTeX source form. If you don't have a running TeX/WEB system, the programs will be useless. If you have TeX running, but not LaTeX, the DVI files are provided and can be sent directly to the TeX device driver for your output device.

**Assoc. Documentation:** The TeX system is described in the book,

"The TeXbook", 483 pages, (ISBN 0-201-13448-9) and is available through Addison and Wesley Publishers. The WEB system is described in the manual, "WEB". Information on these items can be obtained through the TeX User's Group, C/O American Mathematical Society, P.O. Box 9506, Providence, RI 02940-9506.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: VMS/BACKUP

#### NEW LIBRARY PROGRAMS AVAILABLE FOR THE PDP-11 FAMILY OF COMPUTERS

**DECUS No:** 11-896 Title: MODES Version: 3, August 1986

**Submitted by:** Peter V. DeVita, Reuters Information Services, Inc.

**Operating System:** RSX-11M-PLUS V2.1 or V3.0 **Source Language:** MACRO-11 **Memory Required:** 8KW plus 209 words of ICB Pool **Keywords:** System Management - RSX-11

**Abstract:** MODES is a CPU monitoring utility written for the RSX-11M-PLUS operating system. It is designed to look like the VAX/VMS Monitor Modes utility. Two switches are included:

- . /HARDCOPY to print the CPU statistics in a one line summary format on hardcopy terminals.
- . /LOG to print the /HARDCOPY statistics to a file instead of the hardcopy terminal.

A VAX/VMS PASCAL program is provided which can read in the ASCII text file generated by the /LOG switch and produce a histogram of the CPU utilization. This program allows the user to select the report interval and the resolution of the report generated.

**Restrictions:** Must be linked with LB: 1,54 RSX11M.STB. Requires system clock interrupt vector, restored on exit. Require 209 words of ICB Pool, also returned to system on exit.

**Media (Service Charge Code):** One RX01 Diskette (KA) Format: FILES-11, 600' Magnetic Tape (MA) Format: FILES-11

**DECUS No:** 11-897 Title: C Windows For RSX Version: 1, November 1987

**Submitted by:** Richard Neitzel, Golden, CO

**Operating System:** RSX-11M V4.2 **Source Language:** C **Software Required:** DECUS Program No. 11-SP-18 **Keywords:** Terminal Management, Utilities - RSX-11, VT100 Routines

**Abstract:** Users of the C language on RSX systems can use the routines in this package to implement a simple form of windowing on CRTs. They support multiple window buffers per task, as well as several windows per CRT from independent tasks. Routines are provided to perform output, input, cursor movement without output, vertical and horizontal line drawing and box drawings. The routines also provide a base for more complex windowing operations.

**Media (Service Charge Code):** One RX02 Diskette (LA) Format: FILES-11, 600' Magnetic Tape (MA) Format: FILES-11

**DECUS No:** 11-898 Title: Finger/RSX Version: December 1987

**Submitted by:** Thomas R. Wyant III, E.I. duPont de Nemours, Richmond, VA

**Operating System:** RSX-11M V4.0, RSX-11M-PLUS V3.0 **forward Source Language:** FORTRAN 77, MACRO-11 **Memory Required:** 28KW **Keywords:** Networking

**Abstract:** This program is an RSX implementation of an interface to DECUS Program No. V-SP-14, "Finger System: Network and Local Server", and provides similar functionality. In particular it performs the following:

- . Identifies current users of the system, when and where logged in, etc. The search is on the last name, with support for the wild card characters "\*" and "%".
- . Finds a specific user and displays the above information plus the contents of the user's FINGER.PLN file.
- . Serves as an in-bound DECnet server to allow searching for users on other nodes. Explicit route-through is supported to allow use in an internet environment.

No command line switches are supported. Switches will be preserved in a route-through operation, and ignored in a request to the local node.

The various pieces of FINGER/RSX functionality require system support as follows:

- . The display of FINGER.PLN and last login time requires multiuser protection.
- . The display of current system users and the use of "." to finger yourself requires accounting (and therefore RSX-11M-PLUS).
- . The display of information to or from remote systems requires DECnet.

**Notes:** Some functionality requires RSX-11M-PLUS.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: DOS-11

#### NEW UNIX SOFTWARE

**DECUS No:** UX-101 Title: Timberwolf Version: 3.2, March 1986

**Submitted by:** University of California at Berkeley, through Digital Equipment Corporation

**Operating System:** UNIX **Source Language:** C **Keywords:** Utilities -ULTRIX

**Abstract:** Timberwolf is an integrated set of placement and routing optimization programs. The general combinatorial optimization technique known as simulated annealing is used by each program. Programs for standard cell, macro/custom cell, and gate-array placement, as well as standard cell global routing have been developed. Experimental results on industrial circuits show that area savings over existing layout programs ranging from 15 to 62 percent are possible.

**Notes:** This program was developed by the Computer-Aided Design Group, Department of Electrical Engineering and Computer Sciences, University of California-Berkeley.

**Restrictions:** U.S. Government export regulations prohibit the distribution of this program outside the United States without the appropriate export licenses.

**Media (Service Charge Code):** User's Manual (EA), 600' Magnetic Tape (MA) Format: TAR

**DECUS No:** UX-103 Title: Mighty Version: 1.6, October 1986

**Submitted by:** University of California at Berkeley, through Digital Equipment Corporation

**Operating System:** UNIX/ULTRIX, VAX/VMS **Source Language:** C **Memory Required:** 720KB

**Abstract:** MIGHTY is a two layer detailed router for general routing problems, including switchboxes, channels, and partially routed areas. The routing regions that can be handled are very general: the boundaries can be described by any rectilinear chain, the pins can be on the boundaries of the region or inside it, and obstructions can be of any shape and form.

**Notes:** This program was developed by the Computer-Aided Design Group, Department of Electrical Engineering and Computer Sciences, University of California-Berkeley. Program is distributed on a TAR formatted tape.

**Restrictions:** U.S. Government export regulations prohibit the distribution of this program outside the United States without the appropriate export licenses.

**Media (Service Charge Code):** 600' Magnetic Tape (MA) Format: TAR

**DECUS No:** UX-104 Title: Wombat Version: October 1983

**Submitted by:** University of California at Berkeley, through Digital Equipment Corporation

**Operating System:** ULTRIX, UNIX V4.3BSD, VAX/VMS V4.2 **Source Language:** C **Memory Required:** 215KB

**Abstract:** Currently, most integrated circuit layouts are hand checked to determine their correctness. This manual procedure is very time-consuming and does not guarantee an error-free circuit. The WOMBAT program has been developed to overcome this problem.

WOMBAT compares two netlists. One is usually based on the simulator input and the other is often extracted from the layout. However, such is not necessarily the case and WOMBAT makes no assumptions about the number of pins or the technology of the circuit elements in the schematics. One can specify how the pins of individual elements permute as well as an initial correspondence between circuit elements and nets. WOMBAT generates a list of corresponding elements and nets and notes any differences.

Release notes are distributed with each order.

**Notes:** This program was developed by the Computer-Aided Design Group, Department of Electrical Engineering and Computer Sciences, University of California-Berkeley.

**Restrictions:** U.S. Government export regulations prohibit the distribution of this program outside the United States without the appropriate export licenses.

**Media (Service Charge Code):** User's Manual (EC), 600' Magnetic Tape (MA) Format: TAR



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You can submit material to the editor, Carmen Wiseman, or to the HMS SIG chair, Bill Walker. We can accept submissions in a wide variety of formats:

- o Items can be sent to the editor on VMS-format RX50s, TK50 cartridges, or IBM PC format 5 1/4" floppies. The SIG chair prefers RT-11 floppies but can handle any reasonable media.
- o Hard copy, like cash, is always acceptable. Camera-ready copy will save us a lot of typing, but we don't insist on it. You can also use the Hardware Submission Form in the "Questionnaires" section of the combined SIGs Newsletters.
- o Those of you with access to DCS can send things to WALKER or WISEMAN. DCS is usually checked on a daily basis.
- o You can reach the SIG chair on CompuServe as "Bill Walker 71066,24" or via EasyLink mailbox 62752448 or MCI Mail account 333-1675. You can reach the editor via EasyLink mailbox 62960090 (be sure to say ATTN: or TO: Carmen Wiseman somewhere in the body of the message).

If you have anything to submit, send it! If it is a mess, but we can read it, we will get it into the newsletter somehow. Finally, if you have any questions about submitting material, call one of us. The telephone numbers are listed below.

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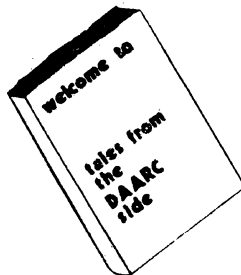
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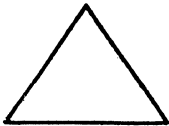
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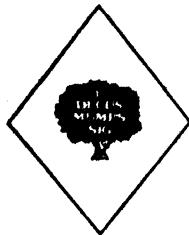
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Ask the WOMBAT WIZARD  
Submission Form

To submit a problem to the WIZARD, please fill out the form below  
and send it to:

WW Editor, Philip A. Naecker  
Consulting Software Engineer  
3011 North Mount Curve Avenue  
Altadena, CA 91001  
USA

Name: \_\_\_\_\_ DECUS Membership No. \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Statement of Problem: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please following the following guidelines when submitting support  
material:

1. If you are trying to demonstrate a method or a concept,  
please simplify the procedures, records, and other information  
to the shortest form possible.
2. Annotate your attachments. Simple comments or hand-written  
notes ("Everything worked until I added this statement.") go a  
long way toward identifying the problem.
3. Keep an exact copy of what you send. And number the pages  
on both copies. But send everything that is related to your  
question, even remotely.
4. If you would like a direct response or would like your  
materials returned, please don't forget to include a stamped,  
self-addressed envelope large enough to hold the materials you  
send.





DATATRIEVE/4GL SIG  
Product Improvement Request Submission Form

Submittor:  
Address:

DECUS Membership Number:  
Firm:

Phone:

Product or Products:

---

How to write a PIR

A PIR should be directed at a specific product or group of products. Be sure to give the full name of the product(s) and version numbers if applicable. Describe the functionality you would like to see in as complete terms as possible. Don't assume that the PIR editors or software developers know how it is done in some other software product - state specifically how you want the software to function. Provide justification of your request and give an example of its use. If you can, suggest a possible implementation of your request.

---

Abstract: (Please limit to one or two short sentences.)

---

Description and Examples: (Use additional pages as necessary.)

[Put my name and address on reverse side, thus:]

PIR Editor, Philip A. Naecker  
Consulting Software Engineer  
3011 North Mount Curve Avenue  
Altadena, CA 91001  
USA



DTR/4GL SIG Spring 1988  
PIR Ballot

DECUS Membership Number: \_\_\_\_\_

CPU Types (Check all that apply):

VAXes \_\_\_\_\_ PDP-11's \_\_\_\_\_ DECsystems \_\_\_\_\_ Other (Specify) \_\_\_\_\_

Application Types at your site (Check all that apply):

<input type="checkbox"/> Business EDP/MIS <input type="checkbox"/> Education <input type="checkbox"/> Office Automation <input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Software Development <input type="checkbox"/> Engineering/Scientific <input type="checkbox"/> Service Bureau
---	---

Number of years using computers: \_\_\_\_\_ Number of years using 4GL's: \_\_\_\_\_

Products Used (Check all that apply):

<input type="checkbox"/> DTR-11	<input type="checkbox"/> VAX-DTR	<input type="checkbox"/> CDD	<input type="checkbox"/> TDMS	<input type="checkbox"/> FMS
<input type="checkbox"/> DBMS(any)	<input type="checkbox"/> Rdb	<input type="checkbox"/> RALLY	<input type="checkbox"/> TEAMDATA	<input type="checkbox"/> DECReporter
<input type="checkbox"/> Powerhouse	<input type="checkbox"/> FOCUS	<input type="checkbox"/> Accent-R	<input type="checkbox"/> Oracle	<input type="checkbox"/> Ingress
<input type="checkbox"/> Other (Specify) _____				

PIR Number	Points	PIR Number	Points
<b>RALLY</b>		<b>VAX-DATATRIEVE (cont)</b>	
S88-1	_____	S88-22	_____
S88-2	_____	S88-23	_____
S88-3	_____	S88-24	_____
S88-4	_____	S88-25	_____
S88-5	_____	S88-26	_____
<b>VAX-DATATRIEVE</b>		S88-27	_____
S88-6	_____	S88-28	_____
S88-7	_____	S88-29	_____
S88-8	_____	S88-30	_____
S88-9	_____	S88-31	_____
S88-10	_____	S88-32	_____
S88-11	_____	S88-33	_____
S88-12	_____	TEAMDATA	(+-0)
S88-13	_____	S88-34	_____
S88-14	_____	S88-35	_____
S88-15	_____	DATATRIEVE-11	(+-0)
S88-16	_____	S88-36	_____
S88-17	_____	S88-37	_____
S88-18	_____	S88-38	_____
S88-19	_____	DECReporter	(+-0)
S88-20	_____	S88-39	_____
S88-21	_____	S88-40	_____

Return your ballot to arrive by April 18, 1988, to:

T.C. Wool  
E.I. duPont  
Engineering Department  
P.O. Box 6090  
Newark, DE 19714-6090





-----  
SUBMITTING ARTICLES TO HARD NEWS  
-----

The purpose of HARD NEWS, the HMS SIG newsletter, is to serve as a forum to share information related to DEC hardware with the members of the SIG. As such, the existence of the newsletter is entirely dependent on your contributions. If you have an HHK item, a better or safer way to do something, product news, a tutorial article of general interest, etc., we would like to publish it in the newsletter. We hope that HARD NEWS will be published at least six times a year.

You can submit material to the editor, Carmen Wiseman, or to the HMS SIG chair, Bill Walker. We can accept submissions in a wide variety of formats:

- o Items can be sent to the editor on VMS-format RX50s, TK50 cartridges, or IBM PC format 5 1/4" floppies. The SIG chair prefers RT-11 floppies but can handle any reasonable media.
- o Hard copy, like cash, is always acceptable. Camera-ready copy will save us a lot of typing, but we don't insist on it. You can also use the Hardware Submission Form in the "Questionnaires" section of the combined SIGs Newsletters.
- o Those of you with access to DCS can send things to WALKER or WISEMAN. DCS is usually checked on a daily basis.
- o You can reach the SIG chair on CompuServe as "Bill Walker 71066,24" or via EasyLink mailbox 62752448 or MCI Mail account 333-1675. You can reach the editor via EasyLink mailbox 62960090 (be sure to say ATTN: or TO: Carmen Wiseman somewhere in the body of the message).

If you have anything to submit, send it! If it is a mess, but we can read it, we will get it into the newsletter somehow. Finally, if you have any questions about submitting material, call one of us. The telephone numbers are listed below.

Contributions can be sent to:

William K. Walker		Carmen D. Wiseman
Monsanto Research Corp.	OR	Digital Review
P.O. Box 32 A-152	==	Prudential Tower, Suite 1390
Miamisburg, OH 45342		800 Boylston Street
(513) 865-3557 (work)		Boston, MA 02199
(513) 426-7094/0344 (home)		(617) 375-4361 (work)



\*H M S S I G\*

HARDWARE SUBMISSION FORM -- A SIG INFORMATION INTERCHANGE

Message

Contact  
Name

Address

Telephone

Type of equipment

SUBMIT ANY TYPE OF HARDWARE PROBLEMS AND/OR FIXES.

SEND TO:

William K. Walker  
Monsanto Research Corp.  
P.O. Box 32 A-152  
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OR  
==

Carmen D. Wiseman  
Digital Review  
Prudential Tower, Suite 1390  
800 Boylston Street  
Boston, MA 02199



IAS WHIMS

WHAT: (Describe your WHIM) (Please print or type)

WHY: (Describe the reason for the WHIM)

HOW: (Make any suggestions for a possible implementation)

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Please mail to:

Kathleen M. Anderson  
EATON Information Management  
Systems Division  
2017 Cunningham Drive  
Suite 208  
Hampton, Virginia 23666

Phone: (804) 326-1941



## MASTERS APPLICATION

Name: \_\_\_\_\_ Title \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Phone: (     ) \_\_\_\_\_  
 Network Address: \_\_\_\_\_ Date: \_\_\_\_\_

The Languages & Tools SIG has established the designation "LANGUAGES AND TOOLS MASTER", to be applied to selected, qualified people willing to share their expertise in various subjects with others. Masters are people who are knowledgeable enough in one or more languages or tools to be comfortable answering questions about them. The qualifications of an L&T Master are: expertise in a specific area, a willingness to have his/her name published as a Master, and a willingness to volunteer services in different ways. Each product may have several Masters, and there is an overall Masters Coordinator who is a member of the L&T Steering Committee.

Masters are asked to serve other users (and, under some circumstances, DEC), as a resource on products within their competence. In addition to being listed in the L&T Masters Directory (published in the newsletter) as available for occasional telephone consultation, Masters may act as 'Doctors' at Symposium Clinics, present Symposium sessions on the products of interest to them, field test products, interact with DEC product managers when appropriate, or act as a reference for a product for Digital salespeople. Especially on mature products, the SIG is anxious for knowledgeable users to offer product tutorial sessions at Symposia, and Masters can be of great help here. At Symposia, Masters will wear an identifying button bearing the legend "Ask Me About...." and the name of the language or tool in which he/she specializes.

If you'd like to serve as an L&T Master, please mark the products on which you are willing to answer questions with an "M" (for Master). Please mark any other products running at your site with an "A" (for "also running") to provide users with a broader picture of your facilities. (Although not an L&T product, Mumps is included here at the request of the Mumps SIG as a service to Mumps users). You may request removal of your name from the Masters Directory at any time, although you may continue to be listed for a month or two, because of publication lead times.

I am qualified to act as an L&T Master for the following products:  Mumps

- |                                    |                                |                              |                               |   |   |
|------------------------------------|--------------------------------|------------------------------|-------------------------------|---|---|
| <input type="checkbox"/> Debug     | <input type="checkbox"/> Bliss | <input type="checkbox"/> CMS | <input type="checkbox"/> TPU  | <input type="checkbox"/> C                | <input type="checkbox"/> Test Manager                                       |
| <input type="checkbox"/> Pascal    | <input type="checkbox"/> Basic | <input type="checkbox"/> MMS | <input type="checkbox"/> EVE  | <input type="checkbox"/> Ada <sup>1</sup> | <input type="checkbox"/> Runoff & DSR                                       |
| <input type="checkbox"/> Fortran   | <input type="checkbox"/> Cobol | <input type="checkbox"/> LSE | <input type="checkbox"/> EDT  | <input type="checkbox"/> APL              | <input type="checkbox"/> T <sub>E</sub> X & L <sup>A</sup> T <sub>E</sub> X |
| <input type="checkbox"/> Document  | <input type="checkbox"/> Dibol | <input type="checkbox"/> SCA | <input type="checkbox"/> TECO | <input type="checkbox"/> RPG              | <input type="checkbox"/> Cobol Generator                                    |
| <input type="checkbox"/> VAX Notes | <input type="checkbox"/> Emacs | <input type="checkbox"/> PCA | <input type="checkbox"/> PL/I | <input type="checkbox"/> Scan             | <input type="checkbox"/> Software Project Mgr                               |

Briefly describe your experience with those you checked. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

How long have you held your present position? \_\_\_\_\_  
 Are you able to attend at least one symposium each year? \_\_\_\_\_

Users are encouraged to seek assistance with products by calling appropriate Masters listed in the Directory. As a Master, your name and telephone number will be published in the Masters Directory, and users will call on you for limited help from time to time. Please check, below, any additional activities you might do:

- Field-test new versions of your product at your work site.
- Provide feedback on the product when needed by its DEC product manager.
- Act as a reference for the product at the request of Digital Sales or Marketing people.

Mail to: Dena Shelton, L&T SIG Masters Coordinator, Cullinet Software, Inc., 2860 Zanker Road, Suite 206, San Jose, CA 95134.





Languages & Tools SIG  
WISHLIST QUESTIONNAIRE

Name: \_\_\_\_\_ Title \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_ Phone: (     ) \_\_\_\_\_

Network Address: \_\_\_\_\_ Date: \_\_\_\_\_

The Languages & Tools SIG is principally concerned with the DEC and public domain software products listed below. If your request directly involves one of these products, please check which one (if you have more than one request, please use a separate form for each):

- |                                    |                                |                              |                               |   |   |
|------------------------------------|--------------------------------|------------------------------|-------------------------------|---|---|
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| <input type="checkbox"/> Pascal    | <input type="checkbox"/> Basic | <input type="checkbox"/> MMS | <input type="checkbox"/> EVE  | <input type="checkbox"/> Ada <sup>1</sup> | <input type="checkbox"/> Runoff & DSR                                       |
| <input type="checkbox"/> Fortran   | <input type="checkbox"/> Cobol | <input type="checkbox"/> LSE | <input type="checkbox"/> EDT  | <input type="checkbox"/> APL              | <input type="checkbox"/> T <sub>E</sub> X & L <sub>A</sub> T <sub>E</sub> X |
| <input type="checkbox"/> Document  | <input type="checkbox"/> Dibol | <input type="checkbox"/> SCA | <input type="checkbox"/> TECO | <input type="checkbox"/> RPG              | <input type="checkbox"/> Cobol Generator                                    |
| <input type="checkbox"/> VAX Notes | <input type="checkbox"/> Emacs | <input type="checkbox"/> PCA | <input type="checkbox"/> PL/I | <input type="checkbox"/> Scan             | <input type="checkbox"/> Software Project Mgr                               |

If your request or suggestion doesn't relate to one of the products listed above, check which one of the following Language & Tools SIG topics it concerns:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Newsletter                 | <input type="checkbox"/> Symposium Sessions       | <input type="checkbox"/> Pre-Symposium Seminars |
| <input type="checkbox"/> Masters Program            | <input type="checkbox"/> Working Group Activities | <input type="checkbox"/> Session Notes          |
| <input type="checkbox"/> Information Folder         | <input type="checkbox"/> SIG Tape                 | <input type="checkbox"/> DECUS Store Item       |
| <input type="checkbox"/> Other L&T SIG topic: _____ |   |   |

Wish List Request—brief description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complete description—please explain your request thoroughly; don't assume we know details of other products or services; give examples. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
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\_\_\_\_\_

Mail to: Shava Nerad, L&T Wishlist Coordinator, MIT, 77 Mass Ave. W91-219A, Cambridge, MA 02139; (617)253-7438



# DATAGRAM

DATAGRAMs are short messages, comments, requests, or answers that are published in NETwords. Please fill in the sections below and send the DATAGRAM to:

JUDI MANDL  
UCONN HEALTH CENTER  
263 FARMINGTON AVENUE, BLDG. #19  
FARMINGTON, CT 06032

Title: \_\_\_\_\_

Message: \_\_\_\_\_

\_\_\_\_\_  
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Your Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

If this is a reply to a previous DATAGRAM, what #? \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Stamp  
Here**

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UCONN HEALTH CENTER  
263 FARMINGTON AVENUE, BLDG. #19  
FARMINGTON, CT 06032

---

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**E. Catherine Ditamore  
ARA Services  
Corp MIS  
The ARA Tower  
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Philadelphia, Pa. 19107**

**RT-11 WISH LIST SURVEY**

Name (optional) \_\_\_\_\_

Address (optional) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DECUS Number (optional) -----

- |      |       |      |       |       |       |       |       |      |       |
|------|-------|------|-------|-------|-------|-------|-------|------|-------|
| 1.1  | _____ | 3.1  | _____ | 3.7u  | _____ | 3.13a | _____ | 5.1b | _____ |
| 1.2  | _____ | 3.2a | _____ | 3.7v  | _____ | 3.13b | _____ | 5.2a | _____ |
| 1.3  | _____ | 3.2b | _____ | 3.7w  | _____ | 3.13c | _____ | 5.2b | _____ |
| 1.4  | _____ | 3.2c | _____ | 3.7x  | _____ | 3.13d | _____ | 6.1  | _____ |
| 1.5  | _____ | 3.2d | _____ | 3.7y  | _____ | 3.14  | _____ | 6.2a | _____ |
| 1.6  | _____ | 3.2e | _____ | 3.7z  | _____ | 3.15  | _____ | 6.2b | _____ |
| 1.7a | _____ | 3.3a | _____ | 3.7aa | _____ | 3.16  | _____ | 6.2c | _____ |
| 1.7b | _____ | 3.3b | _____ | 3.7bb | _____ | 3.17a | _____ | 6.2d | _____ |
| 1.8  | _____ | 3.3c | _____ | 3.7cc | _____ | 3.17b | _____ | 6.3  | _____ |
| 1.9a | _____ | 3.3d | _____ | 3.7dd | _____ | 3.17c | _____ | 6.4a | _____ |
| 1.9b | _____ | 3.4a | _____ | 3.7ee | _____ | 3.17d | _____ | 6.4b | _____ |
| 1.9c | _____ | 3.4b | _____ | 3.8a  | _____ | 3.17e | _____ | 6.4c | _____ |
| 1.9d | _____ | 3.4c | _____ | 3.8b  | _____ | 3.17f | _____ | 6.4d | _____ |
| 1.10 | _____ | 3.5a | _____ | 3.8c  | _____ | 3.18  | _____ | 6.5  | _____ |
| 1.11 | _____ | 3.5b | _____ | 3.9a  | _____ | 3.19a | _____ | 6.6a | _____ |
| 1.12 | _____ | 3.6a | _____ | 3.9b  | _____ | 3.19b | _____ | 6.6b | _____ |
| 1.13 | _____ | 3.6b | _____ | 3.9c  | _____ | 3.19c | _____ | 6.6c | _____ |
| 1.14 | _____ | 3.6c | _____ | 3.9d  | _____ | 4.1   | _____ | 6.6d | _____ |
| 2.1  | _____ | 3.6d | _____ | 3.9e  | _____ | 4.2a  | _____ | 6.7  | _____ |
| 2.2  | _____ | 3.6e | _____ | 3.9f  | _____ | 4.2b  | _____ | 6.8a | _____ |
| 2.3  | _____ | 3.6f | _____ | 3.9g  | _____ | 4.3   | _____ | 6.8b | _____ |
| 2.4  | _____ | 3.6g | _____ | 3.9h  | _____ | 4.4a  | _____ | 6.8c | _____ |
| 2.5  | _____ | 3.7a | _____ | 3.9i  | _____ | 4.4b  | _____ | 6.8d | _____ |
| 2.6  | _____ | 3.7b | _____ | 3.9j  | _____ | 4.5a  | _____ | 6.8e | _____ |
| 2.7  | _____ | 3.7c | _____ | 3.9k  | _____ | 4.5b  | _____ | 7.   | _____ |
| 2.8  | _____ | 3.7d | _____ | 3.10a | _____ | 4.6   | _____ | 8.   | _____ |
| 2.9  | _____ | 3.7e | _____ | 3.10b | _____ | 4.7a  | _____ | 9.1  | _____ |
| 2.10 | _____ | 3.7f | _____ | 3.10c | _____ | 4.7b  | _____ | 9.2a | _____ |
| 2.11 | _____ | 3.7g | _____ | 3.10d | _____ | 4.7c  | _____ | 9.2b | _____ |
| 2.12 | _____ | 3.7h | _____ | 3.10e | _____ | 4.7d  | _____ | 9.3a | _____ |
| 2.13 | _____ | 3.7i | _____ | 3.10f | _____ | 4.7e  | _____ | 9.3b | _____ |
| 2.14 | _____ | 3.7j | _____ | 3.10g | _____ | 4.7f  | _____ | 10.1 | _____ |
| 2.15 | _____ | 3.7k | _____ | 3.10h | _____ | 4.7g  | _____ | 10.2 | _____ |
| 2.16 | _____ | 3.7l | _____ | 3.10i | _____ | 4.7h  | _____ | 10.3 | _____ |
| 2.17 | _____ | 3.7m | _____ | 3.10j | _____ | 4.7i  | _____ |      | _____ |
| 2.18 | _____ | 3.7n | _____ | 3.10k | _____ | 4.7j  | _____ |      | _____ |
| 2.19 | _____ | 3.7o | _____ | 3.10l | _____ | 4.7k  | _____ |      | _____ |
| 2.20 | _____ | 3.7p | _____ | 3.10m | _____ | 4.7l  | _____ |      | _____ |
| 2.21 | _____ | 3.7q | _____ | 3.10n | _____ | 4.7m  | _____ |      | _____ |
| 2.22 | _____ | 3.7r | _____ | 3.11a | _____ | 4.7n  | _____ |      | _____ |
| 2.23 | _____ | 3.7s | _____ | 3.11b | _____ | 4.7o  | _____ |      | _____ |
| 2.24 | _____ | 3.7t | _____ | 3.12  | _____ | 5.1a  | _____ |      | _____ |

Send Responses to: RT-11 Wish List Survey  
 Multiware, Inc.  
 2121-B Second St. Suite 107  
 Davis, CA 95616





## System Improvement Request Submission Form

Page 1 of \_\_\_\_\_

---

Submittor:

Firm:

Address:

Phone:

---

How to write an SIR:

Describe the capability you would like to see available on VAX systems. Be as specific as possible. Please don't assume we know how it's done on the XYZ system. Justify why the capability would be useful and give an example of its use. If you wish, suggest a possible implementation of your request.

---

Abstract (Please limit to four lines):

---

Description and examples (use additional pages if required)

PAGESWAPPER - March 1988 - Volume 9 Number 8  
System Improvement Request Submission Form

Tear out or photocopy reverse to submit an SIR

Mark D. Oakley  
Battelle Columbus Division  
Room 11-6-008  
505 King Avenue  
Columbus, Ohio 43201-2369  
USA

## VAX Systems SIG Spring 1988 SIR Ballot

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Our site uses the following VAX cpus (check all that apply)

8700/8800 \_\_\_\_\_ 86nn \_\_\_\_\_ 85nn \_\_\_\_\_ 83nn/82nn \_\_\_\_\_  
11/780,11/782,11/785 \_\_\_\_\_ 11/750 \_\_\_\_\_ 11/730,11/725 \_\_\_\_\_  
MicroVAX I,II \_\_\_\_\_ MicroVAX 2000 \_\_\_\_\_ MicroVAX 3n00 \_\_\_\_\_

We use VAXes in the following applications (Check all that apply)

Business EDP _____	Software Development _____
Education _____	Computer Science Research _____
Data Acquisition/Control _____	CAD/CAM _____
Service Bureau _____	Hardware Development _____
Scientific/Engineering _____	Office Automation _____
Telecommunications _____	Other _____

I support the following as the most important System Improvement Requests. (List from zero to fifteen SIR's):

-----  
-----  
-----

I oppose the following SIR's as detrimental. (List from zero to five SIR's):

-----

Mail to:

Mark D. Oakley  
Battelle Columbus Division  
Room 11-6008  
505 King Avenue  
Columbus, OH 43201-2693  
USA

To be counted, your ballot must be received by April 8.

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Tear out or photocopy reverse to vote on SIRs

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