

A large, stylized letter 'A' is formed using the characters 'S' and 'Y'. The letter is symmetrical and composed of multiple rows of these characters. The top of the 'A' is formed by a row of 'S's, followed by rows of 'Y's and 'S's. The middle section consists of a row of 'Y's, followed by rows of 'S's and 'Y's. The bottom of the 'A' is formed by a row of 'S's, followed by rows of 'Y's and 'S's. The overall shape is a wide, triangular letter 'A' with a central vertical stem.

[illegible]

(1) 50
(2) 79
(4) 206

DECLARATIONS
PURGWS - Purge Working Set
PURGWSSCN - Scan Working Set to Purge Pages

```
0000 1      .TITLE SYSPURGWS - Purge Working Set System Service
0000 2      .IDENT 'V04-000'
0000 3
0000 4      *****
0000 5
0000 6      *
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0000 24      *
0000 25      *****
0000 26
0000 27      ++
0000 28      FACILITY:
0000 29
0000 30      ABSTRACT:
0000 31
0000 32      ENVIRONMENT:
0000 33
0000 34      AUTHOR: PETER H. LIPMAN      , CREATION DATE: 22-MAY-78
0000 35
0000 36      MODIFIED BY:
0000 37
0000 38      V03-003 TCM0001      Trudy C. Matthews      1-Apr-1983
0000 39      Change references to working set fields in PHD so that
0000 40      they are used as unsigned words.
0000 41
0000 42      V03-002 WMC0001      Wayne Cardoza      10-Mar-1983
0000 43      Change use of MMG$CRECOM2 to individual calls.
0000 44
0000 45      V03-001 LJK0194      Lawrence J. Kenah      31-Jan-1983
0000 46      Insure that simplifying assumption remains valid while
0000 47      removing global pages from working set.
0000 48      --
```

```

0000 50      .SBTTL  DECLARATIONS
0000 51      :
0000 52      : INCLUDE FILES:
0000 53      :
0000 54      $IPLDEF      ;Processor priority levels
0000 55      $MMGDEF      ; Offsets from FP into scratch area
0000 56      $PCBDEF      ;Process control block definitions
0000 57      $PFNDEF      ;Page frame number data base definitions
0000 58      $PHDDEF      ;Process header definitions
0000 59      $PRDEF       ;Processor register definitions
0000 60      $PSLDEF      ;Processor status long word definitions
0000 61      $PTEDEF      ;Page table entry definitions
0000 62      $SSDEF       ;System status code definitions
0000 63      $WSLDEF      ;Working set list definitions
0000 64      :
0000 65      : MACROS:
0000 66      :
0000 67      :
0000 68      :
0000 69      : EQUATED SYMBOLS:
0000 70      :
0000 71      : Offset from AP
0000 72      :
00000004 0000 73      INADR      = 4      ;Offset to input range
0000 74      :
0000 75      : OWN STORAGE:
0000 76      :
0000 77      .LIST  MEB

```



```
0000 79 .SBTTL PURGWS - Purge Working Set
0000 80 :++
0000 81 : FUNCTIONAL DESCRIPTION:
0000 82 :
0000 83 :
0000 84 : CALLING SEQUENCE:
0000 85 :
0000 86 : CALLG  ARGLIST,G^SYSS$PURGWS
0000 87 :
0000 88 :
0000 89 : INPUT PARAMETERS:
0000 90 :
0000 91 : INADR(AP) = Address of 2 long words the 1st of which specifies
0000 92 : the starting virtual address to purge, the 2nd specifies
0000 93 : the ending virtual address to purge (inclusive).
0000 94 :
0000 95 : IMPLICIT INPUTS:
0000 96 : NONE
0000 97 :
0000 98 : OUTPUT PARAMETERS:
0000 99 :
0000 100 : R0 = System status code
0000 101 :
0000 102 : IMPLICIT OUTPUTS:
0000 103 :
0000 104 : NONE
0000 105 :
0000 106 : COMPLETION CODES:
0000 107 :
0000 108 : SSS_NORMAL ;Successful completion
0000 109 : SSS_ACCVIO ;Access violation
0000 110 :
0000 111 : SIDE EFFECTS:
0000 112 : NONE
0000 113 :
0000 114 : --
0000 115 :
0000 116 : *****
0000 117 :
0000 118 : ***** THE FOLLOWING CODE MAY BE PAGED *****
0000 119 :
0000 120 : .PSECT YSEXEPAGED
0000 121 :
0000 122 : *****
0000 123 :
0000 124 : .ENTRY  EXE$PURGWS,^M<R2,R3,R4,R5,R6,R7,R8>
0000 125 :
0000 126 : MOVAB  B^MMG$PURGWSPAG,R6 ;Address of purge subroutine
0000 127 : SUBL   S^#-MMG$C_LENGTH,SP ;Reserve scratch area
0000 128 : MOVL   INADR(AP),R2 ;Get address range parameter
0000 129 : BEQL   20$ ;Branch if none specified
0000 130 : IFNORD #8,(R2),20$ ;Branch if not readable by caller
0000 131 : PROBER #0,#8,(R2)
0000 132 : BEQL   20$
0000 133 : MOVQ   (R2),R2 ;R2 = STARTVA, R3 = ENDVA
0000 134 : CLRL   B^MMG$S_SAVRETADR(FP) ;Init return range
0000 135 : CLRL   B^MMG$S_CALLEDIPL(FP) ;Init called IPL
```

56 3B'AF 9E 0002 126 MOVAB B^MMG\$PURGWSPAG,R6 ;Address of purge subroutine
5E 1C C2 0006 127 SUBL S^#-MMG\$C_LENGTH,SP ;Reserve scratch area
52 04 AC D0 0009 128 MOVL INADR(AP),R2 ;Get address range parameter
28 13 000D 129 BEQL 20\$;Branch if none specified
000F 130 IFNORD #8,(R2),20\$;Branch if not readable by caller
62 08 00 0C 000F 131 PROBER #0,#8,(R2)
22 13 0013 132 BEQL 20\$
52 62 7D 0015 133 MOVQ (R2),R2 ;R2 = STARTVA, R3 = ENDVA
F4 AD D4 0018 134 CLRL B^MMG\$S_SAVRETADR(FP) ;Init return range
F8 AD D4 001B 135 CLRL B^MMG\$S_CALLEDIPL(FP) ;Init called IPL

```
02 50 DC 001E 134      MOVPSL R0      ;Get Processor Status
FC AD 16 EF 0020 135      EXTZV      #PSLSV PRVMOD,#PSLSS PRVMOD,- ;Set access mode
      50      0023 136      R0,B^MMGSL MAXACMODE7FP) ;from caller's mode
      0026 137      SETIPL      #IPLS_ASTDEL ;Raise to ASTDEL
12 02 DA 0026 138      MTPR      #IPLS_ASTDEL,S^#PRS IPL
      FFD4' 30 0029 138      BSBW      MMG$CREDEL ;Common code for range handling
      50 DD 002C 139      PUSHL      R0
      FFCF' 30 002E 140      BSBW      MMG$RETRANGE
02 50 E9 0031 141      BLBC      R0,10$
      50 BA 0034 142      POPR      R0
      04 0036 143 10$:      RET      ;Exit from service
      0037 144      :
      0037 145      : No input address range was specified, or the caller could not read it.
      0037 146      :
50 0C 3C 0037 147 20$:      MOVZWL #SS$_ACCVIO,R0 ;Return error if no input range
      04 003A 148      RET
```

```
003B 150 :++  
003B 151 : FUNCTIONAL DESCRIPTION:  
003B 152 :  
003B 153 :  
003B 154 : CALLING SEQUENCE:  
003B 155 :  
003B 156 :     BSBW     MMG$PURGWSPAG  
003B 157 :  
003B 158 :  
003B 159 : INPUT PARAMETERS:  
003B 160 :  
003B 161 :     R0 = ACCESS MODE TO CHECK AGAINST PAGE OWNER  
003B 162 :     R2 = VIRTUAL ADDRESS (LOW 9 BITS = 0)  
003B 163 :     R4 = PCB ADDRESS  
003B 164 :     R5 = PROCESS HEADER ADDRESS - P1 OR SYSTEM SPACE  
003B 165 :     R6 = COUNT - 1 OF PAGES REMAINING TO BE DELETED INCLUDING THIS ONE  
003B 166 :     R7 = +^X200 IF GOING FORWARD IN ADDRESS SPACE  
003B 167 :         = -^X200 IF GOING BACKWARDS IN ADDRESS SPACE  
003B 168 :     IPL = ASTLVL  
003B 169 :  
003B 170 : IMPLICIT INPUTS:  
003B 171 :     NONE  
003B 172 :  
003B 173 : OUTPUT PARAMETERS:  
003B 174 :  
003B 175 :     R0 = STATUS CODE  
003B 176 :     R2 = Address of last page processed  
003B 177 :     R6 = Count of pages remaining ( - 1) to process  
003B 178 :  
003B 179 : IMPLICIT OUTPUTS:  
003B 180 :     NONE  
003B 181 :  
003B 182 : COMPLETION CODES:  
003B 183 :  
003B 184 :     SSS_NORMAL                                ;SUCCESSFUL RETURN  
003B 185 :  
003B 186 : SIDE EFFECTS:  
003B 187 :     NONE  
003B 188 :  
003B 189 : --  
003B 190 :  
003B 191 : *****  
003B 192 : ***** THE FOLLOWING CODE MAY BE PAGED *****  
003B 193 :  
0000003B 194 :  
0000003B 195 :     .PSECT Y$EXEPAGED  
003B 196 :  
003B 197 : *****  
003B 198 :  
003B 199 : MMG$PURGWSPAG:  
003B 200 :     MOVL     #1,R8                                ;Purging general pages  
003B 201 :     JSB      MMG$PURGWSSCN                        ;Scan working set to purge the pages  
003B 202 :     CLRL     R6                                    ;End of range  
003B 203 :     MOVZWL   #SSS_NORMAL,R0                       ;Successful completion  
003B 204 :     RSB
```

58 01 D0
00000003'EF 16
56 D4
50 01 3C
05 0049


```
004A 206      .SBTTL PURGWSSCN - Scan Working Set to Purge Pages
004A 207      :++
004A 208      : FUNCTIONAL DESCRIPTION:
004A 209      :
004A 210      :     This routine is called to do a scan of the working set list
004A 211      :     for pages in the specified virtual address range and delete those
004A 212      :     pages from the working set list.
004A 213      :
004A 214      : CALLING SEQUENCE:
004A 215      :
004A 216      :     BSBW      MMG$PURGWSSCN
004A 217      :
004A 218      : INPUT PARAMETERS:
004A 219      :
004A 220      :     R0 = Access mode in low byte, flags in rest
004A 221      :     R2 = STARTVA
004A 222      :     R4 = Process Control Block
004A 223      :     R5 = Process Header Address (P1 space ok)
004A 224      :     R6 = Number of pages - 1 remaining in range of pages
004A 225      :     R7 = +^X200 if going forward in the address space
004A 226      :     = -^X200 if going backwards in the address space
004A 227      :     R8 = 0 if scanning only for global pages in the specified range
004A 228      :         Used by MMG$DELPAG when a GLOBAL page is found in the range
004A 229      :         = 1 if scanning for any pages in the specified range
004A 230      :         Used by the $PURGWS System Service
004A 231      :
004A 232      : IMPLICIT INPUTS:
004A 233      :
004A 234      :     NONE
004A 235      :
004A 236      : OUTPUT PARAMETERS:
004A 237      :
004A 238      :     R0,R2 PRESERVED
004A 239      :     R8 = RESOURCE TO WAIT FOR ON A FAILED GLOBAL SCAN
004A 240      :
004A 241      : IMPLICIT OUTPUTS:
004A 242      :
004A 243      :     NONE
004A 244      :
004A 245      : COMPLETION CODES:
004A 246      :
004A 247      :     NONE
004A 248      :
004A 249      : SIDE EFFECTS:
004A 250      :
004A 251      :     NONE
004A 252      :
004A 253      :--
```

```
004A 255 :  
004A 256 : *****  
004A 257 :  
004A 258 : ***** THE FOLLOWING CODE MUST BE RESIDENT *****  
004A 259 :  
00000000 260 .PSECT $MMGCOD  
0000 261 :  
0000 262 : *****  
0000 263 :  
0000 264 .ENABL LSB  
0000 265  
00BF 31 0000 266 PURGWS_EMPTY:  
0003 267 BRW 80$ ;No pages to be purged  
0003 268  
0003 269 MMG$PURGWSSCN::  
0003 270 DSBINT #IPL$_SYNCH ;Save called IPL, raise to SYNCH  
7E 12 DB 0003 MFPR S^#PR$ IPL,-(SP)  
12 08 DA 0006 MTPR #IPL$_SYNCH,S^#PR$ IPL  
0009 271 ;no swapping while scanning the WSL  
51 0C A5 3C 0009 272 MOVZWL PHD$W_WSLOCK(R5),R1 ;Start scanning with locked pages  
000D 273 ;if this is a GLOBAL scan  
7E 34 A4 3C 000D 274 MOVZWL PCB$W_GPGCNT(R4),-(SP) ;Count of GLOBAL pages in WSL  
10 58 E9 0011 275 BLBC R8,5$ ;Branch if scanning for GLOBAL pages  
51 0E A5 3C 0014 276 MOVZWL PHD$W_WSDYN(R5),R1 ;Don't consider the locked pages  
0018 277 ;when scanning for all page types  
6E 36 A4 A0 0018 278 ADDW PCB$W_PPGCNT(R4),(SP) ;Calculate number of WSL entries  
53 51 08 A5 A3 001C 279 SUBW3 PHD$W_WSLIST(R5),R1,R3 ;Number of entries in locked area  
6E 53 A2 0021 280 SUBW R3,(SP) ;Entry count = GPGCNT + PPGCNT - Locked  
DA 13 0024 281 5$: BEQL PURGWS_EMPTY ;Branch if no entries to scan  
05 BB 0026 282 PUSH R #^M<R0,R2> ;Save STARTVA, access mode  
0B 57 1F E0 0028 283 BBS #31,R7,10$ ;Branch if going backwards  
53 52 F7 8F 78 002C 284 ASHL #-9,R2,R3 ;Low virtual page number  
50 53 56 C1 0031 285 ADDL3 R6,R3,R0 ;High virtual page number  
09 11 0035 286 BRB 20$  
50 52 F7 8F 78 0037 287 10$: ASHL #-9,R2,R0 ;High virtual page number  
53 50 56 C3 003C 288 SUBL3 R6,R0,R3 ;Low virtual page number  
09 BB 0040 289 20$: PUSH R #^M<R0,R3> ;Push high VPN, low VPN  
0042 290 :  
0042 291 : 0(SP) = High virtual page number  
0042 292 : 4(SP) = Low virtual page number  
0042 293 : 8(SP) = Access mode  
0042 294 : 12(SP) = Saved STARVA  
0042 295 : 16(SP) = Count of pages to scan for  
0042 296 : 20(SP) = Saved caller's IPL  
0042 297 :  
52 6541 D0 0042 298 24$: MOVL (R5)[R1],R2 ;Fetch next WSLE  
68 52 E9 0046 299 BLBC R2,60$ ;Branch if not valid  
07 58 E9 0049 300 BLBC R8,26$ ;Branch if just scanning for GLOBALS  
52 30 93 004C 301 BITB #<WSL$M_WSLOCK ! WSL$M_PFNLOCK>,R2 ;All page types,  
09 13 004F 302 BEQL 28$ ;but no locked ones  
59 11 0051 303 BRB 50$  
02 52 03 01 EC 0053 304 26$: CMPV #WSL$V_PAGTYP,#WSL$S_PAGTYP,R2,#PFN$C GLOBAL ;GLOBAL page?  
57 19 0058 305 BLSS 60$ ;Branch if not  
50 52 F7 8F 78 005A 306 28$: ASHL #-9,R2,R0 ;Get virtual page number  
0B 19 005F 307 BLSS 32$ ;If system address, then discard it.  
0061 308 ;It is a page table page which is not  
0061 309 ;locked in the working set.
```



```
04 AE 50 D1 0061 310 CMPL R0,4(SP) ;Above the low address?
      45 19 0065 311 BLSS 50$ ;Branch if no
      6E 50 D1 0067 312 CMPL R0,(SP) ;Below the high address?
      40 14 006A 313 BGTR 50$ ;Branch if no
      51 FF8F' DD 006C 314 32$: PUSHL R1 ;Save the working set list index
      52 6E 30 006E 315 BSBW MMG$SVAPTECHK ;Get the SVAPTE in R3
      30 93 0071 316 MOVL (SP),R1 ;Recover WSLX
      2B 13 0074 317 BITB #<WSLSM_WSLOCK ! WSLSM_PFNLOCK>,R2 ;Is this entry locked?
      50 0C AE 9A 0077 318 BEQL 35$ ;Branch if not
      63 02 17 ED 007D 319 MOVZBL <8+4>(SP),R0 ;Get access mode to check
      02 26 19 0082 320 CMPZV #PTESV_OWN,#PTESV_OWN,(R3),R0 ;Legal to unlock the page?
      58 DD 0084 321 BLSS 40$ ;Branch if not, just skip it.
      53 DD 0086 322 PUSHL R8 ;Save registers
      FF75' 30 0088 323 PUSHL R3 ;altered by unlock WSLE logic
      43 50 E9 008B 324 BSBW MMG$ULKGBLWSLE ;Unlock WSLE for GLOBAL page
      0108 8F BA 008E 325 BLBC R0,100$ ;Error status should not be returned
      51 0E A5 3C 0092 326 POPR #^M<R3,R8> ;Recover saved registers
      0096 327 MOVZWL PHDSW_WSDYN(R5),R1 ;New WSLX for this page
      0096 328
      0096 329 ; R0 is available as scratch for the following calculation
      50 52 6541 CD 0096 331 XORL3 (R5)[R1],R2,R0 ;Insure that PTE located by R1 and
      50 50 F7 8F 78 009B 332 ASHL #-9,R0,R0 ; contents of R2 differ only in flag bits
      33 12 00A0 333 BNEQ 110$ ;Step out of line if disagreement
      6E D7 00A2 334 DECL (SP) ;Continue scanning from original wslx
      FF59' 30 00A4 335 35$: BSBW MMG$FREWSLX ;Delete working set list entry
      1F 50 E9 00A7 336 BLBC R0,90$ ;Branch if need to wait for page file
      02 BA 00AA 337 40$: POPR #^M<R1> ;Recover WSLX to continue scan from
      10 AE D7 00AC 338 50$: DECL 16(SP) ;Count another page found
      0C 15 00AF 339 BLEQ 70$ ;Branch if no more to look for
      51 D6 00B1 340 60$: INCL R1 ;Step to next entry
      12 A5 51 B1 00B3 341 CMPW R1,PHDSW_WSLAST(R5) ;Are we at the end?
      89 1B 00B7 342 BLEQU 24$ ;Branch if more
      00B9 343
      00B9 344 ; Did not find the calculated number of pages in the working set.
      00B9 345
      00B9 346 BUG_CHECK WSLPAGCNT,FATAL ;Working set list page count error
      FEFF 00B9 .WORD ^XFÉFF
      0004' 00BB .IIF IDN <FATAL>,<FATAL> .WORD BUG$ WSLPAGCNT!4
      5E 08 C0 00BD 347 70$: ADDL #2*4,SP ;Clean off page numbers
      05 BA 00C0 348 POPR #^M<R0,R2> ;Restore R0 = access mode, R2 = STARTVA
      5E 04 C0 00C2 349 80$: ADDL #1*4,SP ;Clean off page count
      00C5 350 ENBINT ;Restore caller's IPL
      12 8E DA 00C5 351 MTPR (SP)+,S^#PR$_IPL ;and exit to it
      05 00C8 352 RSB
      00C9 353 ; FREWSLX needed to allocate page file and couldn't
      00C9 354
      00C9 355 90$: BLBS R8,40$ ;Leave it in working set if $PURGWS
      DE 58 E8 00C9 356 MOVL R1,R8 ;Resource to wait for
      58 51 D0 00CC 357 BRB 70$ ;Go back
      EC 11 00CF 358
      00D1 359 ; Error in unlocking a locked global page or
      00D1 360 ; in freeing page from the working set list.
      00D1 361
      00D1 362 100$: BUG_CHECK PURGWSSCN,FATAL
      FEFF 00D1 .WORD ^XFÉFF
```

```

0004' 00D3      .IIF IDN <FATAL>,<FATAL> , .WORD      BUG$_PURGWSSCN!4
      00D5      363
      00D5      364 ; The first dynamic working set list entry does not agree with the contents
      00D5      365 ; of other registers. The operation must be restarted at a place in the
      00D5      366 ; working set list appropriate to the type of operation in progress.
      00D5      367
5E      04      C0 00D5      368 110$: ADDL      #4,SP      ;Discard current WSLX
      F6 58      E8 00D8      369      BLBS      R8,100$      ;Shouldn't be here except for globals
51      OC A5      3C 00DB      370      MOVZWL   PHD$W_WSLOCK(R5),R1 ;Start at the top of the list again
      FF60      31 00DF      371 120$: BRW      24$      ;... and also at the top of the loop
      00E2      372
      00E2      373      .DSABL   LSB
      00E2      374
      00E2      375      .END

```


SYSPURGWS
Symbol table

- Purge Working Set System Service M 7

16-SEP-1984 02:25:32
5-SEP-1984 03:56:10VAX/VMS Macro V04-00
[SYS.SRC]SYSPURGWS.MAR;1Page 10
(5)

```
BUG$ PURGWSSCN          ***** X 03
BUG$ WSLPAGCNT          ***** X 03
EX$ PURGWS              00000000 RG 02
INADR                  = 00000004
IPL$ ASTDEL            = 00000002
IPL$ SYNCH             = 00000008
MMG$ CREDEL            ***** X 02
MMG$ LENGTH            = FFFFFFFE4
MMG$ FREWSLX           ***** X 03
MMG$ CALLEDIPL         = FFFFFFFF8
MMG$ MAXACMODE         = FFFFFFFFC
MMG$ SAVRETADR         = FFFFFFFF4
MMG$ PURGWSPAG         0000003B R 02
MMG$ PURGWSSCN         00000003 RG 03
MMG$ RETRANGE          ***** X 02
MMG$ SVAPTECHK         ***** X 03
MMG$ SULKGBLWSLE       ***** X 03
PCBSW GPGCNT          = 00000034
PCBSW PPGCNT          = 00000036
PFNSC GLOBAL          = 00000002
PHDSW WSDYN           = 0000000E
PHDSW WSLAST          = 00000012
PHDSW WSLIST          = 00000008
PHDSW WSLOCK          = 0000000C
PRS IPL               = 00000012
PSL$S PRVMOD          = 00000002
PSL$V PRVMOD          = 00000016
PTE$S OWN             = 00000002
PTE$V OWN             = 00000017
PURGWS EMPTY          00000000 R 03
SS$ ACCVIO            = 0000000C
SS$ NORMAL            = 00000001
WSL$M PFNLOCK         = 00000010
WSL$M WSLOCK          = 00000020
WSL$S PAGTYP          = 00000003
WSL$V PAGTYP          = 00000001
```

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
Y\$EXEPAGED	0000004A (74.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE
\$MMGCOD	000000E2 (226.)	03 (3.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.07	00:00:00.42
Command processing	119	00:00:00.58	00:00:01.25
Pass 1	301	00:00:08.83	00:00:17.51

SYSPURGWS
VAX-11 Macro Run Statistics

- Purge Working Set System Service N 7

16-SEP-1984 02:25:32 VAX/VMS Macro V04-00
5-SEP-1984 03:56:10 [SYS.SRC]SYSPURGWS.MAR;1

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(5)

Symbol table sort	0	00:00:01.42	00:00:03.36
Pass 2	82	00:00:01.77	00:00:04.50
Symbol table output	6	00:00:00.05	00:00:00.09
Psect synopsis output	2	00:00:00.03	00:00:00.06
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	541	00:00:12.75	00:00:27.21

The working set limit was 1200 pages.

50979 bytes (100 pages) of virtual memory were used to buffer the intermediate code.

There were 50 pages of symbol table space allocated to hold 932 non-local and 19 local symbols.

375 source lines were read in Pass 1, producing 18 object records in Pass 2.

22 pages of virtual memory were used to define 21 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

Macros defined

_ \$255\$DUA28:[SYS.OBJ]LIB.MLB;1
_ \$255\$DUA28:[SYSLIB]STARLET.MLB;2
TOTALS (all libraries)

12
6
18

1053 GETS were required to define 18 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:SYSPURGWS/OBJ=OBJ\$:SYSPURGWS MSRC\$:SYSPURGWS/UPDATE=(ENH\$:SYSPURGWS)+EXECMLS/LIB

0387 AH-BT13A-SE
VAX/VMS V4.0

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