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CCCCCCCC  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG  EEEEEEEEE
CCCCCCCC  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG  EEEEEEEEE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CC         AA      AA      RRRRRRRR  AA      AA      GG      GG      EEEEEEEE
CC         AA      AA      RRRRRRRR  AA      AA      GG      GG      EEEEEEEE
CC         AAAAAAAAAA  RR  RR      AAAAAAAAAA  GG  GGGGGG  EE
CC         AAAAAAAAAA  RR  RR      AAAAAAAAAA  GG  GGGGGG  EE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CC         AA      AA      RR      RR      AA      AA      GG      GG      EE
CCCCCCCC  AA      AA      RR      RR      AA      AA      GGGGGG  EEEEEEEEE
CCCCCCCC  AA      AA      RR      RR      AA      AA      GGGGGG  EEEEEEEEE

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LL         IIIIII  SSSSSSSS
LL         IIIIII  SSSSSSSS
LL         II      SS
LL         II      SS
LL         II      SS
LL         II      SS
LL         II      SSSSSS
LL         II      SSSSSS
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LLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLL IIIIII  SSSSSSSS

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0001 0 MODULE CARAGE ( IDENT = 'V04-000'
P 0002 0      %BLISS32C, ADDRESSING_MODE (EXTERNAL = LONG_RELATIVE,
0003 0      ) =
0004 0
0005 1 BEGIN
0006 1
0007 1 *****
0008 1 *
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0025 1 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0026 1 *
0027 1 *
0028 1 *****
0029 1
0030 1
0031 1 ++
0032 1 FACILITY:      DSR (Digital Standard RUNOFF) / DSRPLUS
0033 1
0034 1 ABSTRACT:
0035 1
0036 1      Processes the .PAGE, .SKIP, .BLANK, .TEST PAGE,
0037 1      .BREAK, and .SPACING commands.
0038 1
0039 1 ENVIRONMENT:  Transportable
0040 1
0041 1 AUTHOR:      R.W.Friday      CREATION DATE:  May, 1978
0042 1

```

Revision History

```

: 44 0043 1 %SBTTL 'Revision History'
: 45 0044 1  MODIFIED BY:
: 46 0045 1
: 47 0046 1      006   KFA00006   Ken Alden   05-Aug-1983
: 48 0047 1      Added handling for .PAGE NOW (plus).
: 49 0048 1
: 50 0049 1      005   RER00005   Ron Randall  17-Mar-1983
: 51 0050 1      For DSRPLUS:
: 52 0051 1      In [h_skip], added code to test for negative skip in topnote.
: 53 0052 1
: 54 0053 1      004   KFA00004   Ken Alden   07-Mar-1983
: 55 0054 1      Global edit of all modules. Updated module names, idents,
: 56 0055 1      copyright dates. Changed require files to BLISS library.
: 57 0056 1      --
: 58 0057 1

```

Module Level Declarations

```
60 0058 1 %SBTTL 'Module Level Declarations'
61 0059 1
62 0060 1 : INCLUDE FILES:
63 0061 1
64 0062 1 LIBRARY 'NXPORT:XPORT'; : XPORT Library
65 0063 1 REQUIRE 'REQ:RNODEF'; : RUNOFF variant definitions
66 0194 1
67 U 0195 1 %IF DSRPLUS %THEN
68 U 0196 1 LIBRARY 'REQ:DPLLIB'; : DSRPLUS BLISS Library
69 0197 1 %ELSE
70 0198 1 LIBRARY 'REQ:DSRLIB'; : DSR BLISS Library
71 0199 1 %FI
72 0200 1
73 0201 1
74 0202 1 : EXTERNAL REFERENCES:
75 0203 1
76 0204 1 EXTERNAL
77 0205 1 FNCT : FNCT_DEFINITION,
78 0206 1 IRA : FIXED_STRING,
79 0207 1 MRA : REF_FIXED_STRING,
80 0208 1 NUMPRM : NUMPRM_DEFINE,
81 0209 1 PHAN : PHAN_DEFINITION,
82 0210 1 SCA : SCA_DEFINITION;
83 0211 1
84 U 0212 1 %IF DSRPLUS %THEN
85 U 0213 1 EXTERNAL
86 U 0214 1 TOPNOT : TN_DEFINITION;
87 U 0215 1
88 U 0216 1 EXTERNAL LITERAL
89 U 0217 1 RNFIIT;
90 0218 1 %FI
91 0219 1
92 0220 1 EXTERNAL LITERAL
93 0221 1 RNFIFT,
94 0222 1 RNFINM,
95 0223 1 RNFMNL;
96 0224 1
97 0225 1 EXTERNAL ROUTINE
98 0226 1 erma,
99 0227 1 gcpage,
100 0228 1 gcpos,
101 0229 1 gcskip,
102 0230 1 gtpc,
103 U 0231 1 %IF DSRPLUS %THEN
104 U 0232 1 newpag,
105 0233 1 %FI
106 0234 1 tpffit,
107 0235 1 tpfsiz;
108 0236 1
```

```

110 0237 1 GLOBAL ROUTINE carage (handler_code) : NOVALUE =
111 0238 1
112 0239 1 !++
113 0240 1 FUNCTIONAL DESCRIPTION:
114 0241 1
115 0242 1     See the ABSTRACT, above.
116 0243 1
117 0244 1 FORMAL PARAMETERS:
118 0245 1
119 0246 1     handler_code - Indicates which command is to be processed.
120 0247 1
121 0248 1 IMPLICIT INPUTS:
122 0249 1
123 0250 1     numprm - Expected to contain a number, as processed by GETNUM.
124 0251 1
125 0252 1 IMPLICIT OUTPUTS:      None
126 0253 1
127 0254 1 ROUTINE VALUE:
128 0255 1 COMPLETION CODES:      None
129 0256 1
130 0257 1 SIDE EFFECTS:          None
131 0258 1 --
132 0259 1
133 0260 2 BEGIN
134 0261 2
135 0262 2     ! Some commands take a number.
136 0263 2     IF (.HANDLER_CODE NEQ H_BREAK) AND
137 0264 2         (.HANDLER_CODE NEQ H_PAGE)
138 0265 3 %IF DSRPLUS %THEN
139 0266 3     AND
140 0267 3     (.HANDLER_CODE NEQ H_PAGE_NOW)
141 0268 3 %FI
142 0269 2 THEN
143 0270 2
144 0271 2     IF NOT .NUM_RESULT
145 0272 2     ! Ignore command if number was bad.
146 0273 2     THEN
147 0274 2     RETURN;
148 0275 2
149 0276 2 SELECTONE .HANDLER_CODE OF
150 0277 2 SET
151 0278 2
152 0279 2 [H_BLANK, H_SKIP] :
153 0280 2 BEGIN
154 0281 2
155 0282 2     IF .NUM_LENGTH EQL 0
156 0283 2     THEN
157 0284 2         NUM_VALUE = 1;           ! Default if no parameter.
158 0285 2
159 0286 2     IF .HANDLER_CODE EQL H_SKIP
160 0287 2     ! Commands .SKIP and .BLANK mean the same
161 0288 2     ! thing, except that .SKIP means ".SPACING"
162 0289 2     ! blank lines, whereas .BLANK means exactly
163 0290 2     ! as many blank lines as specified.
164 0291 2     THEN
165 0292 2         NUM_VALUE = .NUM_VALUE * .SCA_SPACING;
166 0293 2

```

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U

Module Level Declarations

```

167      0294 3      IF .NUM_VALUE LSS 0
168      0295 3      THEN
169      0296 4      BEGIN
170      0297 4
171      U 0298 4  %IF DSRPLUS %THEN
172      0299 4
173      0300 4      .SKIP with negative value is illegal in a topnote.
174      0301 4
175      0302 4      IF .TN_COLLECTING
176      0303 4      THEN
177      0304 4      BEGIN
178      0305 4      ERMA (RNFIIT, FALSE);
179      0306 4      RETURN;
180      0307 4      END;
181      0308 4  %FI
182      0309 4
183      0310 4
184      0311 4      .SKIP with negative value is illegal in a footnote.
185      0312 4
186      0313 4      IF .FNCT_COLLECTING
187      0314 4      THEN
188      0315 5      BEGIN
189      0316 5      ERMA (RNFIIT, FALSE);
190      0317 5      RETURN;
191      0318 4      END;
192      0319 4
193      0320 4      IF ABS (.NUM_VALUE) GEQ .PHAN_LLINES
194      0321 4      THEN
195      0322 4      ! User said something like .SKIP -9999.
196      0323 5      BEGIN
197      0324 5      ERMA (RNFINM, FALSE);
198      0325 5      RETURN;
199      0326 4      END;
200      0327 4
201      0328 4      ! It's a valid .SKIP/.BLANK with a negative count.
202      0329 4      GCPOS (.NUM_VALUE);
203      0330 4      RETURN;
204      0331 4      END;
205      0332 3
206      0333 3      ! Generate code for the conditional skip.
207      0334 3      GCSKIP (.NUM_VALUE);
208      0335 2      END;
209      0336 2
210      0337 2  [H_BREAK] :
211      0338 2      ! Everything associated with .BREAK is contained in
212      0339 2      ! the tables, that are interpreted by DOCM.
213      0340 2      0;
214      0341 2
215      0342 2  [H_PAGE] :
216      0343 2      ! Generate code for the conditional page.
217      0344 2      GCPAGE ();
218      0345 2
219      U 0346 2  %IF DSRPLUS %THEN
220      0347 2  [H_PAGE_NOW] :
221      0348 2      ! Throw page NOW.
222      0349 2      BEGIN
223      U 0350 2      IF .fnct_collecting      ! Don't start a new page if

```

Module Level Declarations

```

: 224 U 0351 2 THEN ; footnotes are being collected,
: 225 U 0352 2 RETURN; ; since footnotes all belong on
: 226 U 0353 2 ; one page.
: 227 U 0354 2
: 228 U 0355 2
: 229 U 0356 2 phan_top_page = false; ; Start another one, even
: 230 U 0357 2 newspag (J); ; if we're at the beginning of a
: 231 U 0358 2 END; ; new page.
: 232 U 0359 2 XFI
: 233 U 0360 2 [H_SPACING] :
: 234 U 0361 2 BEGIN
: 235 U 0362 2
: 236 U 0363 2 IF .NUM_LENGTH EQL 0
: 237 U 0364 2 ! No number provided.
: 238 U 0365 2 THEN
: 239 U 0366 2 BEGIN
: 240 U 0367 2 ERMA (RNFMNL, FALSE);
: 241 U 0368 2 RETURN;
: 242 U 0369 2 END;
: 243 U 0370 2
: 244 U 0371 2 IF (.NUM_VALUE LEQ 0) OR
: 245 U 0372 2 (.NUM_VALUE GTR 5)
: 246 U 0373 2 ! Number not between 0 and 5.
: 247 U 0374 2 THEN
: 248 U 0375 2 BEGIN
: 249 U 0376 2 ERMA (RNFINM, FALSE);
: 250 U 0377 2 RETURN;
: 251 U 0378 2 END;
: 252 U 0379 2
: 253 U 0380 2 SCA_SPACING = .NUM_VALUE;
: 254 U 0381 2 END;
: 255 U 0382 2
: 256 U 0383 2 [H_TEST_PAGE] :
: 257 U 0384 2 BEGIN
: 258 U 0385 2
: 259 U 0386 2 IF .NUM_LENGTH EQL 0
: 260 U 0387 2 ! No number provided.
: 261 U 0388 2 THEN
: 262 U 0389 2 BEGIN
: 263 U 0390 2 ERMA (RNFMNL, FALSE);
: 264 U 0391 2 RETURN;
: 265 U 0392 2 END;
: 266 U 0393 2
: 267 U 0394 2 IF .NUM_VALUE LEQ 0
: 268 U 0395 2 ! Negative number not allowed.
: 269 U 0396 2 THEN
: 270 U 0397 2 BEGIN
: 271 U 0398 2 ERMA (RNFINM, FALSE);
: 272 U 0399 2 RETURN;
: 273 U 0400 2 END;
: 274 U 0401 2
: 275 U 0402 2 ! Add count of pending footnote lines, if any,
: 276 U 0403 2 ! to the given test-page value.
: 277 U 0404 2 ! Generate code for a test page.
: 278 U 0405 2 GTPC (.NUM_VALUE + TPFSIZ (TPFFIT ()));
: 279 U 0406 2 END;
: 280 U 0407 2

```



Module Level Declarations

: 281  
: 282  
: 283

0408 2       TES;  
0409 2  
0410 1       END;

!End of CARAGE

					.TITLE	CARAGE		
					.IDENT	\V04-000\		
					.EXTRN	FNCT, IRA, MRA, NUMPRM		
					.EXTRN	PHAN, SCA, RNFIFT		
					.EXTRN	RNFIM, RNFML, ERMA		
					.EXTRN	GCPAGE, GCPOS, GCSKIP		
					.EXTRN	GTPC, TPFFIT, TPFSIZ		
					.PSECT	\$CODE\$,NOWRT,2		
					.ENTRY	CARAGE, Save R2,R3		0237
					MOVAB	NUMPRM+4, R3		
					MOVL	HANDLER_CODE, R2		0263
					CMPL	R2, #11		
					BEQL	1\$		
	000000A7				CMPL	R2, #167		0264
					BEQL	1\$		
					BLBS	NUMPRM, 1\$		0271
					RET			
					CMPL	R2, #10		0279
					BEQL	2\$		
	000000BC				CMPL	R2, #188		
					BNEQ	8\$		
					TSTL	NUMPRM+12		0282
					BNEQ	3\$		
					MOVL	#1, NUMPRM+4		0284
	000000BC				CMPL	R2, #188		0286
					BNEQ	4\$		
					MULL2	@SCA+124, NUMPRM+4		0292
					TSTL	NUMPRM+4		0294
					BGEQ	7\$		
					BLBC	FNCT+20, 5\$		0313
					CLRL	-(SP)		0316
					PUSHL	#RNFIFT		
					BRB	14\$		
					MOVL	NUMPRM+4, R0		0320
					BGEQ	6\$		
					MNEGL	R0, R0		
	0000000C				CMPL	R0, @PHAN+4		
					BGEQ	13\$		
					PUSHL	NUMPRM+4		0329
	0000000G				CALLS	#1, GCPOS		
					RET			0296
					PUSHL	NUMPRM+4		0334
	0000000G				CALLS	#1, GCSKIP		
					RET			0276
					CMPL	R2, #11		0337
					BEQL	16\$		
	000000A7				CMPL	R2, #167		0342
					BNEQ	9\$		
	0000000G				CALLS	#0, GCPAGE		0344

Module Level Declarations

L 13  
15-Sep-1984 23:55:25  
14-Sep-1984 13:05:38

VAX-11 Bliss-32 V4.0-7+2  
[RUNOFF.SRC]CARAGE.BLI;1

000000BD	8F		52	D1	00095	9\$:	RET				
			21	12	00096		CMPL	R2, #189			0360
		08	A3	D5	0009D		BNEQ	12\$			
			0A	12	0009F		TSTL	NUMPRM+12			0363
			7E	D4	000A2	10\$:	BNEQ	11\$			
		00000000G	8F	DD	000A4		CLRL	-(SP)			0367
			2C	11	000A6		PUSHL	#RNF MNL			
			63	DD	000AC		BRB	14\$			
	50		1F	15	000AE	11\$:	MOVL	NUMPRM+4, R0			0371
			50	D1	000B1		BLEQ	13\$			
	05		1A	14	000B3		CMPL	R0, #5			0372
			63	DD	000B6		BGTR	13\$			
00000000G	FF		C4	DD	000B8		MOVL	NUMPRM+4, @SCA+124			0380
			52	D1	000BF		RET				0276
000000CB	8F		34	12	000C0	12\$:	CMPL	R2, #203			0383
			A3	D5	000C7		BNEQ	16\$			
		08	D6	13	000C9		TSTL	NUMPRM+12			0386
			63	D5	000CC		BEQL	10\$			
			10	14	000CE		TSTL	NUMPRM+4			0394
			7E	D4	000D0		BGTR	15\$			
		00000000G	8F	DD	000D2	13\$:	CLRL	-(SP)			0398
			02	FB	000D4		PUSHL	#RNF INM			
00000000G	EF		04	FB	000DA	14\$:	CALLS	#2, ERMA			
			00	FB	000E1		RET				0397
00000000G	EF		50	DD	000E2	15\$:	CALLS	#0, TPFFIT			0405
			01	FB	000E9		PUSHL	R0			
00000000G	EF		01	FB	000EB		CALLS	#1, TPFSIZ			
		00 B340	9F	FB	000F2		PUSHAB	@NUMPRM+4[R0]			
00000000G	EF		01	FB	000F6		CALLS	#1, GTPC			
			04	FB	000FD	16\$:	RET				0410

: Routine Size: 254 bytes, Routine Base: \$CODE\$ + 0000

: 284 0411 1  
: 285 0412 1 END  
: 286 0413 0 ELUDOM

!End of module

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	254	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time

CARAGE  
V04-000

Module Level Declarations

M 13  
15-Sep-1984 23:55:25  
14-Sep-1984 13:05:38

VAX-11 Bliss-32 V4.0-742  
[RUNOFF.SRC]CARAGE.BLI;1

Page 9  
(4)

CL  
VO

```
: $255$DUA28:[SYSLIB]XPORT.L32;1      590      0      0      252      00:00.1
: -$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1 1248     20     1      86      00:00.2
```

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:CARAGE/OBJ=OBJ\$:CARAGE MSRCS:CARAGE/UPDATE=(ENHS:CARAGE)

```
: Size:          254 code + 0 data bytes
: Run Time:      00:06.0
: Elapsed Time: 00:16.5
: Lines/CPU Min: 4123
: Lexemes/CPU-Min: 13617
: Memory Used:  73 pages
: Compilation Complete
```

.....

0337 AH-BT13A-SE  
VAX/VMS V4.0

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This image displays a grid of 100 small terminal windows arranged in a 10x10 pattern. Each window contains text from a different system utility or command-line interface, typical of a VAX/VMS environment. The utilities shown include: SETCAS REQ, VR REQ, ALINE LIS, BARS LIS, CARAGE LIS, SAVSTK REQ, AREC LIS, CAPTION LIS, TOCRTY REQ, XTNTAB REQ, SCAR REQ, BOTPAG LIS, CLH LIS, TPROB REQ, CNTUMSREQ R32, TSF REQ, NDUMSREQ R32, SAVE REQ, and CENTXT LIS. The text in each window is small and varies in format, often including headers and data fields.