


```

SSSSSSSS  AAAAAA  TTTTTTTTTT  SSSSSSSS  SSSSSSSS  SSSSSSSS  77777777  11
SSSSSSSS  AAAAAA  TTTTTTTTTT  SSSSSSSS  SSSSSSSS  SSSSSSSS  77777777  11
SS         AA      AA      TT         SS         SS         SS         77         1111
SS         AA      AA      TT         SS         SS         SS         77         1111
SS         AA      AA      TT         SS         SS         SS         77         11
SS         AA      AA      TT         SS         SS         SS         77         11
SSSSSSS   AA      AA      TT         SSSSSSS   SSSSSSS   SSSSSSS   77         11
SSSSSSS   AA      AA      TT         SSSSSSS   SSSSSSS   SSSSSSS   77         11
SS         AA      AA      TT         SS         SS         SS         77         11
SS         AA      AA      TT         SS         SS         SS         77         11
SS         AA      AA      TT         SS         SS         SS         77         11
SS         AA      AA      TT         SS         SS         SS         77         11
SSSSSSSS  AA      AA      TT         SSSSSSSS  SSSSSSSS  SSSSSSSS  77         111111
SSSSSSSS  AA      AA      TT         SSSSSSSS  SSSSSSSS  SSSSSSSS  77         111111

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

```

(1)	54	DECLARATIONS
(1)	84	CONDITION TABLES
(1)	121	TM SETUP, TM CLEANUP
(1)	184	CONDITION SUBROUTINES - SETUP AND CLEANUP
(1)	254	FORM CONDS
(1)	347	VERIFY
(1)	477	VFY_CLEANUP

```
0000 1 .TITLE SATSSS71 SATS SYSTEM SERVICE TESTS $CNTREG (SUCC S.C.)
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 :*****
0000 6 :*
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0000 23 :* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. *
0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28
0000 29 :++
0000 30 : FACILITY: SYSTST (SATS SYSTEM SERVICE TESTS)
0000 31 :
0000 32 : ABSTRACT:
0000 33 :
0000 34 : THIS MODULE CONTAINS SUBROUTINES WHICH, WHEN LINKED
0000 35 : WITH SUCCCOMMON.OBJ, FORM TEST MODULE SATSSS71 TO TEST SUCCESSFUL
0000 36 : OPERATION OF THE $CNTREG SYSTEM SERVICE. THE SERVICE IS INVOKED
0000 37 : UNDER VARIOUS INPUT CONDITIONS WITH VARYING INPUT PARAMETERS. ONLY
0000 38 : SUCCESSFUL STATUS CODES ARE EXPECTED IN THIS TEST MODULE. CORRECT
0000 39 : OPERATION OF THE SERVICE FOR EACH OF ITS ISSUANCES IS VERIFIED BY
0000 40 : CHECKING FOR AN SSS NORMAL STATUS CODE, EXPECTED RETURN ARGUMENTS
0000 41 : AND EXPECTED FUNCTIONALITY PERFORMED.
0000 42 :
0000 43 : ENVIRONMENT: USER MODE IMAGE; NEEDS CMKRNL PRIVILEGE,
0000 44 : DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000 45 :
0000 46 : AUTHOR: THOMAS L. CAFARELLA, CREATION DATE: JUL, 1977
0000 47 :
0000 48 : MODIFIED BY:
0000 49 :
0000 50 : : VERSION
0000 51 : 01 -
0000 52 : --
```

```
0000 54 .SBTTL DECLARATIONS
0000 55 :
0000 56 : INCLUDE FILES: /
0000 57 :
0000 58 $PRVDEF ; PRIVILEGE BIT DEFINITIONS
0000 59 $PHDDEF ; PROCESS HEADER OFFSETS
0000 60 $PSLDEF ; PROCESSOR STATUS LONGWORD DEFINITIONS
0000 61 :
0000 62 : MACROS:
0000 63 :
0000 64 :
0000 65 : EQUATED SYMBOLS:
0000 66 :
0000 67 :
0000 68 : OWN STORAGE:
0000 69 :
```


00000000	79	.PSECT	RWDATA,RD,WRT,NOEXE,LONG	
00000008 0000	80	PRIVMASK:	.BLKQ 1	: ADDR OF PRIVILEGE MASK (IN PHD)
00000010 0008	81	RETADR:	.BLKQ 1	: RETADR ARGUMENT FOR SUBJECT CNTREG
00000018 0010	82	RETADR_ERG:	.BLKQ 1	: RETADR ARGUMENT FOR PRELIM EXPREG

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```

0018      84      .SBTTL  CONDITION TABLES
0018      85      :
0018      86      :
0018      87      :
0018      88      :
0018      89      :
0018      90      :
0018      91      :
00000005 0040      92      .LONG          5
00000019 0044      93      .LONG          25
0048      94      :
0048      95      :
0048      96      :
0048      97      :
0048      98      :
00000000 0068      99      .LONG          0      : PROGRAM
00000001 006C     100     .LONG          1      : CONTROL
0070     101     :
0070     102     :
0070     103     :
0070     104     :
0070     105     :
0070     106     :
0070     107     :
00000000 009F     108     .LONG          PSL$C_KERNEL
00000001 00A3     109     .LONG          PSL$C_EXEC
00000002 00A7     110     .LONG          PSL$C_SUPER
00000003 00AB     111     .LONG          PSL$C_USER
00AF     112     :
00AF     113     :
00AF     114     :
00AF     115     :
00AF     116     :
0119     117     :
011A     118     :
00000000 0119     119     .PSECT  SATSSS71,RD,WRT,EXE

```

.SBTTL CONDITION TABLES

***** CONDITION TABLES FOR CNTREG SYSTEM SERVICE *****

COND 1,LONG,<PAGCNT>,-
 <SMALL COUNT>,-
 <LARGE COUNT>,-

COND 2,LONG,<REGION>,-
 <PROGRAM>,-
 <CONTROL>,-

COND 3,LONG,<ACMODE>,-
 <KERNEL>,-
 <EXEC>,-
 <SUPER>,-
 <USER>,-

COND 4,NOTARG,<PREVIOUS CONDITION OF CONTRACTED AREA>,-
 <PREVIOUSLY EXPANDED BY EXPREG>,-
 <PREVIOUSLY CREATED BY CRETVA>,-

COND 5,NULL

.PSECT SATSSS71,RD,WRT,EXE


```

0000 121 .SBTTL TM_SETUP, TM_CLEANUP
0000 122 :++
0000 123 : FUNCTIONAL DESCRIPTION:
0000 124 :
0000 125 : TM_SETUP AND TM_CLEANUP ARE CALLED TO PERFORM
0000 126 : REQUIRED HOUSEKEEPING AT THE BEGINNING AND END, RESPECTIVELY, OF
0000 127 : TEST MODULE EXECUTION.
0000 128 :
0000 129 : CALLING SEQUENCE:
0000 130 :
0000 131 : BSBW TM_SETUP BSBW TM_CLEANUP
0000 132 :
0000 133 : INPUT PARAMETERS:
0000 134 :
0000 135 : NONE
0000 136 :
0000 137 : IMPLICIT INPUTS:
0000 138 :
0000 139 : NONE
0000 140 :
0000 141 : OUTPUT PARAMETERS:
0000 142 :
0000 143 : NONE
0000 144 :
0000 145 : IMPLICIT OUTPUTS:
0000 146 :
0000 147 : TM_SETUP: COND TABLE INDEX REGISTERS (R2,3,4,5,6) CLEARED;
0000 148 : ALL PRIVILEGES ACQUIRED.
0000 149 :
0000 150 : COMPLETION CODES:
0000 151 :
0000 152 : EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
0000 153 :
0000 154 : SIDE EFFECTS:
0000 155 :
0000 156 : SS CHECK AND ERR EXIT MACROS CAUSE PREMATURE EXIT
0000 157 : (VIA RSB) IF ERROR ENCOUNTERED.
0000 158 :
0000 159 :--
0000 160 :
0000 161 :
0000 162 :
0000 163 TM_SETUP::
0000 164 CLRL R2 ; INITIALIZE
0000 165 CLRL R3 ; .. CONDITION
0000 166 CLRL R4 ; .... TABLE
0000 167 CLRL R5 ; ..... INDEX
0000 168 CLRL R6 ; ..... REGISTERS
0000 169 BSBW MOD MSG PRINT ; PRINT TEST MODULE BEGIN MSG
0000 170 MOVAL TEST_MOD_SUCC,TMD_ADDR ; ASSUME END MSG WILL SHOW SUCCESS
0000 171 INSV #SUCCESS,#0,#3,MOD_MSG_CODE ; ADJUST STATUS CODE FOR SUCCESS
0000 172 MODE TO,5$,KRNL ; KERNEL MODE TO ACCESS PHD
0000 173 MOVL @#CTL$GL PHD,R9 ; GET PROCESS HEADER ADDRESS
0000 174 MOVAL PHD$Q PRIVMSK(R9),PRIVMSK ; GET PRIV MASK ADDRESS
0000 175 MODE FROM,5$ ; BACK TO USER MODE
0000 176 PRIV ADD,ALL ; GET ALL PRIVILEGES

```

```

52 D4 0000
53 D4 0002
54 D4 0004
55 D4 0006
56 D4 0008
FFF3' 30 000A
00000000'EF 00000000'EF DE 000D 170
03 00 00000000'8F FO 0018 171
00000000'EF 0020
59 00000000'9F DO 0048 173
00000000'EF 69 DE 004F 174
0056 175
0057 176

```

SATSSS71
V04-000

```
0077 177 $SETPRN S TEST MOD_NAME_D ; SET PROCESS NAME
0084 178 SS CHECK NORMAL ; CHECK STATUS CODE RETURNED FROM SETPRN
05 00B2 179 RSB ; RETURN TO MAIN ROUTINE
00B3 180 TM_CLEANUP::
FF4A' 30 00B3 181 BSBW MOD_MSG_PRINT ; PRINT TEST MODULE END MSG
05 00B6 182 RSB ; RETURN TO MAIN ROUTINE
```

SA
VC

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00B7 184 .SBTTL CONDITION SUBROUTINES - SETUP AND CLEANUP
00B7 185 :++
00B7 186 : FUNCTIONAL DESCRIPTION:
00B7 187 :
00B7 188 : COND X AND COND X CLEANUP ARE SUBROUTINES WHICH ARE EXECUTED
00B7 189 : BEFORE AND AFTER THE VERIFY SUBROUTINE, RESPECTIVELY, WHENEVER A NEW
00B7 190 : CONDITION X VALUE IS SELECTED (SEE FUNCTIONAL DESCRIPTION OF SUCCOMMON
00B7 191 : ROUTINE IN SUCCOMMON.MAR). ANY SETUP FUNCTION PARTICULAR TO THE
00B7 192 : CONDITION X TABLE IS INCLUDED IN THE COND X SUBROUTINE AND CLEANED
00B7 193 : UP, IF NECESSARY, IN THE COND X CLEANUP SUBROUTINE. THIS INCLUDES,
00B7 194 : ESPECIALLY, CODE TO DETECT CONFLICTS AMONG CURRENT ENTRIES IN TWO
00B7 195 : OR MORE CONDITION TABLES. IF A CONFLICT IS DETECTED, A NON-ZERO
00B7 196 : VALUE IS STORED INTO CONFLICT, WHICH CAUSES THE CALLING ROUTINE
00B7 197 : (SUCCOMMON) TO SKIP THE CURRENT ENTRY IN THE CONDITION X TABLE.
00B7 198 :
00B7 199 : CALLING SEQUENCE:
00B7 200 :
00B7 201 : BSBW COND X BSBW COND X_CLEANUP
00B7 202 : WHERE X = 1,2,3,4,5
00B7 203 :
00B7 204 : INPUT PARAMETERS:
00B7 205 :
00B7 206 : CONFLICT = 0
00B7 207 :
00B7 208 : IMPLICIT INPUTS:
00B7 209 :
00B7 210 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
00B7 211 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
00B7 212 :
00B7 213 : OUTPUT PARAMETERS:
00B7 214 :
00B7 215 : CONFLICT SET TO NON-ZERO IF COND TABLE CONFLICT DETECTED.
00B7 216 :
00B7 217 : IMPLICIT OUTPUTS:
00B7 218 :
00B7 219 : R2,3,4,5,6 PRESERVED
00B7 220 :
00B7 221 : COMPLETION CODES:
00B7 222 :
00B7 223 : NONE
00B7 224 :
00B7 225 : SIDE EFFECTS:
00B7 226 :
00B7 227 : NONE
00B7 228 :
00B7 229 : --
00B7 230 :
00B7 231 :
00B7 232 :
00B7 233 COND1::
05 00B7 234 RSB ; RETURN TO MAIN ROUTINE
00B8 235 COND1_CLEANUP::
05 00B8 236 RSB ; RETURN TO MAIN ROUTINE
00B9 237 COND2::
05 00B9 238 RSB ; RETURN TO MAIN ROUTINE
00BA 239 COND2_CLEANUP::
05 00BA 240 RSB ; RETURN TO MAIN ROUTINE

```

```

05 00BB 241 COND3::
05 00BB 242 RSB ; RETURN TO MAIN ROUTINE
05 00BC 243 COND3_CLEANUP::
05 00BC 244 RSB ; RETURN TO MAIN ROUTINE
05 00BD 245 COND4::
05 00BD 246 RSB ; RETURN TO MAIN ROUTINE
05 00BE 247 COND4_CLEANUP::
05 00BE 248 RSB ; RETURN TO MAIN ROUTINE
05 00BF 249 COND5::
05 00BF 250 RSB ; RETURN TO MAIN ROUTINE
05 00C0 251 COND5_CLEANUP::
05 00C0 252 RSB ; RETURN TO MAIN ROUTINE
```

```

00C1 254 .SBTTL FORM_CONDS
00C1 255 :++
00C1 256 : FUNCTIONAL DESCRIPTION:
00C1 257 :
00C1 258 : FORM CONDS FORMATS AND PRINTS INFORMATION ABOUT
00C1 259 : THE CURRENT ELEMENT IN EACH OF THE CONDITION TABLES.
00C1 260 :
00C1 261 : CALLING SEQUENCE:
00C1 262 :
00C1 263 : BSBW FORM_CONDS
00C1 264 :
00C1 265 : INPUT PARAMETERS:
00C1 266 :
00C1 267 : NONE
00C1 268 :
00C1 269 : IMPLICIT INPUTS:
00C1 270 :
00C1 271 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
00C1 272 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
00C1 273 : FOR X = 1,2,3,4,5 :
00C1 274 : COND_X_T - TITLE TEXT FOR CONDX TABLE
00C1 275 : COND_X_TAB - ELEMENT TEXT FOR CONDX TABLE
00C1 276 : COND_X_C - CONTEXT OF THE CONDX TABLE
00C1 277 : COND_X_E - DATA ELEMENTS OF THE CONDX TABLE
00C1 278 :
00C1 279 : OUTPUT PARAMETERS:
00C1 280 :
00C1 281 : NONE
00C1 282 :
00C1 283 : IMPLICIT OUTPUTS:
00C1 284 :
00C1 285 : NONE
00C1 286 :
00C1 287 : COMPLETION CODES:
00C1 288 :
00C1 289 : NONE
00C1 290 :
00C1 291 : SIDE EFFECTS:
00C1 292 :
00C1 293 : NONE
00C1 294 :
00C1 295 : --
00C1 296 :
00C1 297 :
00C1 298 :
00C1 299 FORM_CONDS::
00C1 300 $FAO_S MSG1_INP_CTL,FAO_LEN,FAO_DESC,TESTNUM
00E0 301 : FORMAT CONDITIONS HEADER MSG
00E0 302 BSBW OUTPUT_MSG : ... AND PRINT IT
14 FF1D' 30 00E3 303 CMPB #COND1_C,#NULL : IS CONDITION 1 NULL ?
03 12 00E6 304 BNEQU 10$ : NO -- CONTINUE
00E3 31 00E8 305 BRW FORM_CONDSX : YES -- SUBROUTINE IS FINISHED
00E8 306 10$:
00E8 307 MOVAL COND1_T,MSG_A : SAVE ADDRESS OF CONDITION 1 TITLE FOR FAO
00F6 308 MOVL COND1_TAB[R2],MSG_B : SAVE ADDR OF COND 1 CURR TEXT ELT FOR FAO
0102 309 MOVB #COND1_C,MSG_CTXT : SAVE CONDITION 1 CONTEXT FOR FAO
0109 310 MOV_VAL COND1_C,COND1_E[R2],MSG_DATA1 ; GIVE COND 1 DATA VALUE TO FAO

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```

00000000'EF 00000018'EF DE 00E8 307
00000000'EF 00000020'EF DO 00F6 308
00000000'EF 04 90 0102 309

```

```

      FEE8' 30 0115 311      BSBW  WRITE_MSG2      ; FORMAT AND WRITE CONDITION 1 MSG
14  04  91 0118 312      CMPB  #COND2_C,#NULL      ; IS CONDITION 2 NULL ?
      03  12 011B 313      BNEQU 20$      ; NO -- CONTINUE
      00AE 31 011D 314      BRW  FORM_CONDSX      ; YES -- SUBROUTINE IS FINISHED
                                0120 315 20$:
00000000'EF 00000048'EF DE 0120 316      MOVAL COND2_T,MSG_A      ; SAVE ADDRESS OF CONDITION 2 TITLE FOR FAO
00000000'EF 00000050'EF43 D0 012B 317      MOVL  COND2_TAB[R3],MSG_B      ; SAVE ADDR OF COND 2 CURR TEXT ELT FOR FAO
      00000000'EF 04  90 0137 318      MOVB  #COND2_C,MSG_CTXT      ; SAVE CONDITION 2 CONTEXT FOR FAO
                                013E 319      MOV VAL COND2_C,COND2_E[R3],MSG_DATA1 ; GIVE COND 2 DATA VALUE TO FAO
      FEB3' 30 014A 320      BSBW  WRITE_MSG2      ; FORMAT AND WRITE CONDITION 2 MSG
14  04  91 014D 321      CMPB  #COND3_C,#NULL      ; IS CONDITION 3 NULL ?
      03  12 0150 322      BNEQU 30$      ; NO -- CONTINUE
      0079 31 0152 323      BRW  FORM_CONDSX      ; YES -- SUBROUTINE IS FINISHED
                                0155 324 30$:
00000000'EF 00000070'EF DE 0155 325      MOVAL COND3_T,MSG_A      ; SAVE ADDRESS OF CONDITION 3 TITLE FOR FAO
00000000'EF 00000078'EF44 D0 0160 326      MOVL  COND3_TAB[R4],MSG_B      ; SAVE ADDR OF COND 3 CURR TEXT ELT FOR FAO
      00000000'EF 04  90 016C 327      MOVB  #COND3_C,MSG_CTXT      ; SAVE CONDITION 3 CONTEXT FOR FAO
                                0173 328      MOV VAL COND3_C,COND3_E[R4],MSG_DATA1 ; GIVE COND 3 DATA VALUE TO FAO
      FE7E' 30 017F 329      BSBW  WRITE_MSG2      ; FORMAT AND WRITE CONDITION 3 MSG
14  00  91 0182 330      CMPB  #COND4_C,#NULL      ; IS CONDITION 4 NULL ?
      47  13 0185 331      BEQLU FORM_CONDSX      ; YES -- SUBROUTINE IS FINISHED
00000000'EF 000000AF'EF DE 0187 332      MOVAL COND4_T,MSG_A      ; SAVE ADDRESS OF CONDITION 4 TITLE FOR FAO
00000000'EF 000000D6'EF45 D0 0192 333      MOVL  COND4_TAB[R5],MSG_B      ; SAVE ADDR OF COND 4 CURR TEXT ELT FOR FAO
      00000000'EF 00  90 019E 334      MOVB  #COND4_C,MSG_CTXT      ; SAVE CONDITION 4 CONTEXT FOR FAO
                                01A5 335      MOV VAL COND4_C,COND4_E[R5],MSG_DATA1 ; GIVE COND 4 DATA VALUE TO FAO
      FE58' 30 01A5 336      BSBW  WRITE_MSG2      ; FORMAT AND WRITE CONDITION 4 MSG
14  14  91 01A8 337      CMPB  #COND5_C,#NULL      ; IS CONDITION 5 NULL ?
      21  13 01AB 338      BEQLU FORM_CONDSX      ; YES -- SUBROUTINE IS FINISHED
00000000'EF 00000119'EF DE 01AD 339      MOVAL COND5_T,MSG_A      ; SAVE ADDRESS OF CONDITION 5 TITLE FOR FAO
00000000'EF 00000119'EF46 D0 01B8 340      MOVL  COND5_TAB[R6],MSG_B      ; SAVE ADDR OF COND 5 CURR TEXT ELT FOR FAO
      00000000'EF 14  90 01C4 341      MOVB  #COND5_C,MSG_CTXT      ; SAVE CONDITION 5 CONTEXT FOR FAO
                                01CB 342      MOV VAL COND5_C,COND5_E[R6],MSG_DATA1 ; GIVE COND 5 DATA VALUE TO FAO
      FE32' 30 01CB 343      BSBW  WRITE_MSG2      ; FORMAT AND WRITE CONDITION 5 MSG
                                01CE 344 FORM_CONDSX:
05  01CE 345      RSB      ; RETURN TO CALLER
```

```
01CF 347 .SBTTL VERIFY
01CF 348 :++
01CF 349 : FUNCTIONAL DESCRIPTION:
01CF 350 :
01CF 351 : VERIFY IS CALLED ONCE FOR EACH COMBINATION OF CONDITION
01CF 352 : TABLE VALUES (AS DETERMINED BY THE INDEX REGISTERS R2,3,4,5,6 FOR
01CF 353 : COND TABLES 1,2,3,4,5, RESPECTIVELY). VERIFY ESTABLISHES THE CONDITIONS
01CF 354 : SPECIFIED BY THE COND TABLES AND ISSUES THE SUBJECT SYSTEM SERVICE
01CF 355 : ($CNTREG). THEN, THE SUCCESSFUL OPERATION OF THE SERVICE IS VERIFIED
01CF 356 : BY EXAMINING THE STATUS CODE RETURNED, THE VALUES FOR RETURN ARGUMENTS
01CF 357 : AND THE FUNCTIONALITY PERFORMED. THE EXAMINATIONS TAKE THE FORM OF
01CF 358 : COMPARISONS AGAINST EXPECTED VALUES. ANY FAILING COMPARISON CAUSES AN
01CF 359 : ERR_EXIT MACRO TO BE EXECUTED (EITHER DIRECTLY, OR INDIRECTLY,
01CF 360 : THROUGH THE SS_CHECK MACRO); ERR_EXIT SETS EFLAG TO NON-ZERO,
01CF 361 : PRINTS ERROR MESSAGES AND CAUSES AN IMMEDIATE RSB TO CALLER.
01CF 362 : WHEN ERR_EXIT IS EXECUTED, FURTHER CALLS TO VERIFY ARE SUPPRESSED,
01CF 363 : AND, AFTER EXECUTING CLEANUP SUBROUTINES, THE IMAGE EXITS.
01CF 364 :
01CF 365 : CALLING SEQUENCE:
01CF 366 :
01CF 367 : BSBW VERIFY
01CF 368 :
01CF 369 : INPUT PARAMETERS:
01CF 370 :
01CF 371 : NONE
01CF 372 :
01CF 373 : IMPLICIT INPUTS:
01CF 374 :
01CF 375 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
01CF 376 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
01CF 377 : FOR X = 1,2,3,4,5 :
01CF 378 : CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
01CF 379 : TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
01CF 380 : ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
01CF 381 : FOR CONDX_E.
01CF 382 :
01CF 383 : OUTPUT PARAMETERS:
01CF 384 :
01CF 385 : NONE
01CF 386 :
01CF 387 : IMPLICIT OUTPUTS:
01CF 388 :
01CF 389 : VERIFY HAS NO OUTPUT. SINCE ITS PURPOSE IS TO TEST FOR ERRORS,
01CF 390 : IT MERELY RETURNS TO CALLER NORMALLY AFTER THE TESTS, PROVIDING
01CF 391 : ALL WERE SUCCESSFUL; IF AN ERROR IS DISCOVERED, RETURN IS VIA
01CF 392 : AN ERR_EXIT OR SS_CHECK MACRO, BOTH OF WHICH DOCUMENT DETECTED
01CF 393 : ERRORS.
01CF 394 :
01CF 395 : COMPLETION CODES:
01CF 396 :
01CF 397 : EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
01CF 398 :
01CF 399 : SIDE EFFECTS:
01CF 400 :
01CF 401 : SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
01CF 402 : (VIA RSB) IF ERROR ENCOUNTERED.
01CF 403 :
```

```

01CF 404 :--
01CF 405
01CF 406
01CF 407
01CF 408 VERIFY::
00000000'EF 95 01CF 409 TSTB CFLAG ; SHOULD CONDITIONS BE PRINTED ?
03 13 01D5 410 BEQL 5$ ; NO -- CONTINUE
FEE7 30 01D7 411 BSBW FORM_CONDS ; YES -- FMT & PRINT ALL CONDS FOR THIS T.C.
01DA 412 5$:
01DA 413 MODE TO,10$,KRNL ; TO KERNEL FOR PRELIM EXPREG
01FD 414 $EXPREG_S PAGCNT[R2],RETADR_ERG, -
01FD 415 ACMODE[R4],REGION[R3]
021F 416 MODE FROM,10$ ; BACK TO USER
0220 417 SS_CHECK NORMAL ; CHECK FOR NORMAL RETURN
01 55 91 024E 418 CMPB R5,#1 ; 2ND CONDITION 4 ELEMENT ?
03 13 0251 419 BEQLU 15$ ; YES -- CONTRACT & ISSUE CRETVA
00D8 31 0253 420 BRW 40$ ; NO -- CONTINUE
0256 421 15$:
0256 422 MODE TO,20$,KRNL ; GET KERNEL MODE
0279 423 $CNTREG_S PAGCNT[R2],,ACMODE[R4],REGION[R3]
0297 424 MODE FROM,20$ ; BACK TO USER MODE
0298 425 SS_CHECK NORMAL ; CHECK FOR NORMAL RETURN
02C6 426 MODE TC,30$,KRNL ; KERNEL MODE AGAIN
02E9 427 $CRETVA_S INADR=RETADR_ERG, ACMODE=ACMODE[R4]
02FF 428 MODE FROM,30$ ; BACK TO USER AGAIN
0300 429 SS_CHECK NORMAL ; CHECK NORMAL RETURN
032E 430 40$:
032E 431 MODE TO,50$,KRNL ; YET ANOTHER CHANGE TO KERNEL
0351 432 :
0351 433 : ***** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE *****
0351 434 :
0351 435 $CNTREG_S PAGCNT[R2],RETADR,ACMODE[R4],REGION[R3]
00000000'8F 50 D1 0373 436 MODE FROM,50$ ; USER MODE RETURNS
61 13 0374 437 CML RO,#SS$_NORMAL ; CODE RECEIVED = CODE EXPECTED ?
00000000'EF 00000000'8F D0 037B 438 BEQLU 55$ ; YES -- DO SOME MORE VERIFYING
00000000'EF 50 D0 037D 439 MOVL #SS$_NORMAL,EXPV ; LOAD UP EXPECTED AND ...
0388 440 MOVL RO,EXPV ; ... RECEIVED VALUES, THEN EXIT
038F 441 ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED FROM CNTREG>
03DE 442 55$:
00000010'EF 00000008'EF D1 03DE 443 CML RETADR,RETADR_ERG ; DID CNTREG RETURN CORRECT RETADR ?
OF 12 03E9 444 BNEQU 57$ ; NO -- ERROR
00000014'EF 0000000C'EF D1 03EB 445 CML RETADR+4,RETADR_ERG+4 ; HOW ABOUT THE 2ND ADDRESS ?
02 12 03F6 446 BNEQU 57$ ; NO -- IT'S AN ERROR
67 11 03F8 447 BRB 58$ ; OK -- GO CHECK MORE
03FA 448 57$:
00000000'EF 00000010'EF 7D 03FA 449 MOVQ RETADR_ERG,EXPV ; LOAD UP EXPECTED AND ...
00000000'EF 00000008'EF 7D 0405 450 MOVQ RETADR_RECV ; ... RECEIVED VALUES, THEN EXIT
0410 451 ERR_EXIT QUAD,<UNEXPECTED VALUE FROM CNTREG FOR RETADR PAIR>
0461 452 58$:
0461 453 MODE TO,60$,KRNL ; GET INTO KERNEL MODE
0484 454 $EXPREG_S PAGCNT[R2],RETADR_ERG,ACMODE[R4],REGION[R3]
04A6 455 MODE FROM,60$ ; BACK TO USER MODE
04A7 456 SS_CHECK NORMAL ; CHECK NORMAL COMPLETION
00000010'EF 00000008'EF D1 04D5 457 CML RETADR,RETADR_ERG ; DID EXPREG RETURN CORRECT RETADR ?
OF 12 04E0 458 BNEQU 67$ ; NO -- ERROR
00000014'EF 0000000C'EF D1 04E2 459 CML RETADR+4,RETADR_ERG+4 ; HOW ABOUT THE 2ND ADDRESS ?
02 12 04ED 460 BNEQU 67$ ; NO -- IT'S AN ERROR

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        66 11 04EF 461 BRB 68$ ; OK -- GO CLEAN UP
           04F1 462 67$:
00000000'EF 00000008'EF 7C 04F1 463 MOVQ RETADR,EXPV ; LOAD UP EXPECTED AND ...
00000000'EF 00000010'EF 7D 04FC 464 MOVQ RETADR,ERG,RCV ; ... RECEIVED VALUES, THEN EXIT
           0507 465 ERR_EXIT QUAD,ZCONTRACTED AREA COULD NOT BE LATER EXPANDED>
           0557 466 68$:
           0557 467 MODE TO,70$,KRNL ; TO KERNEL MODE
           057A 468 $CNTREG,S,PAG(CNT[R2]),,ACMODE[R4],REGION[R3]
           0598 469 MODE FROM,70$ ; ... AND BACK TO USER MODE
           0599 470 SS_CHECK NORMAL ; CHECK FOR NORMAL RETURN
           05C7 471 :
           05C7 472 :
           05C7 473 :
           05C7 474 :
05 05C7 475 RSB ; RETURN TO CALLER

DO NOT INCLUDE THIS CNTREG IN VFY CLEANUP, BECAUSE
OF POSSIBLE CONTRACTING OF THIS CODING.
```

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05C8 477      .SBTTL VFY_CLEANUP
05C8 478      :++
05C8 479      : FUNCTIONAL DESCRIPTION:
05C8 480      :
05C8 481      :           VFY_CLEANUP EXECUTES SYSTEM SERVICES TO UNDO THE
05C8 482      : EFFECT OF THOSE ISSUED IN THE VERIFY SUBROUTINE. VFY_CLEANUP MUST
05C8 483      : ASSUME THAT VERIFY MAY NOT HAVE EXECUTED IN ITS ENTIRETY (IF AN
05C8 484      : ERROR IS FOUND). ALSO, VFY_CLEANUP MAY ISSUE SS CHECK OR ERR_EXIT
05C8 485      : ONLY AFTER PERFORMING ALL OF ITS CLEANUP OPERATIONS; THIS IS REQUIRED
05C8 486      : IN THE EVENT THAT VFY_CLEANUP IS CALLED DURING ERROR PROCESSING,
05C8 487      : WHEN PERFORMING THE REQUIRED CLEANUP IS MORE IMPORTANT THAN
05C8 488      : POSSIBLY DISCOVERING A SECOND ERROR.
05C8 489      :
05C8 490      : CALLING SEQUENCE:
05C8 491      :
05C8 492      :           BSBW VFY_CLEANUP
05C8 493      :
05C8 494      : INPUT PARAMETERS:
05C8 495      :
05C8 496      :           NONE
05C8 497      :
05C8 498      : IMPLICIT INPUTS:
05C8 499      :
05C8 500      :           R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
05C8 501      :           FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
05C8 502      :           FOR X = 1,2,3,4,5 :
05C8 503      :           COND_X_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
05C8 504      :           TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
05C8 505      :           ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
05C8 506      :           FOR CONDX_E.
05C8 507      :
05C8 508      : OUTPUT PARAMETERS:
05C8 509      :
05C8 510      :           NONE
05C8 511      :
05C8 512      : IMPLICIT OUTPUTS:
05C8 513      :
05C8 514      :           NONE
05C8 515      :
05C8 516      : COMPLETION CODES:
05C8 517      :
05C8 518      :           EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
05C8 519      :
05C8 520      : SIDE EFFECTS:
05C8 521      :
05C8 522      :           SS CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
05C8 523      :           (VIA RSB) IF ERROR ENCOUNTERED.
05C8 524      :
05C8 525      : --
05C8 526      :
05C8 527      :
05C8 528      :
05C8 529      : VFY_CLEANUP::
05 05C8 530      :           RSB ; RETURN TO CALLER
05C9 531      :           .END

```

SATSSS71
Symbol table

SSSS	= 00000511	R	04	FAO_LEN	*****	X	04
SSSCHARS	= 0000002B			FORM_CONDS	000000C1	RG	04
SSSCHARS1	= 0000001D			FORM_CONDSX	000001CE	R	04
SSSCHARS2	= 0000001C			LONG	= 00000004	G	
SSSCHARS3	= 00000000			MOD_MSG_CODE	*****	X	04
SSSCHARS4	= 00000000			MOD_MSG_PRINT	*****	X	04
SSSCHARS5	= 00000000			MSGT_INP_CTL	00000019	R	02
SSSCOND_A	= 00000001			MSG3_ERR_CTL	00000039	RG	02
SSSTRINGS	= 00000001			MSG_A	*****	X	04
SSSTRINGS2	= 00000005			MSG_B	*****	X	04
SST1	= 00000000			MSG_CTXT	*****	X	04
SST2	= 00000004			MSG_DATA1	*****	X	04
ACMODE	0000009F	R	03	NOTARG	= 00000000	G	
BYTE	= 00000001	G		NULL	= 00000014	G	
CFLAG	*****	X	04	OUTPUT_MSG	*****	X	04
CHMRTN	*****	X	04	PAGCNT	00000040	R	03
CHM_CONT	*****	X	04	PCV	*****	X	04
COMP_SC	*****	X	04	PHDSQ_PRIVMSK	= 00000000		
COND1	000000B7	RG	04	PRIVMSK	00000000	R	03
COND1_C	= 00000074			PRIV_ARGS	= 00000002		
COND1_CLEANUP	000000B8	RG	04	PROCESS_ERR	*****	X	04
COND1_E	00000040	R	03	PSLSC_EXEC	= 00000001		
COND1_H	0000001F	RG	03	PSLSC_KERNEL	= 00000000		
COND1_T	00000018	R	03	PSLSC_SUPER	= 00000002		
COND1_TAB	00000020	R	03	PSLSC_USER	= 00000003		
COND2	000000B9	RG	04	QUAD	= 00000008	G	
COND2_C	= 00000004			RECV	*****	X	04
COND2_CLEANUP	000000BA	RG	04	REGION	00000068	R	03
COND2_E	00000068	R	03	REST_REGS	*****	X	04
COND2_H	0000004F	RG	03	RETADR	00000008	R	03
COND2_T	00000048	R	03	RETADR_ERG	00000010	R	03
COND2_TAB	00000050	R	03	SAVE_REGS	*****	X	04
COND3	000000BB	RG	04	SSS_NORMAL	*****	X	04
COND3_C	= 00000004			SUCCESS	*****	X	04
COND3_CLEANUP	000000BC	RG	04	SYSSCMKRNL	*****	GX	04
COND3_E	0000009F	R	03	SYSSCNTREG	*****	GX	04
COND3_H	00000077	RG	03	SYSSCRETVA	*****	GX	04
COND3_T	00000070	R	03	SYSSXPREG	*****	GX	04
COND3_TAB	00000078	R	03	SYSSFAO	*****	X	04
COND4	000000BD	RG	04	SYSSSETPRN	*****	GX	04
COND4_C	= 00000000			SYSSSETPRV	*****	GX	04
COND4_CLEANUP	000000BE	RG	04	TESTNUM	*****	X	04
COND4_E	00000119	R	03	TEST_MOD_NAME	00000000	RG	02
COND4_H	000000D5	RG	03	TEST_MOD_NAME_D	00000009	R	02
COND4_T	000000AF	R	03	TEST_MOD_SUCC	*****	X	04
COND4_TAB	000000D6	R	03	TMD_ADDR	*****	X	04
COND5	000000BF	RG	04	TM_CLEANUP	000000B3	RG	04
COND5_C	= 00000014			TM_SETUP	00000000	RG	04
COND5_CLEANUP	000000C0	RG	04	VERIFY	000001CF	RG	04
COND5_H	00000119	RG	03	VFY_CLEANUP	000005C8	RG	04
COND5_T	00000119	R	03	WORD	= 00000002	G	
COND5_TAB	00000119	R	03	WRITE_MSG2	*****	X	04
CTL\$GL_PHD	*****	X	04				
DESC	= 00000010	G					
EFLAG	*****	X	04				
EXPV	*****	X	04				
FAO_DESC	*****	X	04				

! 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
RODATA	00000051 (81.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
RWDATA	0000011A (282.)	03 (3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC LONG
SATSSS71	000005C9 (1481.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.11	00:00:00.62
Command processing	107	00:00:00.74	00:00:03.84
Pass 1	319	00:00:07.57	00:00:18.79
Symbol table sort	0	00:00:00.53	00:00:01.33
Pass 2	166	00:00:01.97	00:00:04.36
Symbol table output	14	00:00:00.09	00:00:00.09
Psect synopsis output	6	00:00:00.03	00:00:00.10
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	644	00:00:11.04	00:00:29.13

The working set limit was 900 pages.
39620 bytes (78 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 338 non-local and 50 local symbols.
531 source lines were read in Pass 1, producing 24 object records in Pass 2.
36 pages of virtual memory were used to define 27 macros.

! Macro library statistics !

Macro library name	Macros defined
_\$255\$DUA28:[SHRLIB]UETP.MLB;1	9
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	1
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	14
TOTALS (all libraries)	24

664 GETS were required to define 24 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SATSSS71/OBJ=OBJ\$:SATSSS71 MSRC\$:SATSSS71/UPDATE=(ENH\$:SATSSS71)+EXECML\$/LIB+SHRLIB\$:UETP/LIB

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SAT5553 LIS	SAT5554 LIS	SAT5555 LIS	SAT5556 LIS	SAT5557 LIS	SAT5558 LIS	SAT5559 LIS	SAT5560 LIS	SAT5561 LIS	SAT5562 LIS	SAT5563 LIS	SAT5564 LIS	SAT5565 LIS	SAT5566 LIS	SAT5567 LIS	SAT5568 LIS	SAT5569 LIS	SAT5570 LIS	SAT5571 LIS	SAT5572 LIS	SAT5573 LIS
SAT5574 LIS	SAT5575 LIS	SAT5576 LIS	SAT5577 LIS	SAT5578 LIS	SAT5579 LIS	SAT5580 LIS	SAT5581 LIS	SAT5582 LIS	SAT5583 LIS	SAT5584 LIS	SAT5585 LIS	SAT5586 LIS	SAT5587 LIS	SAT5588 LIS	SAT5589 LIS	SAT5590 LIS	SAT5591 LIS	SAT5592 LIS	SAT5593 LIS	SAT5594 LIS
SAT5595 LIS	SAT5596 LIS	SAT5597 LIS	SAT5598 LIS	SAT5599 LIS	SAT5600 LIS	SAT5601 LIS	SAT5602 LIS	SAT5603 LIS	SAT5604 LIS	SAT5605 LIS	SAT5606 LIS	SAT5607 LIS	SAT5608 LIS	SAT5609 LIS	SAT5610 LIS	SAT5611 LIS	SAT5612 LIS	SAT5613 LIS	SAT5614 LIS	SAT5615 LIS
SAT5616 LIS	SAT5617 LIS	SAT5618 LIS	SAT5619 LIS	SAT5620 LIS	SAT5621 LIS	SAT5622 LIS	SAT5623 LIS	SAT5624 LIS	SAT5625 LIS	SAT5626 LIS	SAT5627 LIS	SAT5628 LIS	SAT5629 LIS	SAT5630 LIS	SAT5631 LIS	SAT5632 LIS	SAT5633 LIS	SAT5634 LIS	SAT5635 LIS	SAT5636 LIS
SAT5637 LIS	SAT5638 LIS	SAT5639 LIS	SAT5640 LIS	SAT5641 LIS	SAT5642 LIS	SAT5643 LIS	SAT5644 LIS	SAT5645 LIS	SAT5646 LIS	SAT5647 LIS	SAT5648 LIS	SAT5649 LIS	SAT5650 LIS	SAT5651 LIS	SAT5652 LIS	SAT5653 LIS	SAT5654 LIS	SAT5655 LIS	SAT5656 LIS	SAT5657 LIS
SAT5658 LIS	SAT5659 LIS	SAT5660 LIS	SAT5661 LIS	SAT5662 LIS	SAT5663 LIS	SAT5664 LIS	SAT5665 LIS	SAT5666 LIS	SAT5667 LIS	SAT5668 LIS	SAT5669 LIS	SAT5670 LIS	SAT5671 LIS	SAT5672 LIS	SAT5673 LIS	SAT5674 LIS	SAT5675 LIS	SAT5676 LIS	SAT5677 LIS	SAT5678 LIS
SAT5679 LIS	SAT5680 LIS	SAT5681 LIS	SAT5682 LIS	SAT5683 LIS	SAT5684 LIS	SAT5685 LIS	SAT5686 LIS	SAT5687 LIS	SAT5688 LIS	SAT5689 LIS	SAT5690 LIS	SAT5691 LIS	SAT5692 LIS	SAT5693 LIS	SAT5694 LIS	SAT5695 LIS	SAT5696 LIS	SAT5697 LIS	SAT5698 LIS	SAT5699 LIS
SAT5700 LIS	SAT5701 LIS	SAT5702 LIS	SAT5703 LIS	SAT5704 LIS	SAT5705 LIS	SAT5706 LIS	SAT5707 LIS	SAT5708 LIS	SAT5709 LIS	SAT5710 LIS	SAT5711 LIS	SAT5712 LIS	SAT5713 LIS	SAT5714 LIS	SAT5715 LIS	SAT5716 LIS	SAT5717 LIS	SAT5718 LIS	SAT5719 LIS	SAT5720 LIS
SAT5721 LIS	SAT5722 LIS	SAT5723 LIS	SAT5724 LIS	SAT5725 LIS	SAT5726 LIS	SAT5727 LIS	SAT5728 LIS	SAT5729 LIS	SAT5730 LIS	SAT5731 LIS	SAT5732 LIS	SAT5733 LIS	SAT5734 LIS	SAT5735 LIS	SAT5736 LIS	SAT5737 LIS	SAT5738 LIS	SAT5739 LIS	SAT5740 LIS	SAT5741 LIS