```
  LOC         OBJECT CODE      ADDR1     ADDR2    STMT

                                                    2 *******************************************************************************
                                                    3 *
                                                    4 *          CU14 cross page boundary instruction tests
                                                    5 *
                                                    6 *          NOTE: This test is based the CLCL-et-al Test
                                                    7 *                modified to only test the CU14 instruction.
                                                    8 *
                                                    9 *          James Wekel February 2024
                                                   10 *******************************************************************************


                                                   12 *******************************************************************************
                                                   13 *
                                                   14 *               CU14 cross page instruction tests
                                                   15 *
                                                   16 *******************************************************************************
                                                   17 *  This program tests functioning of the CU14 instruction
                                                   18 *  across page boundaties. Only M3=0 is tested and CC=0 is expected.
                                                   19 *  Specification exceptions are not tested.
                                                   20 *
                                                   21 *  PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
                                                   22 *  obvious coding errors.  None of the tests are thorough.  They are
                                                   23 *  NOT designed to test all aspects of any of the instructions.
                                                   24 *
                                                   25 *******************************************************************************
                                                   26 *
                                                   27 *  Example Hercules Testcase:
                                                   28 *
                                                   29 *        *Testcase CU14-01-xpage (Test cross page CU14 instruction )
                                                   30 *
                                                   31 *          # ------------------------------------------------------------
                                                   32 *          #  This tests only the function of the CU14 instruction where
                                                   33 *          #  operands cross page boundaries.
                                                   34 *          #  Specification Exceptions are NOT tested.
                                                   35 *          # ------------------------------------------------------------
                                                   36 *
                                                   37 *          mainsize    16
                                                   38 *          numcpu      1
                                                   39 *          sysclear
                                                   40 *          archlvl     z/Arch
                                                   41 *
                                                   42 *          loadcore    "$(testpath)/CU14-01-xpage.core" 0x0
                                                   43 *
                                                   44 *          runtest     2
                                                   45 *
                                                   46 *          *Done
                                                   47 *
                                                   48 *******************************************************************************
```

```
   LOC        OBJECT CODE     ADDR1     ADDR2     STMT

                                                  50 ****************************************************************************
                                                  51 *
                                                  52 *                    Low Core PSWs
                                                  53 *
                                                  54 ****************************************************************************

                              00000000  000006EF  56 CU14TST START 0
00000000                      00000000            57         USING CU14TST,R0            Low core addressability

00000000                      00000000  000001A0  59         ORG   CU14TST+X'1A0'        z/Architecure RESTART PSW
000001A0   00000001 80000000                       60         DC    X'0000000180000000'
000001A8   00000000 00000200                       61         DC    AD(BEGIN)

000001B0                      000001B0  000001D0  63         ORG   CU14TST+X'1D0'        z/Architecure PROGRAM CHECK PSW
000001D0   00020001 80000000                       64         DC    X'0002000180000000'
000001D8   00000000 0000DEAD                       65         DC    AD(X'DEAD')

000001E0                      000001E0  00000200  67         ORG   CU14TST+X'200'        Start of actual test program...
```

```
 LOC        OBJECT CODE      ADDR1      ADDR2     STMT

                                                  69 ***************************************************************************
                                                  70 *              The actual "CU14TST" program itself...
                                                  71 ***************************************************************************
                                                  72 *
                                                  73 *    Architecture Mode: z/Arch
                                                  74 *    Register Usage:
                                                  75 *
                                                  76 *    R0       interation count for current test
                                                  77 *    R1       current target address
                                                  78 *    R2       CU14 - First-Operand Address  - target
                                                  79 *    R3       CU14 - First-Operand Length
                                                  80 *    R4       CU14 - Second-Operand Address  - source
                                                  81 *    R5       CU14 - Second-Operand length
                                                  82 *    R6       (work)
                                                  83 *    R7       CU14CTL base
                                                  84 *    R8       First base register
                                                  85 *    R9       Second base register
                                                  86 *    R10-R13  (work) (copy source)
                                                  87 *    R14      Subroutine call
                                                  88 *    R15      Secondary Subroutine call or current source address
                                                  89 *
                                                  90 ***************************************************************************

00000200                     00000200             92          USING  BEGIN,R8         FIRST Base Register
00000200                     00001200             93          USING  BEGIN+4096,R9    SECOND Base Register

00000200  0580                                    95 BEGIN    BALR   R8,0             Initalize FIRST base register
00000202  0680                                    96          BCTR   R8,0             Initalize FIRST base register
00000204  0680                                    97          BCTR   R8,0             Initalize FIRST base register

00000206  4190 8800          00000800             99          LA     R9,2048(,R8)     Initalize SECOND base register
0000020A  4190 9800          00000800            100          LA     R9,2048(,R9)     Initalize SECOND base register
                                                 101 *
                                                 102 **       Run the tests...
                                                 103 *
0000020E  45E0 8302          00000502            104          BAL    R14,TEST01       Test CU14   instruction
                                                 105 *
```

```
  LOC        OBJECT CODE    ADDR1     ADDR2    STMT

                                               107 ***********************************************************************
                                               108 *        Test for normal or unexpected test completion...
                                               109 ***********************************************************************

00000212   9501 8200                 00000400  111          CLI    TESTNUM,X'01'    Did we end on expected test?
00000216   4770 83F0                 000005F0  112          BNE    FAILTEST         No?! Then FAIL the test!

0000021A   9504 8201                 00000401  114          CLI    SUBTEST,X'04'    Did we end on expected SUB-test?
0000021E   4770 83F0                 000005F0  115          BNE    FAILTEST         No?! Then FAIL the test!

00000222   47F0 83D8                 000005D8  117          B      EOJ             Yes, then normal completion!


                                               119 ***********************************************************************
                                               120 *        Fixed test storage locations ...
                                               121 ***********************************************************************

00000226              00000226  00000400        123          ORG    BEGIN+X'200'
                                               124
00000400                                        125 TESTADDR DS     0D             Where test/subtest numbers will go
00000400   99                                   126 TESTNUM  DC     X'99'          Test number of active test
00000401   99                                   127 SUBTEST  DC     X'99'          Active test sub-test number


00000402              00000402  00000502        129          ORG    *+X'100'
```

```
  LOC          OBJECT CODE      ADDR1      ADDR2      STMT

                                                      131 *****************************************************************************
                                                      132 *          TEST01                        Test CU14 instruction
                                                      133 *****************************************************************************

00000502   9201 8200                       00000400   135 TEST01    MVI     TESTNUM,X'01'
                                                      136
00000506   4170 83F8                       000005F8   137           LA      R7,CU14CTL              Point R7 --> testing control table
0000050A                       00000000               138           USING   CU14TEST,R7             What each table entry looks like
                                                      139
                               0000050A   00000001    140 TST1LOOP  EQU     *
0000050A   4360 7000                       00000000   141           IC      R6,TNUM                 Set test number
0000050E   4260 8200                       00000400   142           STC     R6,TESTNUM
                                                      143
00000512   5800 7010                       00000010   144           L       R0,OP2LEN               source length
                                                      145 *
00000516   58F0 7014                       00000014   146           L       R15,OP1WHERE            Calculate Target address
0000051A   1BF0                                       147           SR      R15,R0
0000051C   41F0 F001                       00000001   148           LA      R15,1(,R15)
                                                      149 *
00000520   5810 7018                       00000018   150           L       R1,OP2WHERE             Calculate source address
00000524   1B10                                       151           SR      R1,R0
00000526   4110 1001                       00000001   152           LA      R1,1(,R1)
                                                      153 *
                                                      154 **        Initialize source operand data (move data to testing address)
                                                      155 *
                               0000052A   00000001    156 TST1INIT  EQU     *
                                                      157 *                                         Source
0000052A   18A1                                       158           LR      R10,R1                  Where to move operand-2 data to
0000052C   58B0 7010                       00000010   159           L       R11,OP2LEN              How much of it there is
00000530   58C0 700C                       0000000C   160           L       R12,OP2DATA             Where op2 data is right now
00000534   58D0 7010                       00000010   161           L       R13,OP2LEN              How much of it there is
00000538   0EAC                                       162           MVCL    R10,R12
                                                      163



                                                      165 *         Execute CU14 instruction and check for expected condition code

0000053A   182F                                       167           LR      R2,R15                  Target
0000053C   5830 7008                       00000008   168           L       R3,OP1LEN                target length
00000540   1841                                       169           LR      R4,R1                   source
00000542   5850 7010                       00000010   170           L       R5,OP2LEN                source length
                                                      171
00000546   1B66                                       172           SR      R6,R6                   get M3 bits for CU14
00000548   4360 7003                       00000003   173           IC      R6,M3                   (M3)
0000054C   4260 835E                       0000055E   174           STC     R6,CU14MOD+2            DYNAMICALLY MODIFIED CODE
                                                      175
00000550   58B0 701C                       0000001C   176           L       R11,FAILMASK            (failure CC)
00000554   89B0 0004                       00000004   177           SLL     R11,4                   (shift to BC instr CC position)
                                                      178
00000558   9200 8201                       00000401   179           MVI     SUBTEST,X'00'           (primary CU14)
0000055C   B9B0 0024                                  180 CU14MOD   CU14    R2,R4                   Start with CU14 and m3=0
00000560   4710 835C                       0000055C   181           BC      B'0001',CU14MOD          cc=3, not finished
                                                      182
00000564   44B0 83C4                       000005C4   183           EX      R11,CU14BC              fail if...
```

```
  LOC        OBJECT CODE        ADDR1    ADDR2    STMT

                                                  185 **          Verify R3,R5  contain (or still contain!) expected values
00000568   9201 8201                    00000401  186             MVI   SUBTEST,X'01'      (R3 result - TARGET remaining len)
0000056C   5930 7020                    00000020  187             C     R3,ENDLN1          R3 correct?
00000570   4770 83BE                    000005BE  188             BNE   CU14FAIL       No, FAILTEST!
                                                  189
00000574   9202 8201                    00000401  190             MVI   SUBTEST,X'02'      (R5 result - SOURCE remaining len)
00000578   5950 7024                    00000024  191             C     R5,ENDLN2          R5 correct
0000057C   4770 83BE                    000005BE  192             BNE   CU14FAIL       No, FAILTEST!
                                                  193
00000580   9203 8201                    00000401  194             MVI   SUBTEST,X'03'      (TARGET IS CORRECT?)
00000584   182F                                   195             LR    R2,R15             conversion result
00000586   5830 7008                    00000008  196             L     R3,OP1LEN
0000058A   5840 7004                    00000004  197             L     R4,OP1DATA         expected result
0000058E   5850 7008                    00000008  198             L     R5,OP1LEN
00000592   0F24                                   199             CLCL  R2,R4
00000594   4710 8390                    00000590  200             BC    B'0001',*-4         not finished?
00000598   4770 83BE                    000005BE  201             BNE   CU14FAIL       No, FAILTEST!
                                                  202 *
                                                  203 *          shift source/target addresses and try again to
                                                  204 *          ensure multiple cross page bounday tests
                                                  205 *
0000059C   4110 1001                    00000001  206             LA    R1,1(,R1)
000005A0   41F0 F001                    00000001  207             LA    R15,1(,R15)
000005A4   4600 832A                    0000052A  208             BCT   R0,TST1INIT
                                                  209
000005A8   4170 7028                    00000028  210             LA    R7,CU14NEXT        Go on to next table entry
000005AC   D503 83F4 7000   000005F4    00000000  211             CLC   =F'0',0(R7)        End of table?
000005B2   4770 830A                    0000050A  212             BNE   TST1LOOP       No, loop...
                                                  213
000005B6   9204 8201                    00000401  214             MVI   SUBTEST,X'04'       Done
000005BA   47F0 83C2                    000005C2  215             B     CU14DONE            Done! (success!)


000005BE   41E0 83F0                    000005F0  217 CU14FAIL LA  R14,FAILTEST       Unexpected results!
000005C2   07FE                                   218 CU14DONE BR  R14                Return to caller or FAILTEST


000005C4   4700 83BE                    000005BE  220 CU14BC   BC  0,CU14FAIL          (fail if unexpected condition code)


000005C8                                          222             DROP  R7
000005C8                      00000200            223             USING BEGIN,R8
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2    STMT

                                                  225 **********************************************************************
                                                  226 *         Normal completion or Abnormal termination PSWs
                                                  227 **********************************************************************


000005C8  00020001 80000000                       229 EOJPSW   DC    0D'0',X'0002000180000000',AD(0)

000005D8  B2B2 83C8                      000005C8  231 EOJ      LPSWE EOJPSW                  Normal completion


000005E0  00020001 80000000                       233 FAILPSW  DC    0D'0',X'0002000180000000',AD(X'BAD')

000005F0  B2B2 83E0                      000005E0  235 FAILTEST LPSWE FAILPSW                 Abnormal termination



                                                  237 **********************************************************************
                                                  238 *         Working Storage
                                                  239 **********************************************************************


000005F4                                          241          LTORG ,                       Literals pool
000005F4  00000000                                242                =F'0'
                               00000400  00000001  244 K        EQU   1024                    One KB
                               00001000  00000001  245 PAGE     EQU   (4*K)                   Size of one page
                               00004000  00000001  246 K16      EQU   (16*K)                  16 KB
                               00008000  00000001  247 K32      EQU   (32*K)                  32 KB
                               00010000  00000001  248 K64      EQU   (64*K)                  64 KB
                               00100000  00000001  249 MB       EQU   (K*K)                    1 MB
```

LOC	OBJECT CODE	ADDR1	ADDR2	STMT				
		00000000	000006EF	251	CU14TST	CSECT	,	
				253	**			
				254	*	CU14TEST DSECT		
				255	**			
				257	CU14TEST	DSECT	,	
00000000	00			258	TNUM	DC	X'00'	CU14 test number
00000001	00			259		DC	X'00'	
00000002	00			260		DC	X'00'	
00000003	00			261	M3	DC	X'00'	M3 byte stored into CU14 instruction
				263				
00000004	00000000			264	OP1DATA	DC	A(0)	Pointer to Operand 1 - result
00000008	00000000			265	OP1LEN	DC	F'0'	length - result
0000000C	00000000			266	OP2DATA	DC	A(0)	Pointer to Operand-2 data - source
00000010	00000000			267	OP2LEN	DC	F'0'	length - source
		00000014	00000001	269	OPSWHERE	EQU	*	
00000014	00000000			270	OP1WHERE	DC	A(0)	result - Where should be placed
00000018	00000000			271	OP2WHERE	DC	A(0)	source - Where should be placed
0000001C	00000000			273	FAILMASK	DC	A(0)	Failure Branch on Condition mask
				275	*			Ending register values
00000020	00000000			276	ENDLN1	DC	A(0)	target length
00000024	00000000			277	ENDLN2	DC	A(0)	source length
				278				
		00000028	00000001	280	CU14NEXT	EQU	*	Start of next table entry...

```
  LOC          OBJECT CODE      ADDR1      ADDR2     STMT

                              00000000  000006EF    283 CU14TST CSECT   ,


                                                    285 *********************************************************************
                                                    286 *        CU14 Testing Control tables    (ref: CU14TEST DSECT)
                                                    287 *********************************************************************
                                                    288         PRINT DATA
000005F8                                            289 CU14CTL DC     0A(0)      start of table
                                                    290 *********************************************************************
                                                    291 *        tests with CC=0 M3=0
                                                    292 *********************************************************************


000005F8                                            294 CCOT1   DS     0F
000005F8   01                                       295         DC     X'01'                        Test Num
000005F9   0000                                     296         DC     X'00',X'00'
000005FB   00                                       297         DC     X'00'                        M3
                                                    298 *
000005FC   00000680 00000070                        299         DC     A(UTF32A),A(UTF32AED-UTF32A)    target - Op1 & length
00000604   00000638 0000003D                        300         DC     A(UTF8A),A(UTF8AEND-UTF8A)      Source - Op2 & length
                                                    301
0000060C   00100000                                 302         DC     A(1*MB+(0*K16))              target
00000610   00200000                                 303         DC     A(2*MB+(0*K16))              source
                                                    304 *
00000614   00000007                                 305         DC     A(7)                         FailCC - not CC0
00000618   00000000                                 306         DC     A(0)                         Result - target len
0000061C   00000000                                 307         DC     A(0)                         Result - source len


00000620   00000000                                 309         DC     A(0)     end of table
00000624   00000000                                 310         DC     A(0)     end of table
00000628   00000000                                 311         DC     A(0)     end of table
                                                    312
```

```
  LOC         OBJECT CODE      ADDR1     ADDR2    STMT

                                               314 *********************************************************************
                                               315 *          CU14  UTF-8 test data
                                               316 *********************************************************************
0000062C  E4E3C6F8 7A4040                       318         DC    C'UTF8:  '                        eye catcher
00000634  0000003D                             319 UTF8ALN DC    A(UTF8AEND-UTF8A)
00000638                                       320 UTF8A   DS    0H
00000638  00                                   321         DC    XL1'00'   first UTF-8 1 Byte character
00000639  31                                   322         DC    XL1'31'   1
0000063A  39                                   323         DC    XL1'39'   9
0000063B  40                                   324         DC    XL1'40'   @
0000063C  41                                   325         DC    XL1'41'   A
0000063D  42                                   326         DC    XL1'42'   B
0000063E  7F                                   327         DC    XL1'7F'   last UTF-8 1 Byte character

0000063F  C280                                 329         DC    XL2'C280'    first UTF-8 2 Byte character
00000641  C380                                 330         DC    XL2'C380'    c3 80 LATIN CAPITAL LETTER A WITH GRAVE
00000643  C3B8                                 331         DC    XL2'C3B8'    c3 b8 LATIN SMALL LETTER O WITH STROKE
00000645  D09C                                 332         DC    XL2'D09C'    D0 9C Đœ Cyrillic Capital Letter Em
00000647  DFBF                                 333         DC    XL2'DFBF'    last UTF-8 2 Byte character DF BF ß¿

00000649  43                                   335         DC    XL1'43'   C

0000064A  E0A080                               337         DC    XL3'E0A080'   first UTF-8 3 Byte character
                                               338 *                            E0 A0 80 à € Samaritan Letter Alaf
0000064D  E0A18D                               339         DC    XL3'E0A18D'   E0 A1 8D à¡• Mandaic Letter An
00000650  EA9FBD                               340         DC    XL3'EA9FBD'   EA 9F BD êŸ½ Latin Epigraphic Inverted M
00000653  EFBF87                               341         DC    XL3'EFbf87'   EF BF 87 ï¿‡ Halfwidth Hangul Letter E
00000656  EFBFBF                               342         DC    XL3'EFBFBF'   last UTF-8 3 Byte character EF BF BF

00000659  44                                   344         DC    XL1'44'   D

0000065A  F0908080                             346         DC    XL4'F0908080'   first UTF-8 4 Byte character
                                               347 *                            F0 90 80 80 ð•€€ Linear B Syllable B008 A
0000065E  F0908487                             348         DC    XL4'F0908487' F0 90 84 87 ð•„‡ Aegean Number One
00000662  F09294B5                             349         DC    XL4'F09294B5' F0 92 94 B5 Cuneiform Sign She Plus Sar
00000666  F09082B8                             350         DC    XL4'F09082B8'  F0 90 82 B8 ð•‚¸ Linear B Ideogram B177
0000066A  F096AB83                             351         DC    XL4'F096AB83'  F0 96 A8 83 ð–¨ƒ Bamum Letter Phase-f Ka
0000066E  F0989A9F                             352         DC    XL4'F0989A9F'   last UTF-8 4 Byte character

00000672  45                                   354         DC    XL1'45'   E
00000673  4E                                   355         DC    XL1'4E'   N
00000674  44                                   356         DC    XL1'44'   D
00000675                                       357 UTF8AEND DS   0X
```

```
 LOC         OBJECT CODE      ADDR1     ADDR2     STMT

                                                  359 ********************************************************************
                                                  360 *          CU14   UTF-32 Result
                                                  361 ********************************************************************
00000675    E4E3C6F3 F27A40                        362          DC    C'UTF32: '                    eye catcher
0000067C    00000070                               363 UTF32ALN DC    A(UTF32AED-UTF32A)
00000680                                           364 UTF32A   DC    0X
00000680    00000000                               365          DC    X'00000000'
00000684    00000031                               366          DC    X'00000031'
00000688    00000039                               367          DC    X'00000039'
0000068C    00000040                               368          DC    X'00000040'
00000690    00000041                               369          DC    X'00000041'
00000694    00000042                               370          DC    X'00000042'
00000698    0000007F                               371          DC    X'0000007F'
0000069C    00000080                               372          DC    X'00000080'
000006A0    000000C0                               373          DC    X'000000C0'
000006A4    000000F8                               374          DC    X'000000F8'
000006A8    0000041C                               375          DC    X'0000041C'
000006AC    000007FF                               376          DC    X'000007FF'
000006B0    00000043                               377          DC    X'00000043'
000006B4    00000800                               378          DC    X'00000800'
000006B8    0000084D                               379          DC    X'0000084D'
000006BC    0000A7FD                               380          DC    X'0000A7FD'
000006C0    0000FFC7                               381          DC    X'0000FFC7'
000006C4    0000FFFF                               382          DC    X'0000FFFF'
000006C8    00000044                               383          DC    X'00000044'
000006CC    00010000                               384          DC    X'00010000'
000006D0    00010107                               385          DC    X'00010107'
000006D4    00012535                               386          DC    X'00012535'
000006D8    000100B8                               387          DC    X'000100B8'
000006DC    00016AC3                               388          DC    X'00016AC3'
000006E0    0001869F                               389          DC    X'0001869F'
000006E4    00000045                               390          DC    X'00000045'
000006E8    0000004E                               391          DC    X'0000004E'
000006EC    00000044                               392          DC    X'00000044'
000006F0                                           393 UTF32AED DS    0X
                                                   394
```

```
 LOC           OBJECT CODE        ADDR1      ADDR2      STMT

                                                        396 ******************************************************************
                                                        397 *         Register equates
                                                        398 ******************************************************************

                           00000000  00000001  400 R0        EQU   0
                           00000001  00000001  401 R1        EQU   1
                           00000002  00000001  402 R2        EQU   2
                           00000003  00000001  403 R3        EQU   3
                           00000004  00000001  404 R4        EQU   4
                           00000005  00000001  405 R5        EQU   5
                           00000006  00000001  406 R6        EQU   6
                           00000007  00000001  407 R7        EQU   7
                           00000008  00000001  408 R8        EQU   8
                           00000009  00000001  409 R9        EQU   9
                           0000000A  00000001  410 R10       EQU   10
                           0000000B  00000001  411 R11       EQU   11
                           0000000C  00000001  412 R12       EQU   12
                           0000000D  00000001  413 R13       EQU   13
                           0000000E  00000001  414 R14       EQU   14
                           0000000F  00000001  415 R15       EQU   15


                                                        417           END
```

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES					
BEGIN	I	000200	2	95	123	61	92	93	223	
CCOT1	F	0005F8	4	294						
CU14BC	I	0005C4	4	220	183					
CU14CTL	A	0005F8	4	289	137					
CU14DONE	I	0005C2	2	218	215					
CU14FAIL	I	0005BE	4	217	188	192	201	220		
CU14MOD	I	00055C	4	180	174	181				
CU14NEXT	U	000028	1	280	210					
CU14TEST	4	000000	40	257	138					
CU14TST	J	000000	1776	56	59	63	67	57		
ENDLN1	A	000020	4	276	187					
ENDLN2	A	000024	4	277	191					
EOJ	I	0005D8	4	231	117					
EOJPSW	D	0005C8	8	229	231					
FAILMASK	A	00001C	4	273	176					
FAILPSW	D	0005E0	8	233	235					
FAILTEST	I	0005F0	4	235	112	115	217			
IMAGE	1	000000	1776	0						
K	U	000400	1	244	245	246	247	248	249	
K16	U	004000	1	246	302	303				
K32	U	008000	1	247						
K64	U	010000	1	248						
M3	X	000003	1	261	173					
MB	U	100000	1	249	302	303				
OP1DATA	A	000004	4	264	197					
OP1LEN	F	000008	4	265	168	196	198			
OP1WHERE	A	000014	4	270	146					
OP2DATA	A	00000C	4	266	160					
OP2LEN	F	000010	4	267	144	159	161	170		
OP2WHERE	A	000018	4	271	150					
OPSWHERE	U	000014	1	269						
PAGE	U	001000	1	245						
R0	U	000000	1	400	57	144	147	151	208	
R1	U	000001	1	401	150	151	152	158	169	206
R10	U	00000A	1	410	158	162				
R11	U	00000B	1	411	159	176	177	183		
R12	U	00000C	1	412	160	162				
R13	U	00000D	1	413	161					
R14	U	00000E	1	414	104	217	218			
R15	U	00000F	1	415	146	147	148	167	195	207
R2	U	000002	1	402	167	180	195	199		
R3	U	000003	1	403	168	187	196			
R4	U	000004	1	404	169	180	197	199		
R5	U	000005	1	405	170	191	198			
R6	U	000006	1	406	141	142	172	173	174	
R7	U	000007	1	407	137	138	210	211	222	
R8	U	000008	1	408	92	95	96	97	99	223
R9	U	000009	1	409	93	99	100			
SUBTEST	X	000401	1	127	114	179	186	190	194	214
TEST01	I	000502	4	135	104					
TESTADDR	D	000400	8	125						
TESTNUM	X	000400	1	126	111	135	142			
TNUM	X	000000	1	258	141					
TST1INIT	U	00052A	1	156	208					
TST1LOOP	U	00050A	1	140	212					
UTF32A	X	000680	1	364	299	363				

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES	
UTF32AED	X	0006F0	1	393	299	363
UTF32ALN	A	00067C	4	363		
UTF8A	H	000638	2	320	300	319
UTF8AEND	X	000675	1	357	300	319
UTF8ALN	A	000634	4	319		
=F'0'	F	0005F4	4	242	211	

MACRO DEFN REFERENCES

No defined macros

```
   DESC      SYMBOL  SIZE     POS        ADDR

Entry: 0

Image      IMAGE   1776   000-6EF   000-6EF
  Region           1776   000-6EF   000-6EF
    CSECT  CU14TST  1776   000-6EF   000-6EF
```

   STMT   FILE NAME

1   /devstor/dev/tests/./CU14-01-xpage.asm

** NO ERRORS FOUND **