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DECUS NO.	8-281a
TITLE	BINARY TAPE SPLICER ASR33/75A
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SOURCE LANGUAGE	PAL

BINARY TAPE SPLICER ASR33/75A

DECUS Program Library Write-up — DECUS No. 8-281a

SPECIFICATIONS:

1. PAL BIN
2. LENGTH 200-377 (OCTAL)
3. INPUT/OUTPUT ASR33 TELETYPE OR 75A HIGH SPEED UNIT
4. START AT 200
   IF BIT 11 IS SET, THE HIGH SPEED UNIT IS SELECTED; IF BIT 11 IS ZERO , THE TELETYPE
5. OPERATION IS FROM CONSOLE, USING SWITCH REGISTER AND "CONT" SWITCH

ABSTRACT:

THIS UTILITY PROGRAM PUNCHES A LENGTH OF LEADER TAPE AND HALTS.
IT THEN TRANSCRIBES BINARY TAPES AS THEY ARE FED IN, WITHOUT INTERRUPTION ON THE OUTPUT TAPE. EACH INPUT TAPE IS CHECKED AGAINST ITS CHECKSUM TO GUARD AGAINST READ ERRORS.
IT FINISHES BY PUNCHING A NEW CHECKSUM AND A LENGTH OF TRAILER TAPE.
SPLICED TAPES CAN BE READ INTO MEMORY USING THE BINARY LOADER.

OPERATING INSTRUCTIONS

LOAD THE SPLICER INTO CORE MEMORY 200-377 USING THE BINARY LOADER

LOAD ADDRESS 200

SELECT INPUT/OUTPUT SYSTEM BY MEANS OF OPTION ON SWITCH REGISTER
BIT 11 = 0 ASR33 TELETYPE
BIT 11 = 1 75A HIGH SPEED UNIT

PRESS START

A LENGTH OF CODE 200 LEADER IS PUNCHED
COMPUTER HALTS

FEED IN CODE 200 LEADER OF FIRST BINARY TAPE TO BE SPLICED

PRESS CONTINUE

BINARY TAPE IS TRANSCRIBED
COMPUTER HALTS (See ERROR STOP if computer fails to halt)

FEED IN SUBSEQUENT BINARY TAPES AS ABOVE

PRESS CONTINUE

WHEN ALL TAPES HAVE BEEN TRANSCRIBED, CLEAR SWITCH REGISTER AND PRESS CONTINUE

A NEW CHECKSUM AND A LENGTH OF CODE 200 TRAILER ARE PUNCHED
COMPUTER HALTS

ERROR STOP:

IF A READ ERROR OCCURS ON ONE OF THE INPUT TAPES, THE COMPUTER WILL LOOP AT 277. SORRY, YOU MUST START OVER. RETURN TO STEP ONE.

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 PALD
*OUT-S:P
*
*IN-S:SPLC
*
*OPT-T

                /BINARY TAPE SPLICER, ASR 33 / 75 A

                *200
0200  3354  START, DCA CHEX /CLEAR CHECKSUM
0201  3353   DCA TCHEX
0202  7604   LAS
0203  0377   AND (1          /WHICH INPUT/OUTPUT SYST?
0204  7640   SZA CLA
0205  5215   JMP FAST        /75 A
0206  6032  SLOW, KCC
0207  6046   TLS             /INITIAL PUNCH
0210  1376   TAD (BOARD
0211  3356   DCA READ        /SET I/O TO ASR 233
0212  1375   TAD (TYPE
0213  3357   DCA WRITE
0214  5224   JMP FORM        /GO MAKE LEADER

0215  6012  FAST, 6012      /RRB
0216  7200   CLA
0217  6026   6026            /PLS, INITIAL PUNCH
0220  1374   TAD (REED
0221  3356   DCA READ        /SET I/O TO 75 A
0222  1373   TAD (PUNCH
0223  3357   DCA WRITE
0224  1350  FORM, TAD M200  /GO PUNCH SOME LEADER
0225  3336   DCA CNTR
0226  1372   TAD (200
0227  4757   JMS I WRITE
0230  2336   ISZ CNTR
0231  5226   JMP .-3
0232  7402   HLT

0233  7201  RESTRT, CLA IAC
0234  3352   DCA FLAG        /SET FLAG TO "NO INPUT YET" STATE
0235  7040   CMA
0236  3360   DCA BUF         /SET BUF EMPTY
0237  7040   CMA
0240  3361   DCA BUF+1
0241  4756  NEXT,JMS I READ /GO READ A NUMBER
0242  3355   DCA STOR        /STORE IT
0243  1355   TAD STOR        /IS IT LEADER-TRAILER
0244  1350   TAD M200
0245  7650   SNA CLA
0246  5264   JMP OUT         /YES, DON'T PUNCH IT
0247  3352   DCA FLAG        /SO, SET FLAG TO B INPUTSTATE
0250  1360   TAD BUF         /CHECK FOR GOOD STUFF IN BUGF
0251  7710   SPA CLA
0252  5260   JMP .+6
0253  1360   TAD BUF
0254  1353   TAD TCHEX
0255  3353   DCA TCHEX
0256  1360   TAD BUF
0257  4757   JMS I WRITE     /PUNCH A GOOD CHAR
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0260  1361    TAD BUF+1
0261  3360    DCA BUF
0262  1355    TAD STOR
0263  5240    JMP NEXT-1
0264  1352   OUT, TAD FLAG    /IS FLAG SET?
0265  7640    SZA CLA
0266  5241    JMP NEXT        /NO, FETCH THE NEXT CHAR
0267  1360    TAD BUF
0270  7106    CLL RTL
0271  7006    RTL
0272  7006    RTL
0273  1361    TAD BUF+1
0274  7041    CMA IAC
0275  1353    TAD TCHEX
0276  7640    SZA CLA
0277  5277    JMP .+0         /READ ERROR ON CURRENT INPUT TAPE
0300  7402    HLT
0301  1354    TAD CHEX
0302  1353    TAD TCHEX
0303  3354    DCA CHEX
0304  3353    DCA TCHEX
0305  7604    LAS             /ANY MORE?
0306  7650    SNA CLA
0307  5311    JMP CHEK        /NO, GO PUNCH CHECKSUM
0310  5233    JMP RESTRT

0311  1354   CHEK, TAD CHEX   /GET 2 MOST SIGNIFICANT OCTAL DIG
0312  7112    CLL RTR         /OF CHECKSUM
0313  7012    RTR
0314  7012    RTR
0315  0371    AND (77
0316  4757    JMS I WRITE     /PUNCH THEM
0317  1354    TAD CHEX        /GET THE REST
0320  0371    AND (77
0321  4757    JMS I WRITE
0322  5224    JMP FORM        /GO MAKE TRAILER

0323  0000   BOARD, 0         /LOW SPEED READER
0324  6031    KSF
0325  5324    JMP .-1
0326  6036    KRB
0327  5723    JMP I BOARD

0330  0000   TYPE, 0          /LOW-SPEED PUNCH
0331  6041    TSF
0332  5331    JMP .-1
0333  6046    TLS
0334  7200    CLA
0335  5730    JMP I TYPE

              CNTR=.
0336  0000   REED, 0          /HIGH SPEED READER
0337  6014    6014            /RFC
0340  6011    6011            /RSF
0341  5340    JMP .-1
0342  6012    6012            /RRB
0343  5736    JMP I REED
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0344  0000  PUNCH, 0          /HIGH SPEED PUNCH
0345  6021   6021            /PSF
0346  5345   JMP .-1
0347  6026   6026            /PLS



0350  7600  M200, 7600        /CLA
0351  5744   JMP I PUNCH

0352  0000  FLAG, 0
0353  0000  TCHEX, 0          /CHECKSUM FOR CURRENT INPUT TAPE
0354  0000  CHEX, 0           /CHECKSUM FOR NEW TAPE
0355  0000  STOR, 0
0356  0000  READ, 0           /READER POINTER
0357  0000  WRITE, 0          /PUNCH POINTER
0360  0000  BUF, 0;
0361  0000   0
0371  0077
0372  0200
0373  0344
0374  0336
0375  0330
0376  0323
0377  0001

BOARD  0323   BUF    0360   CHEK   0311   CHEX   0354   CNTR   0336
FAST   0215   FLAG   0352   FORM   0224   M200   0350   NEXT   0241
OUT    0264   PUNCH  0344   READ   0356   REED   0336   RESTRT 0233
SLOW   0206   START  0200   STOR   0355   TCHEX  0353   TYPE   0330
WRITE  0357
.
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