```
                        .TITLE ERDETD /RESULT OF OVERLAYING 16/6/72
                        /
                        /
                        /
                        /1    SUITE         : PCB LAYOUT
                        /2    PROGRAM TITLE : REDAL 20
                        /3    ROUTINE TITLE : ERDETD
                        /
                        /
                        / THIS PROGRAM SOURCE FILE IS SUPPLIED IN CONFIDENCE TO THE
                        / CUSTOMER: THE CONTENTS OR DETAILS OF ITS OPERATION MAY ONLY
                        / BE DISCLOSED TO PERSONS EMPLOYED BY THE CUSTOMER WHO REQUIRE
                        / A KNOWLEDGE OF THE SOFTWARE CODING TO CARRY OUT THEIR JOB.
                        / DISCLOSURE TO ANY OTHER PERSON MUST HAVE THE PRIOR AUTHORISATION
                        / FROM THE DIRECTORS OF REDAC SOFTWARE LIMITED.
                        /
                        /6    PURPOSE : COMPARES THE TREES FOR MASTER AND CHECKING DATA
                        /     AND LISTS THE DIFFERENCES.
                        /
                        /7    CALLING SEQUENCE AND DESCRIPTION OF ARGUMENTS:
                        /     CALL ERDETD(DFAD1,DFAD2)
                        /     DFAD1 - ADDRESS OF MASTER TREES
                        /     DFAD2 - ADDRESS OF CHECKING TREES
                        /
                        /8    I/O DEVICES AND FUNCTIONS:
                        /     .DAT1  OUTPUT FOR LIST OF DIFFERENCES BETWEEN TREES
                        /
                        /9     REGISTERS USED:  MQ,AIR 10 11
                        /
                        /10   COMMON AREAS:  COMPS ROUTE LIBRY EOCNAD
                        /
                        /12   GLOBALS:  ERDETD,.DA
                        /
                        /13   EDITED BY L. DOUGAN  FEB 1975
                        /     TO REMOVE PAPERTAPE OUTPUT
                        /
                        /-------------------------------------------------------------
                         .GLOBL ERDETD,.DA
                         .IODEV 1
00000 R 000000 A    COMCOM .CBD COMPS 1
00001 R 000000 A    RUTCOM .CBD ROUTE 1
00002 R 000000 A    LIBCOM .CBD LIBRY 1
00003 R 000000 A    EOCNAD .CBD EOCNAD 1
00004 R 740040 A    ERDETD XX
00005 R 121015 E     JMS* .DA
00006 R 600011 R     JMP .+1+2
00007 R 000000 A    DFAD1 0
00010 R 000000 A    DFAD2 0
00011 R 201016 R     LAC (400000
00012 R 041003 R     DAC MTRECN# / MIXED TREE COUNTER
00013 R             START .INIT 1,1,START
00013 R 001001 A *G          CAL+1*1000 1&777
```

```
                00014 R 000001 A *G          1
                00015 R 000013 R *G          START+0
                00016 R 000000 A *G          0
   52           00017 R 220000 R      LAC* COMCOM
   53           00020 R 040771 R      DAC COMPAD*
   54           00021 R 220001 R      LAC* RUTCOM / 2ND SET OF CONNS IN ROUTES ARRAY
   55           00022 R 040772 R      DAC CONNAD*
   56           00023 R 220002 R      LAC* LIBCOM
   57           00024 R 040777 R      DAC LIBAD*
   58           00025 R 777770 A      LAW -10
   59           00026 R 040774 R      DAC ERDCNT*
   60           00027 R 200774 R     ERDLP2 LAC ERDCNT
   61           00030 R 740001 A      CMA
   62           00031 R 041014 R      DAC WIDTH*
   63           00032 R 100216 R      JMS ERDET2 / DELETE COMMON WIDTH 'WIDTH' TREES
   64           00033 R 200007 R      LAC DFAD1
   65           00034 R 100567 R      JMS ERDET4 / DELETE COMMON THICKER TREES
   66           00035 R 200010 R      LAC DFAD2
   67           00036 R 100567 R      JMS ERDET4
   68           00037 R 440774 R      ISZ ERDCNT
   69           00040 R 600027 R      JMP ERDLP2
   70                                 /
   71           00041 R 100320 R      JMS ERDET3 / PRINT OUT DIFFERENCES
   72                                 .CLOSE 1
                00042 R 000001 A *G          CAL 1&777
                00043 R 000006 A *G          6
   73           00044 R 620004 R      JMP* ERDETD
   74                                 /
   75                                 /
   76                                 /
   77                                 / SUBROUTINE SEARCH. SEARCHES THE ARRAY
   78                                 / IN DFAD2 AND LOOKS FOR A GIVEN NODE
   79                                 /
   80           00045 R 740040 A     SEARCH XX
   81           00046 R 041005 R      DAC NODE*
   82           00047 R 200010 R      LAC DFAD2 / USE 2ND SET OF TREES WITH 2ND CONNS
   83           00050 R 341017 R      TAD (-1
   84           00051 R 061020 R      DAC* (10
   85           00052 R 220010 A     SERKLP LAC* 10
   86           00053 R 541017 R      SAD (-1 / LOOK FOR END OF ARRAY
   87           00054 R 741000 A      SKP
   88           00055 R 600060 R      JMP .+1+2
   89           00056 R 750000 A      CLA
   90           00057 R 620045 R      JMP* SEARCH / NOT FOUND
   91           00060 R 740001 A      CMA
   92           00061 R 341021 R      TAD (1
   93           00062 R 041000 R      DAC MIN / - NO OF NODES
   94           00063 R 220010 A      LAC* 10 / BUMP POINTER
   95           00064 R 201005 R      LAC NODE
   96           00065 R 560010 A      SAD* 10
   97           00066 R 620045 R      JMP* SEARCH / FOUND
   98           00067 R 441000 R      ISZ MIN
```

```
 99          00070 R 600065 R      JMP .-3
100          00071 R 600052 R      JMP SERKLP / NEXT TREE
101                                /
102          00072 R 740040 A     PARITY XX
103          00073 R 040770 R      DAC ACST2*
104          00074 R 777771 A      LAW -7
105          00075 R 041006 R      DAC PARCNT*
106          00076 R 200770 R      LAC ACST2*
107          00077 R 141007 R      DZM PARCN2*
108          00100 R 744020 A     PARLP RCR
109          00101 R 741400 A      SZL
110          00102 R 441007 R      ISZ PARCN2
111          00103 R 441006 R      ISZ PARCNT
112          00104 R 600100 R      JMP PARLP
113          00105 R 201007 R      LAC PARCN2
114          00106 R 501021 R      AND (1
115          00107 R 740200 A      SZA
116          00110 R 201022 R      LAC (200
117          00111 R 340770 R      TAD ACST2*
118          00112 R 620072 R      JMP* PARITY
119                                /
120          00113 R 740040 A     UNPAK XX
121          00114 R 744000 A      CLL
122          00115 R 640510 A      LRS 10
123          00116 R 040773 R      DAC DUMP*
124          00117 R 744010 A      RCL
125          00120 R 340773 R      TAD DUMP
126          00121 R 340771 R      TAD COMPAD
127          00122 R 341021 R      TAD (1
128          00123 R 040773 R      DAC DUMP
129          00124 R 220773 R      LAC* DUMP
130          00125 R 040767 R      DAC ACST*
131          00126 R 440773 R      ISZ DUMP
132          00127 R 220773 R      LAC* DUMP
133          00130 R 501023 R      AND (777400 / CLEAR CR
134          00131 R 341024 R      TAD (100 / INSERT BLANK
135          00132 R 041002 R      DAC MQST*
136                                /
137                                / LEFT JUSTIFY THE NAME
138                                /
139          00133 R 200767 R     LRJUST LAC ACST
140          00134 R 501025 R      AND (774000
141          00135 R 541026 R      SAD (200000 / LOOK FOR LEADING BLANK
142          00136 R 741000 A      SKP
143          00137 R 600152 R      JMP LJUST2
144          00140 R 201002 R      LAC MQST
145          00141 R 652000 A      LMQ
146          00142 R 200767 R      LAC ACST
147          00143 R 744000 A      CLL
148          00144 R 640607 A      LLS 7
149          00145 R 040767 R      DAC ACST
150          00146 R 641002 A      LACQ
```

```
151         00147 R 341024 R      TAD (100
152         00150 R 041002 R      DAC MQST
153         00151 R 600133 R      JMP LRJUST
154                               /
155         00152 R 777773 A     LJUST2 LAW -5
156         00153 R 040776 R      DAC JUSCNT# / COUNTER
157         00154 R 200767 R      LAC ACST
158         00155 R 640513 A      LRS 13
159         00156 R 501027 R      AND (177
160         00157 R 100072 R      JMS PARITY
161         00160 R 060011 A      DAC* 11
162         00161 R 201002 R      LAC MQST
163         00162 R 652000 A      LMQ
164         00163 R 200767 R      LAC ACST
165         00164 R 640607 A      LLS 7
166         00165 R 040767 R      DAC ACST
167         00166 R 641002 A      LACQ
168         00167 R 041002 R      DAC MQST
169         00170 R 440776 R      ISZ JUSCNT
170         00171 R 600154 R      JMP LJUST2+2 / CONTINUE
171         00172 R 620113 R      JMP* UNPAK
172                               /
173                               /
174         00173 R 740040 A     NUMPAK XX
175         00174 R 652000 A      LMQ
176         00175 R 754000 A      CLL!CLA
177         00176 R 640323 A      DIV
178         00177 R 000012 A      12
179         00200 R 041013 R      DAC UNIT#
180         00201 R 641002 A      LACQ
181         00202 R 741200 A      SNA
182         00203 R 600207 R      JMP .+1+3
183         00204 R 341030 R      TAD (60
184         00205 R 100072 R      JMS PARITY
185         00206 R 741000 A      SKP
186         00207 R 201031 R      LAC (240
187         00210 R 060011 A      DAC* 11
188         00211 R 201013 R      LAC UNIT
189         00212 R 341030 R      TAD (60
190         00213 R 100072 R      JMS PARITY
191         00214 R 060011 A      DAC* 11
192         00215 R 620173 R      JMP* NUMPAK
193                               /
194                               /
195                               /
196                               / SUBROUTINE ERDET2 (DFILE(1),DFILE(501),COMPON(1))
197                               / COMPARES TWO SETS OF TREES AND DELETES THE
198                               / IDENTICAL ONES FROM THE DFILE ARRAY
199                               /
200         00216 R 740040 A     ERDET2 XX
201                               /
202                               /SCAN TREES IN DFILE(1) AND LOOK FOR IDENTICAL ONES IN DFILE(501)
```

```
                                    /
00217 R 200007 R                     LAC DFAD1
00220 R 041010 R                     DAC PTR1#
00221 R 200010 R                     LAC DFAD2
00222 R 041011 R                     DAC PTR2#
00223 R 201010 R                    LOOP LAC PTR1
00224 R 341017 R                     TAD (-1
00225 R 061020 R                     DAC* (10
00226 R 220010 A                     LAC* 10
00227 R 741100 A                     SPA
00230 R 600317 R                     JMP COMPD / -1 DETECTED
00231 R 041004 R                     DAC N# / NO OF NODES
00232 R 740001 A                     CMA
00233 R 341021 R                     TAD (1
00234 R 041000 R                     DAC MIN / - NO OF NODES
00235 R 220010 A                     LAC* 10
00236 R 541014 R                     SAD WIDTH
00237 R 741000 A                     SKP
00240 R 600263 R                     JMP LUPEND
00241 R 201011 R                     LAC PTR2
00242 R 341017 R                     TAD (-1
00243 R 061032 R                     DAC* (11
00244 R 220011 A                     LAC* 11
00245 R 541004 R                     SAD N
00246 R 741000 A                     SKP
00247 R 600263 R                     JMP LUPEND
00250 R 220011 A                     LAC* 11
00251 R 541014 R                     SAD WIDTH
00252 R 741000 A                     SKP
00253 R 600263 R                     JMP LUPEND
00254 R 220010 A                    LUPZ LAC* 10
00255 R 560011 A                     SAD* 11
00256 R 741000 A                     SKP
00257 R 600263 R                     JMP LUPEND
00260 R 441000 R                     ISZ MIN#
00261 R 600254 R                     JMP LUPZ
00262 R 600277 R                     JMP IDENT / IDENTICAL TREES FOUND
                                    /
00263 R 201011 R                    LUPEND LAC PTR2
00264 R 361011 R                     TAD* PTR2
00265 R 341033 R                     TAD (2
00266 R 041011 R                     DAC PTR2
00267 R 221011 R                     LAC* PTR2
00270 R 740100 A                     SMA
00271 R 600223 R                     JMP LOOP
                                    /
                                    / IDENTICAL TREE NOT FOUND
                                    /
00272 R 201010 R                     LAC PTR1
00273 R 341004 R                     TAD N
00274 R 341033 R                     TAD (2
00275 R 041010 R                     DAC PTR1
```

```
255         00276 R 600221 R      JMP LOOP-2
256                               /
257         00277 R 201010 R      IDENT LAC PTR1
258         00300 R 100304 R       JMS COPY
259         00301 R 201011 R       LAC PTR2
260         00302 R 100304 R       JMS COPY
261         00303 R 600221 R       JMP LOOP-2
262                               /
263         00304 R 740040 A      COPY XX
264         00305 R 341017 R       TAD (-1
265         00306 R 061020 R       DAC* (10
266         00307 R 341033 R       TAD (2
267         00310 R 341004 R       TAD N
268         00311 R 061032 R       DAC* (11
269         00312 R 220011 A      ZIP LAC* 11
270         00313 R 060010 A       DAC* 10
271         00314 R 541017 R       SAD (-1
272         00315 R 620304 R       JMP* COPY
273         00316 R 600312 R       JMP ZIP
274         00317 R 620216 R      COMPD JMP* ERDET2 / EXIT
275                               /
276                               /
277                               /
278         00320 R 740040 A      ERDET3 XX
279                               /
280                               / ONLY NON IDENTICAL TREES REMAIN : LIST THEM
281                               /
282         00321 R 220007 R       LAC* DFAD1
283         00322 R 741100 A       SPA
284         00323 R 600354 R       JMP NOTR1 / NO TREES LEFT
285                                .WRITE 1,2,MESS1,34
            00324 R 002001 A *G           CAL+2*1000 1&777
            00325 R 000011 A *G           11
            00326 R 000366 R *G           MESS1
                             *G           .DEC
            00327 R 777736 A *G           -34
286                                .WAIT 1
            00330 R 000001 A *G           CAL 1&777
            00331 R 000012 A *G           12
287         00332 R 200007 R       LAC DFAD1
288         00333 R 100444 R       JMS PRINT
289         00334 R 220010 R       LAC* DFAD2
290         00335 R 741100 A       SPA
291         00336 R 620320 R       JMP* ERDET3 / NO TREES LEFT
292         00337 R               ST2 .INIT 1,1,ST2
            00337 R 001001 A *G           CAL+1*1000 1&777
            00340 R 000001 A *G           1
            00341 R 000337 R *G           ST2+0
            00342 R 000000 A *G           0
293         00343 R               BACK .WRITE 1,2,MESS2,34
            00343 R 002001 A *G           CAL+2*1000 1&777
            00344 R 000011 A *G           11
```

```
          00345 R 000406 R *G          MESS2
                          *G          .DEC
          00346 R 777736 A *G          -34
294                                   .WAIT 1
          00347 R 000001 A *G          CAL 1&777
          00350 R 000012 A *G          12
295       00351 R 200010 R            LAC DFAD2
296       00352 R 100444 R            JMS PRINT
297       00353 R 620320 R            JMP* ERDET3
298       00354 R 220010 R           NOTR1 LAC* DFAD2
299       00355 R 740100 A            SMA
300       00356 R 600343 R            JMP BACK
301                                   .WRITE 1,2,MESS3,34
          00357 R 002001 A *G          CAL+2*1000 1&777
          00360 R 000011 A *G          11
          00361 R 000426 R *G          MESS3
                          *G          .DEC
          00362 R 777736 A *G          -34
302                                   .WAIT 1
          00363 R 000001 A *G          CAL 1&777
          00364 R 000012 A *G          12
303       00365 R 620320 R            JMP* ERDET3
304                                   /
305       00366 R 021002 A           MESS1 21002
306       00367 R 000000 A            0
307       00370 R 202531 A            .ASCII / UNMATCHED TREES IN MASTER DATA /<15>
          00371 R 646602 A
          00372 R 522071 A
          00373 R 042610 A
          00374 R 202512 A
          00375 R 242612 A
          00376 R 515011 A
          00377 R 147100 A
          00400 R 466032 A
          00401 R 352212 A
          00402 R 511010 A
          00403 R 440650 A
          00404 R 405001 A
          00405 R 500000 A
308       00406 R 021002 A           MESS2 21002
309       00407 R 000000 A            0
310       00410 R 202531 A            .ASCII / UNMATCHED TREES IN CHECKING DATA /<15>
          00411 R 646602 A
          00412 R 522071 A
          00413 R 042610 A
          00414 R 202512 A
          00415 R 242612 A
          00416 R 515011 A
          00417 R 147100 A
          00420 R 416210 A
          00421 R 541626 A
          00422 R 446350 A
```

```
                00423 R 720210 A
                00424 R 406510 A
                00425 R 120032 A
311             00426 R 021002 A        MESS3 21002
312             00427 R 000000 A         0
313             00430 R 202351 A         .ASCII / NO UNMATCHED TREES DETECTED /<15>
                00431 R 720252 A
                00432 R 472330 A
                00433 R 152206 A
                00434 R 442130 A
                00435 R 420250 A
                00436 R 512130 A
                00437 R 551500 A
                00440 R 422132 A
                00441 R 442606 A
                00442 R 522130 A
                00443 R 420032 A
314                             /
315             00444 R 740040 A        PRINT XX
316             00445 R 341017 R         TAD (-1
317             00446 R 061020 R         DAC* (10
318             00447 R 220010 A        PLUP LAC* 10 / NUMBER OF NODES
319             00450 R 741100 A         SPA
320             00451 R 620444 R         JMP* PRINT
321             00452 R 041004 R         DAC N
322             00453 R 100670 R         JMS PACK
323             00454 R 040733 R         DAC NUMBER+1
324             00455 R 200726 R         LAC BLANK
325             00456 R 040732 R         DAC NUMBER
326                                      .WRITE 1,2,MESSY2,34 / NO OF NODES
                00457 R 002001 A *G              CAL+2*1000 1&777
                00460 R 000011 A *G              11
                00461 R 000730 R *G              MESSY2
                                 *G              .DEC
                00462 R 777736 A *G              -34
327                                      .WAIT 1
                00463 R 000001 A *G              CAL 1&777
                00464 R 000012 A *G              12
328             00465 R 220010 A             LAC* 10 / WIDTH OF TREE
329             00466 R 741100 A             SPA
330             00467 R 600710 R             JMP MIXTRE
331             00470 R 341030 R             TAD (60 / NUMBER IN ASCII FORM
332             00471 R 660713 A             ALSS 13 / IN TOP OF WORD
333             00472 R 341034 R             TAD (320 / CR IN NEXT 7 BITS
334             00473 R 040756 R             DAC NUMBE2
335                                          .WRITE 1,2,MESSY3,34
                00474 R 002001 A *G              CAL+2*1000 1&777
                00475 R 000011 A *G              11
                00476 R 000744 R *G              MESSY3
                                 *G              .DEC
                00477 R 777736 A *G              -34
336                                          .WAIT 1
```

```
                00500 R 000001 A *G          CAL 1&777
                00501 R 000012 A *G          12
337                                 /
338             00502 R 201004 R      LAC N
339             00503 R 740001 A      CMA
340             00504 R 341021 R      TAD (1
341             00505 R 041004 R      DAC N
342             00506 R 220010 A     PLUP2 LAC* 10
343             00507 R 041000 R      DAC MIN
344             00510 R 501035 R      AND (77
345             00511 R 100670 R      JMS PACK
346             00512 R 744000 A      CLL
347             00513 R 640703 A      ALS 3
348             00514 R 341021 R      TAD (1 / TOP 4 BITS OF CR
349             00515 R 040723 R      DAC NAME3
350             00516 R 201036 R      LAC (500000
351             00517 R 040724 R      DAC NAME4 / BOTTOM 3 BITS OF CR
352             00520 R 201000 R      LAC MIN
353             00521 R 744000 A      CLL
354             00522 R 640510 A      LRS 10 / PTR * 2
355             00523 R 041000 R      DAC MIN
356             00524 R 744010 A      RCL
357             00525 R 341000 R      TAD MIN
358             00526 R 340771 R      TAD COMPAD
359             00527 R 341021 R      TAD (1
360             00530 R 041000 R      DAC MIN
361             00531 R 221000 R      LAC* MIN
362             00532 R 040721 R      DAC NAME1
363             00533 R 441000 R      ISZ MIN
364             00534 R 221000 R      LAC* MIN
365             00535 R 501023 R      AND (777400 / TURN CR OR ALT MODE INTO BLANK
366             00536 R 723100 A      AAC 100
367             00537 R 040722 R      DAC NAME2
368             00540 R 200721 R     NTST LAC NAME1
369             00541 R 741100 A      SPA / LOOK FOR CHAR AND NOT BLANK
370             00542 R 600555 R      JMP NAMOK
371             00543 R 200722 R      LAC NAME2
372             00544 R 652000 A      LMQ
373             00545 R 200721 R      LAC NAME1
374             00546 R 744000 A      CLL
375             00547 R 640607 A      LLS 7
376             00550 R 040721 R      DAC NAME1
377             00551 R 641002 A      LACQ
378             00552 R 341024 R      TAD (100 / BLANK SPACE
379             00553 R 040722 R      DAC NAME2
380             00554 R 600540 R      JMP NTST
381             00555 R 740000 A     NAMOK NOP
382                                   .WRITE 1,2,MESSY,34 / NODE OUTPUT
                00556 R 002001 A *G          CAL+2*1000 1&777
                00557 R 000011 A *G          11
                00560 R 000717 R *G          MESSY
                                 *G          .DEC
```

```
          00561 R 777736 A *G          -34
383                             .WAIT 1
          00562 R 000001 A *G          CAL 1&777
          00563 R 000012 A *G          12
384       00564 R 441004 R      ISZ N
385       00565 R 600506 R      JMP PLUP2
386       00566 R 600447 R      JMP PLUP
387                            /
388                            / SUBROUTINE ERDET4. FINDS ANY TREES OF GIVEN
389                            / WIDTH AND MARKS ANY THINNER TREES CONTAINING
390                            / THESE BY SETTING THE TREE WIDTH WORD TO A
391                            / UNIQUE NEGATIVE NUMBER. THICKER (COMMON)
392                            / TREES ARE DELETED SO THAT ONLY THE THINNEST TREE REMAINS
393                            /
394       00567 R 740040 A     ERDET4 XX
395       00570 R 041010 R      DAC PTR1 / POINTER TO TREE LIST
396       00571 R 140775 R      DZM FESTER# / DELETION INDICATOR
397                            /
398                            / SCAN LIST AND LOOK FOR SPEC WIDTH
399                            /
400       00572 R 201010 R      LAC PTR1
401       00573 R 041012 R     DET4LP DAC SCAN#
402       00574 R 221012 R      LAC* SCAN
403       00575 R 741100 A      SPA
404       00576 R 620567 R      JMP* ERDET4
405       00577 R 041004 R      DAC N / NUMBER OF NODES
406       00600 R 441012 R      ISZ SCAN
407       00601 R 221012 R      LAC* SCAN
408       00602 R 541014 R      SAD WIDTH
409       00603 R 600610 R      JMP CWIDT / CORRECT WIDTH FOUND
410       00604 R 201012 R     WBAK LAC SCAN / RETURN PT FOR NO THINNER TREES
411       00605 R 341004 R      TAD N
412       00606 R 341021 R      TAD (1
413       00607 R 600573 R      JMP DET4LP / CONTINUE
414                            /
415                            / WE HAVE NOW FOUND A TREE. PICK UP THE FIRST
416                            / NODE AND SCAN THE REST OF THE ARRAY LOOKING FOR
417                            / THAT NODE. IF FOUND DELETE THIS TREE AND
418                            / REPEAT THIS PROCESS FOR THE NEW TREE. FINALLY
419                            / MARK THE LAST TREE WITH A UNIQUE NUMBER
420                            /
421       00610 R 441012 R     CWIDT ISZ SCAN
422       00611 R 221012 R      LAC* SCAN
423       00612 R 041005 R      DAC NODE# / FIRST NODE
424       00613 R 201012 R      LAC SCAN
425       00614 R 341004 R      TAD N
426       00615 R 041011 R      DAC PTR2 / PTR TO NEXT TREE
427                            /
428       00616 R 221011 R     LP4 LAC* PTR2
429       00617 R 741100 A      SPA
430       00620 R 600656 R      JMP WIDBK / -1 READ
431       00621 R 740001 A      CMA
```

```
00622 R 341021 R     [illegible] (1
00623 R 041001 R     DAC MIN2# / - NO OF NODES
00624 R 201011 R     LAC PTR2
00625 R 341021 R     TAD (1
00626 R 061020 R     DAC* (10
00627 R 220010 A    LP5 LAC* 10 / READ A NODE
00630 R 541005 R     SAD NODE
00631 R 600641 R     JMP T2FND / NEW TREE FOUND
00632 R 441001 R     ISZ MIN2
00633 R 600627 R     JMP LP5
00634 R 201011 R     LAC PTR2
00635 R 361011 R     TAD* PTR2
00636 R 341033 R     TAD (2
00637 R 041011 R     DAC PTR2
00640 R 600616 R     JMP LP4
                    /
00641 R 201012 R    T2FND LAC SCAN
00642 R 341037 R     TAD (-2
00643 R 100304 R     JMS COPY / DELETE FIRST TREE
00644 R 201004 R     LAC N
00645 R 341021 R     TAD (1
00646 R 740001 A     CMA / AC = -N-2
00647 R 341011 R     TAD PTR2 / NEW POINTER
00650 R 440775 R     ISZ FESTER / SET INDICATOR
00651 R 041012 R     DAC SCAN / SCAN = PTR2
00652 R 221012 R     LAC* SCAN
00653 R 041004 R     DAC N
00654 R 441012 R     ISZ SCAN
00655 R 600610 R     JMP CWIDT / CONTINUE
                    /
00656 R 201012 R    WIDBK LAC SCAN
00657 R 341017 R     TAD (-1
00660 R 041012 R     DAC SCAN
00661 R 200775 R     LAC FESTER
00662 R 741200 A     SNA
00663 R 600604 R     JMP WBAK / NO DELETIONS
00664 R 201003 R     LAC MTRECN
00665 R 061012 R     DAC* SCAN / UNIQUE NUMBER
00666 R 441003 R     ISZ MTRECN
00667 R 600571 R     JMP ERDET4+2
                    /
00670 R 740040 A    PACK XX
00671 R 652000 A     LMQ
00672 R 754000 A     CLL!CLA
00673 R 640323 A     DIV
00674 R 000012 A     12
00675 R 041013 R     DAC UNIT#
00676 R 641002 A     LACQ
00677 R 741200 A     SNA
00700 R 600703 R     JMP .+3
00701 R 660710 A     ALSS 10
00702 R 341040 R     TAD (010000
```

```
484         00703 R 341013 R      TAD UNIT
485         00704 R 341013 R      TAD UNIT
486         00705 R 341041 R      TAD (40
487         00706 R 340727 R      TAD BLANK+1
488         00707 R 620670 R      JMP* PACK
489                               /
490         00710 R               MIXTRE .WRITE 1,2,MESSY4,34
            00710 R 002001 A *G           CAL+2*1000 1&777
            00711 R 000011 A *G           11
            00712 R 000757 R *G           MESSY4
                             *G           .DEC
            00713 R 777736 A *G           -34
491                                .WAIT 1
            00714 R 000001 A *G           CAL 1&777
            00715 R 000012 A *G           12
492         00716 R 600502 R      JMP PLUP2-4
493                               /
494         00717 R 021002 A      MESSY 21002
495         00720 R 000000 A       0
496         00721 R 000000 A      NAME1 0
497         00722 R 000000 A      NAME2 0
498         00723 R 000000 A      NAME3 0
499         00724 R 000000 A      NAME4 0
500         00725 R 064000 A       64000 / CR IN TOP 7 BITS
501         00726 R 201004 A      BLANK .ASCII /     /
            00727 R 020100 A
502         00730 R 021002 A      MESSY2 21002
503         00731 R 000000 A       0
504         00732 R 000000 A      NUMBER 0
505         00733 R 000000 A       0
506         00734 R 202351 A       .ASCII / NODES ON TREE /<15>
            00735 R 742212 A
            00736 R 515011 A
            00737 R 747100 A
            00740 R 522450 A
            00741 R 542500 A
            00742 R 064000 A
            00743 R 000000 A
507         00744 R 021002 A      MESSY3 21002
508         00745 R 000000 A       0
509         00746 R 202331 A       .ASCII / MIN BRANCH WIDTH /
            00747 R 147100 A
            00750 R 412450 A
            00751 R 147206 A
            00752 R 441012 A
            00753 R 744610 A
            00754 R 522204 A
            00755 R 000000 A
510         00756 R 000000 A      NUMBE2 0 / WIDTH THEN CR
511                               /
512         00757 R 021002 A      MESSY4 21002
513         00760 R 000000 A       0
```

```
514        00761 R 202571 A      .ASCII / WIDTH ERRORS /<15>
           00762 R 142250 A
           00763 R 441010 A
           00764 R 551244 A
           00765 R 476452 A
           00766 R 320032 A
515                000000 A      .END
           01015 R 001015 E *E
           01016 R 400000 A *L
           01017 R 777777 A *L
           01020 R 000010 A *L
           01021 R 000001 A *L
           01022 R 000200 A *L
           01023 R 777400 A *L
           01024 R 000100 A *L
           01025 R 774000 A *L
           01026 R 200000 A *L
           01027 R 000177 A *L
           01030 R 000060 A *L
           01031 R 000240 A *L
           01032 R 000011 A *L
           01033 R 000002 A *L
           01034 R 000320 A *L
           01035 R 000077 A *L
           01036 R 500000 A *L
           01037 R 777776 A *L
           01040 R 010000 A *L
           01041 R 000040 A *L
               SIZE=01042     NO ERROR LINES
```

ACST	00767	130	139	146	149	157	164	166	
ACST2	00770	103	106	117					
BACK	00343	293*	300						
BLANK	00726	324	487	501*					
COMCOM	00000	40*	52						
COMPAD	00771	53	126	358					
COMPD	00317	213	274*						
CONNAD	00772	55							
COPY	00304	258	260	263*	272	450			
CWIDT	00610	409	421*	460					
DET4LP	00573	401*	413						
DFAD1	00007	47*	64	204	282	287			
DFAD2	00010	48*	66	82	206	289	295	298	
DUMP	00773	123	125	128	129	131	132		
EOCNAD	00003	43*	43						
ERDCNT	00774	59	60	68					
ERDETD	00004	1	38	44*	73				
ERDET2	00216	63	200*	274					
ERDET3	00320	71	278*	291	297	303			
ERDET4	00567	65	67	394*	404	471			
ERDLP2	00027	60*	69						
FESTER	00775	396	455	465					
IDENT	00277	239	257*						
JUSCNT	00776	156	169						
LIBAD	00777	57							
LIBCOM	00002	42*	56						
LJUST2	00152	143	155*	170					
LOOP	00223	208*	247	255	261				
LP4	00616	428*	446						
LP5	00627	437*	441						
LRJUST	00133	139*	153						
LUPEND	00263	221	228	232	236	241*			
LUPZ	00254	233*	238						
MESSY	00717	382	494*						
MESSY2	00730	326	502*						
MESSY3	00744	335	507*						
MESSY4	00757	490	512*						
MESS1	00366	285	305*						
MESS2	00406	293	308*						
MESS3	00426	301	311*						
MIN	01000	93	98	217	237	343	352	355	357
		360	361	363	364				
MIN2	01001	433	440						
MIXTRE	00710	330	490*						
MQST	01002	135	144	152	162	168			
MTRECN	01003	50	468	470					
N	01004	214	226	252	267	321	338	341	384
		405	411	425	451	458			
NAME1	00721	362	368	373	376	496*			
NAME2	00722	367	371	379	497*				
NAME3	00723	349	498*						
NAME4	00724	351	499*						
NAMOK	00555	370	381*						

```
NODE    01005   81    95    423   438
NOTR1   00354   284   298*
NTST    00540   368*  380
NUMBER  00732   323   325   504*
NUMBE2  00756   334   510*
NUMPAK  00173   174*  192
PACK    00670   322   345   473*  488
PARCNT  01006   105   111
PARCN2  01007   107   110   113
PARITY  00072   102*  118   160   184   190
PARLP   00100   108*  112
PLUP    00447   318*  386
PLUP2   00506   342*  385   492
PRINT   00444   288   296   315*  320
PTR1    01010   205   208   251   254   257   395   400
PTR2    01011   207   222   241   242   244   245   259   426
                428   434   442   443   445   454
RUTCOM  00001   41*   54
SCAN    01012   401   402   406   407   410   421   422   424
                448   456   457   459   462   464   469
SEARCH  00045   80*   90    97
SERKLP  00052   85*   100
START   00013   51*   51
ST2     00337   292*  292
T2FND   00641   439   448*
UNIT    01013   179   188   478   484   485
UNPAK   00113   120*  171
WBAK    00604   410*  467
WIDBK   00656   430   462*
WIDTH   01014   62    219   230   408
ZIP     00312   269*  273
.DA     01015   38    45
```