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1          .TITLE  TSOVR - Overlay handler for mapped system regions
2          ;
3          ; This overlay handler replaces the normal RT11 handler in SYSLIB at link
4          ; time. The calling sequence remains the same as documented in the RT-11
5          ; System User's Guide chapter 11. This handler is called by a dummy
6          ; subroutine of the following form:
7          ;
8          ;     JSR      R5,$OVRH      ;call to common code for overlays
9          ;     .WORD   <OVERLAY # * 6> ;# of desired segment
10         ;     .WORD   <ENTRY ADDRESS> ;actual core address (virtual)
11         ;
12         ; This routine intercepts the overlay request and maps KPAR5 to the
13         ; address in physical memory where the segment was loaded.
14         ;
15         ;
16 000000      .PSECT  O$HAND,GBL
17
18         ; Global definitions
19         .GLOBL  $OVRH, OVRLEN, OVRHC, OVRADD, $OVTAB, O$HAND
20
21         ; Global references
22         .GLOBL  PSW, SYSMAP, MAPSYS
23
24         .ENABL  LC
25 000000  O$HAND:
26 000000  $OVRH:
27 000000  010546      MOV      R5,-(SP)      ;save a pointer to the argument list
28 000002  011505      MOV      (R5),R5      ;obtain the segment number of the system region
29 000004  004767  000000G  CALL     MAPSYS      ;call the mapping system routine
30 000010  012605      MOV      (SP)+,R5     ;restore the pointer to the argument list
31 000012  005725      TST      (R5)+      ;get to the module entry point
32 000014  011505      MOV      @R5,R5      ;obtain entry of address of mapped module
33 000016  000205      RTS       R5        ;enter the system mapped region
34         000020      OVRLEN = . - $OVRH   ;length of the overlay handler
35         ;
36         ; OVRHC is used by the root and mapped regions to call other mapped
37         ; regions. It preserves the currently mapped region, sets a return address,
38         ; and calls the system overlay handler. Upon return, it restores the
39         ; previously mapped region and returns to the caller.
40         ;
41 000020  011646      OVRHC:  MOV      (SP),-(SP)    ;move the return address down one location
42 000022  013746  000000G  MOV      @#KPAR5,-(SP) ;save the system mapping region on the stack
43 000026  012746  000046'  MOV      #OVRT,-(SP)  ;save the return address on the stack
44 000032  017646  000004   MOV      @4(SP),-(SP) ;obtain the entry address
45 000036  062766  000002  000006  ADD      #2,6(SP)     ;set return past the module overlay address
46 000044  000136      JMP      @(SP)+      ;jump into the overlay handler
47         ;
48         ; OVRT will return from the DCALL macro.
49         ; The C-bit must be preserved on entry until the return.
50         ;
51 000046  013766  000000G  000004  OVRT:  MOV      @#PSW,4(SP) ;save the current psw
52 000054  012637  000000G  MOV      (SP)+,@#KPAR5 ;restore system overlay mapping
53 000060  000002      RTI       ;return to the caller
54
55 000062  000000'  OVRADD: .WORD  $OVTAB      ;point to overlay handler table
56
57         ; Overlay table structure:

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58 ;  
59 ; loc 64 --> $DVTAB:  
60 ; .WORD <IDENTIFIER>, <KPAR5>, <WORD COUNT>  
61 ; DUMMY SUBROUTINES FOR ALL OVERLAY SEGMENTS  
62 ;  
63 000000 .PSECT $DTABL, D, @BL, DVR  
64  
65 000000 $DVTAB:;  
66  
67 000001 .END
```

Errors detected: 0

*** Assembler statistics

Work file reads: 0
Work file writes: 0
Size of work file: 45 Words (1 Pages)
Size of core pool: 17920 Words (70 Pages)
Operating system: RT-11

Elapsed time: 00:00:02.27
DK: TSOVR, LP: TSOVR=DL1: TSOVR. MAC/C/N: SYM

\$OVRH	1-19	1-26#	1-34
\$OVTAB	1-19	1-55	1-65#
KPAR5	1-42	1-52*	
MAPSYS	1-22	1-29	
O\$HAND	1-19	1-25#	
OVRADD	1-19	1-55#	
OVRT	1-43	1-51#	
OVRHC	1-19	1-41#	
OVRLEN	1-19	1-34#	
PSW	1-22	1-51	
SYSMAP	1-22		