```
EEEEEEEEEEEEEEEE    RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEEEEEEEEEEEEEEE    RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEEEEEEEEEEEEEEE    RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEE                 RRR         RRR    FFF
EEE                 RRR         RRR    FFF
EEE                 RRR         RRR    FFF
EEE                 RRR         RRR    FFF
EEE                 RRR         RRR    FFF
EEE                 RRR         RRR    FFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEE                 RRR   RRR          FFF
EEE                 RRR   RRR          FFF
EEE                 RRR   RRR          FFF
EEE                 RRR      RRR       FFF
EEE                 RRR      RRR       FFF
EEE                 RRR      RRR       FFF
EEEEEEEEEEEEEEEE    RRR         RRR    FFF
EEEEEEEEEEEEEEEE    RRR         RRR    FFF
EEEEEEEEEEEEEEEE    RRR         RRR    FFF
```

```
IIIIII   NN     NN   IIIIII   TTTTTTTTTT   RRRRRRRR   EEEEEEEEEE   AAAAAA   LL
IIIIII   NN     NN   IIIIII   TTTTTTTTTT   RRRRRRRR   EEEEEEEEEE   AAAAAA   LL
  II     NN     NN     II         TT       RR     RR  EE          AA    AA  LL
  II     NN     NN     II         TT       RR     RR  EE          AA    AA  LL
  II     NNNN   NN     II         TT       RR     RR  EE          AA    AA  LL
  II     NN NN  NN     II         TT       RRRRRRRR   EEEEEEE     AA    AA  LL
  II     NN  NN NN     II         TT       RRRRRRRR   EEEEEEE     AA    AA  LL
  II     NN   NNNN     II         TT       RR  RR     EE          AAAAAAAAAA LL
  II     NN   NNNN     II         TT       RR  RR     EE          AAAAAAAAAA LL
  II     NN     NN     II         TT       RR   RR    EE          AA    AA  LL
IIIIII   NN     NN   IIIIII       TT       RR    RR   EEEEEEEEEE  AA    AA  LLLLLLLLLL
IIIIII   NN     NN   IIIIII       TT       RR    RR   EEEEEEEEEE  AA    AA  LLLLLLLLLL

LL          IIIIII   SSSSSSSS
LL          IIIIII   SSSSSSSS
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
LLLLLLLLL   IIIIII   SSSSSSSS
LLLLLLLLL   IIIIII   SSSSSSSS
```

```
0001              Subroutine ERFRTINI ( Array_addr, Array_size )
0002
0003        C
0004        C Version:       'V04-000'
0005        C
0006        C******************************************************************
0007        C*                                                               *
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0025        C*                                                               *
0026        C*                                                               *
0027        C******************************************************************
0028        C
0029        C++
0030        C        Author: Sharon Reynolds       Creation date:  29-Mar-1983
0031        C
0032        C        Functional Description:
0033        C
0034        C        This module initializes data structures that contain the
0035        C        device class, type, version number, and the transfer vector
0036        C        offsets for the devices supported by the ERFRLTIM image.
0037        C
0038        C        Modified By:
0039        C
0040        C        V03-001 SAR0127          Sharon A. Reynolds,     7-Sep-1983
0041        C                Added initialization of a common text area for
0042        C                device registers used by both the DR750/DR780 modules.
0043        C
0044        C**
0045        C--
0046
0047        C
0048        C        Include files
0049        C
0050                 Include 'SRC$:DR32COM.FOR /nolist'
0101
0102        !
0103        !  REALTIME DEVICE CLASS AND TYPES
0104        !
0105                 Parameter DC$_REALTIME = '00000060'X
0106
0107                 PARAMETER DT$_LPA11 = '00000001'X        !  LPA-11
```

```
0108            PARAMETER DTS_DR780 = '00000002'X         !  DR780
0109            PARAMETER DTS_DR750 = '00000003'X         !  DR750
0110            PARAMETER DTS_DR11W = '0    0004'X         !  DR11W
0111            PARAMETER DTS_PCL11R = '00000005'X         !  PCL11 RECEIVER (CSS)
0112            PARAMETER DTS_PCL11T = '00000006'X         !  PCL11 TRANSMTTER (CSS)
0113      !     PARAMETER DTS_DR11C = '00000007'X         !  DR11C PARALLEL INTERFACE
0114            PARAMETER DTS_BS_DT07 = '00000008'X        !  PARALLEL INTERFACE ON DMF-32
0115      !     PARAMETER DTS_XP_PCL11B = '00000009'X      !  PCL-11B (DECNET and NONDECNET mode CSS)
0116      !     PARAMETER DTS_XI_DR11C = '0000000A'X       !  PARALLEL INTERFACE ON DMF-32
0117
0118            Parameter V1 = 1                          ! device module version number
0119
0120            Parameter        Maxtypes = 7
0121
0122            Integer*4        Array_addr, Array_size
0123
0124            Integer*2        Real_time_codes ( 4 * Maxtypes )
0125
0126      C
0127      C The following table consist of:
0128      C  DEVICE TYPE, DEVICE CLASS, MODULE VERSION, TRANSFER VECTOR OFFSET
0129      C
0130      C The MODULE VERSION is used to determine if the module in this image
0131      C is the one to use. This is accomplished the root image comparing
0132      C this value against the value in the master tables in the root image.
0133      C
0134      C The TRANSFER VECTOR OFFSET is the index to the transfer vector to
0135      C be used for a specific device type. For example, the transfer
0136      C vectors for the disk image are ordered as:
0137      C        INITDISK  0
0138      C        MASSDISK  1
0139      C        RKDISK    2
0140      C        RLDISK    3
0141      C        ECT.
0142
0143            Data            Real_time_codes /
0144            1 DTS_LPA11,      DC$_REALTIME, V1, 1,     !  LPA-11
0145            2 DTS_DR780,      DC$_REALTIME, V1, 2,     !  DR780
0146            3 DTS_DR750,      DC$_REALTIME, V1, 3,     !  DR750
0147            4 DTS_DR11W,      DC$_REALTIME, V1, 4,     !  DR11W
0148            5 DTS_PCL11R,     DC$_REALTIME, V1, 5,     !  PCL11 RECEIVER (CSS)
0149            6 DTS_PCL11T,     DC$_REALTIME, V1, 6,     !  PCL11 TRANSMTTER (CSS)
0150      !     7 DTS_DR11C,      DC$_REALTIME, V1, 0,     !  DR11C PARALLEL INTERFACE
0151            8 DTS_BS_DT07,    DC$_REALTIME, V1, 7/     !  UNIBUS SWITCH
0152      !     8 DTS_XI_DR11C,   DC$_REALTIME, V1, 1      !  PARALLEL INTERFACE ON DMF-32
0153      !     9 DTS_XP_PCL11B,  DC$_REALTIME, V1, 1      !  PCL-11B (DECNET and NONDECNET mode CSS)
0154
0155            Array_addr = %LOC (Real_time_codes(1))
0156            Array_size = Maxtypes
0157
0158      C
0159      C Initialize the DR32 common.
0160      C
0161            V1DR_SL(0) = 'SUCCESSFUL COMPLETION*'
0162            V1DR_SL(1) = 'COMMAND STARTED*'
0163            V1DR_SL(2) = 'INVALID PTE*'
0164            V1DR_SL(3) = 'COMMAND IN*'
```

```
0165            V1DR_SL(4) = 'FAR-END DISABLED*'
0166            V1DR_SL(5) = 'SELF TEST*'
0167            V1DR_SL(6) = 'RANGE ERROR*'
0168            V1DR_SL(7) = 'UNALIGNED QUEUE ERROR*'
0169            V1DR_SL(8) = 'INVALID COMMAND PACKET*'
0170            V1DR_SL(9) = 'FREE QUEUE EMPTY*'
0171            V1DR_SL(10) = 'RANDOM ENABLE*'
0172            V1DR_SL(11) = 'INVALID DDI COMMAND*'
0173            V1DR_SL(12) = 'LENGTH ERROR*'
0174            V1DR_SL(13) = 'DRIVER ABORT*'
0175            V1DR_SL(14) = 'DDI PARITY ERROR*'
0176
0177            V2DR_SL(21) = 'NON-EXISTENT REGISTER*'
0178            V2DR_SL(22) = 'LOG FAR-END REGISTERS*'
0179            V2DR_SL(23) = 'FAR-END ERROR*'
0180
0181            V1DR_CB(1) = 'BASE VA OF COMMAND BLOCK*'
0182            V1DR_CB(2) = 'LENGTH OF COMMAND BLOCK (BYTES)*'
0183            V1DR_CB(3) = 'SVAPTE OF COMMAND BLOCK BASE VA*'
0184
0185            V1DR_BB(1) = 'BASE VA OF BUFFER BLOCK*'
0186            V1DR_BB(2) = 'LENGTH OF BUFFER BLOCK (BYTES)*'
0187            V1DR_BB(3) = 'SVAPTE OF BUFFER BLOCK BASE VA*'
0188
0189            Return
0190            End
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	293	PIC CON REL LCL		SHR	EXE	RD	NOWRT	LONG
1	$PDATA	472	PIC CON REL LCL		SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	56	PIC CON REL LCL	NOSHR	NOEXE	RD	WRT	LONG
3	DR32	600	PIC OVR REL GBL		SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	1421							

ENTRY POINTS

Address	Type	Name
0-00000000		ERFRTINI

VARIABLES

Address	Type	Name	Address	Type	Name
AP-00000004@	I*4	ARRAY_ADDR	AP-00000008@	I*4	ARRAY_SIZE

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000000	I*2	REAL_TIME_CODES	56	(28)
3-0000019B	CHAR	V1DR_BB	93	(3)
3-000001F8	CHAR	V1DR_CB	96	(3)
3-00000000	CHAR	V1DR_SL	345	(0:14)
3-00000159	CHAR	V2DR_SL	66	(21:23)

COMMAND QUALIFIERS

  FORTRAN /LIS=LIS$:INITREAL/OBJ=OBJ$:INITREAL MSRC$:INITREAL

  /CHECK=(NOBOUNDS,OVERFLOW,NOUNDERFLOW)
  /DEBUG=(NOSYMBOLS,TRACEBACK)
  /STANDARD=(NOSYNTAX,NOSOURCE_FORM)
  /SHOW=(NOPREPROCESSOR,NOINCLUDE,MAP)
  /F77 /NOG_FLOATING /I4 /OPTIMIZE /WARNINGS /NOD_LINES /NOCROSS_REFERENCE /NOMACHINE_CODE /CONTINUATIONS=19

COMPILATION STATISTICS

  Run Time: 1.68 seconds
  Elapsed Time: 5.39 seconds
  Page Faults: 124
  Dynamic Memory: 160 pages

GETCODE
LIS

INITPROC1
LIS

INITREAL
LIS

EXECIMAGE
LIS

ERFSUMM
LIS

INITBUS
LIS

INITPROC4
LIS

RMS3221
LIS

ERFTAPEVE
LIS

HEADER
LIS

FILES
LIS

ERLLOGSTS
LIS

INITPROC2
LIS

INIT_TAPE
LIS

ERLLOGMSG
LIS

INITDISK
LIS

INITPROC5
LIS

IMAGELOAD
LIS

INITPROC3
LIS

INTERVENE
LIS

ERFRTVEC
LIS

ERFSUMVEC
LIS