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RRRRRRRRRRRR		MMM		MMM		SSSSSSSSSSSS	
RRRRRRRRRRRR		MMM		MMM		SSSSSSSSSSSS	
RRRRRRRRRRRR		MMM		MMM		SSSSSSSSSSSS	
RRR	RRR	MMMMM		MMMMM		SSS	
RRR	RRR	MMMMM		MMMMM		SSS	
RRR	RRR	MMMMM		MMMMM		SSS	
RRR	RRR	MMM	MMM	MMM		SSS	
RRR	RRR	MMM	MMM	MMM		SSS	
RRR	RRR	MMM	MMM	MMM		SSS	
RRRRRRRRRRRR		MMM		MMM		SSSSSSSS	
RRRRRRRRRRRR		MMM		MMM		SSSSSSSS	
RRRRRRRRRRRR		MMM		MMM		SSSSSSSS	
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM			SSS
RRR	RRR	MMM		MMM		SSSSSSSSSSSS	
RRR	RRR	MMM		MMM		SSSSSSSSSSSS	
RRR	RRR	MMM		MMM		SSSSSSSSSSSS	

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RRRRRRRR      MM      MM      000000      RRRRRRRR      CCCCCCCC      LL      CCCCCCCC      KK      KK      222222
RRRRRRRR      MM      MM      000000      RRRRRRRR      CCCCCCCC      LL      CCCCCCCC      KK      KK      222222
RR      RR      MMMM      MMMM      00      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MMMM      MMMM      00      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      00      0000      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      00      0000      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RRRRRRRR      MM      MM      00      00      00      RRRRRRRR      CCCCCCCC      LL      CCCCCCCC      KK      KK      222222
RRRRRRRR      MM      MM      00      00      00      RRRRRRRR      CCCCCCCC      LL      CCCCCCCC      KK      KK      222222
RR      RR      MM      MM      0000      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      0000      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      00      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      00      00      RR      RR      CC      CCCCCCCC      LL      KK      KK      22      22
RR      RR      MM      MM      000000      RR      RR      CC      CCCCCCCC      LL      KK      KK      2222222222
RR      RR      MM      MM      000000      RR      RR      CC      CCCCCCCC      LL      KK      KK      2222222222

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LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II      SS
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
LLLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIII      SSSSSSSS

```

```

1 0001 0 MODULE RMORCLCK2(
2 0002 0     LANGUAGE (BLISS32),
3 0003 0     IDENT = 'V04-000'
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
10 0010 1 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
11 0011 1 *  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
12 0012 1 *  ALL RIGHTS RESERVED.
13 0013 1 *
14 0014 1 *  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
15 0015 1 *  ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
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18 0018 1 *  OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
19 0019 1 *  TRANSFERRED.
20 0020 1 *
21 0021 1 *  THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
22 0022 1 *  AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
23 0023 1 *  CORPORATION.
24 0024 1 *
25 0025 1 *  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
26 0026 1 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1 ++
32 0032 1
33 0033 1 FACILITY:
34 0034 1     VAX-11 RMS
35 0035 1
36 0036 1 ABSTRACT:
37 0037 1     This module contains record locking related routines, specifically
38 0038 1     timeout on record lock support.
39 0039 1
40 0040 1 ENVIRONMENT:
41 0041 1     VAX/VMS Operating System, executive mode
42 0042 1
43 0043 1 --
44 0044 1
45 0045 1 AUTHOR: David Solomon, CREATION DATE: 16-Feb-1983
46 0046 1
47 0047 1 MODIFIED BY:
48 0048 1
49 0049 1     V03-004 DAS0001      David Solomon      28-Feb-1984
50 0050 1     Use ISAM BUG_CHECK macro for bugcheck. Also, remove unnecessary
51 0051 1     code to set and clear PIOSV_INHAST.
52 0052 1
53 0053 1     V03-003 SHZ0002      Stephen H. Zalewski    26-Apr-1983
54 0054 1     Change PSECT attributes for this module.
55 0055 1
56 0056 1
57 0057 1

```

RMORCLCK2
V04-000

6 9
16-Sep-1984 02:13:17
14-Sep-1984 13:00:51

VAX-11 Bliss-32 V4.0-742
[RMS.SRC]RMORCLCK2.B32;1

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RM
V0

:	58	0058	1	:	V03-002	MCN0001	Maria del C. Nasr	22-Mar-1983
:	59	0059	1	:		Reorganize linkages		
:	60	0060	1	:				
:	61	0061	1	:	V03-001	SHZ0001	Stephen H. Zalewski	24-Feb-1983
:	62	0062	1	:		Changed name of module from rm0reclck2 to rm0rclck2 so that		
:	63	0063	1	:		when linking we pick up the correct module name.		
:	64	0064	1	:				
:	65	0065	1	:				

```

67 0066 1 |
68 0067 1 | INCLUDE FILES:
69 0068 1 |
70 0069 1 |
71 0070 1 | LIBRARY
72 0071 1 | 'RMSLIB:RMSINTDEF'
73 0072 1 | ;
74 0073 1 |
75 0074 1 | LIBRARY
76 0075 1 | 'SYSSLIBRARY:STARLET'
77 0076 1 | ;
78 0077 1 |
79 0078 1 | SWITCHES
80 0079 1 | ADDRESSING_MODE( EXTERNAL = GENERAL )
81 0080 1 | ;
82 0081 1 |
83 0082 1 | PSECT
84 0083 1 | CODE = RMSRMSO(PSECT_ATTR),
85 0084 1 | PLIT = RMSRMSO(PSECT_ATTR)
86 0085 1 | ;
87 0086 1 |
88 0087 1 |
89 0088 1 | MACROS:
90 0089 1 |
91 0090 1 |
92 0091 1 | MACRO
93 M 0092 1 | R_RLB = ! RLB address register declaration.
94 0093 1 | RLB = 3 %
95 M 0094 1 | ,R_RLB_STR = ! RLB structure declaration.
96 0095 1 | ,R_RLB : REF BBLOCK %
97 M 0096 1 | ,L_SET_LOCK_TMO = ! Linkage to RMSSET_LOCK_TMO.
98 M 0097 1 | ,RL$SET_LOCK_TMO =
99 M 0098 1 | JSB:
100 M 0099 1 | GLOBAL( COMMON_RABREG, RLB = 3 )
101 M 0100 1 | PRESERVE( 1, 2 ) ! RMSLOCK needs R1 and R2.
102 0101 1 | %
103 0102 1 | ;
104 0103 1 |
105 0104 1 | LINKAGE
106 0105 1 | L_SET_LOCK_TMO,
107 0106 1 | L_JSB;
108 0107 1 |
109 0108 1 |
110 0109 1 | TABLE OF CONTENTS:
111 0110 1 |
112 0111 1 |
113 0112 1 | FORWARD ROUTINE
114 0113 1 | RMSSET_LOCK_TMO: RL$SET_LOCK_TMO ! Set up timer AST for wait on lock.
115 0114 1 | ,RMSLOCK_TMO_AST: NOVALDE ! AST routine for lock timeout.
116 0115 1 | ;
117 0116 1 |
118 0117 1 |
119 0118 1 | EXTERNAL REFERENCES:
120 0119 1 |
121 0120 1 |
122 0121 1 | EXTERNAL ROUTINE
123 0122 1 | RMSCHKAST_ANY: RL$JSB ADDRESSING_MODE( WORD_RELATIVE )

```

RMORCLCK2
V04-000

: 124 0123 1
: 125 0124 1 ;

I 9
16-Sep-1984 02:13:17 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 13:00:51 [RMS.SRC]RMORCLCK2.B32;1

. Check for ASTs inhibited.

```

0125 1 %SBTTL 'RM$SET_LOCK_TMO'
0126 1 GLOBAL ROUTINE RM$SET_LOCK_TMO: RL$SET_LOCK_TMO =
0127 1
0128 1 |++
0129 1
0130 1 FUNCTIONAL DESCRIPTION:
0131 1
0132 1     This routine sets up a timer as a result of a record lock wait. It is
0133 1     called by RMORECLCK\DO_ENQ if the user specified ROP bits WAT and TMO.
0134 1
0135 1 CALLING SEQUENCE:
0136 1
0137 1     ret-status.wlc.v = RM$SET_LOCK_TMO()
0138 1
0139 1 FORMAL PARAMETERS:
0140 1
0141 1     NONE
0142 1
0143 1 IMPLICIT INPUTS:
0144 1
0145 1     R3             Address of RLB.
0146 1
0147 1 IMPLICIT OUTPUTS:
0148 1
0149 1     NONE
0150 1
0151 1 ROUTINE VALUE:
0152 1
0153 1     Return status from $SETIMR.
0154 1
0155 1 SIDE EFFECTS:
0156 1
0157 1     A timer AST is declared.
0158 1
0159 1 --
0160 2 BEGIN
0161 2
0162 2 LOCAL
0163 2     TIMEOUT: VECTOR[2, LONG]      ! 64-bit delta time
0164 2     STATUS                        ! Holds $SETIMR status.
0165 2     :
0166 2
0167 2 EXTERNAL REGISTER
0168 2     R_RLB_STR                     ! RLB.
0169 2     :
0170 2
0171 2 |*
0172 2     Convert timeout value from seconds to a 64-bit delta time.
0173 2
0174 2     Details: delta times are negative, hence the upper longword is %FFFFFFF.
0175 2     The short cut used to convert the seconds to 100-nanosecond units is
0176 2     acceptable here because the number of 100-nanosecond units one can express
0177 2     in a longword (429 seconds) is greater than the number of 100-nanosecond units
0178 2     one can express in the number of seconds that will fit in a byte (255).
0179 2
0180 2
0181 2 IF .RLB[RLB$B_TMO] NEQU 0      ! If the timeout value is non-zero,
0182 2
0183 2

```

```

184 0182 2 THEN ! then convert to delta time.
185 0183 2 BEGIN
186 0184 2
187 0185 2 TIMEOUT[0] = .RLB[RLBSB_TMO] * -10000000;
188 0186 2 ! Convert seconds to 100-nanoseconds.
189 0187 2
190 0188 2 TIMEOUT[1] = -1; ! Upper longword is negative.
191 0189 2
192 0190 2 END
193 0191 2 ELSE ! Else special case zero timeout.
194 0192 2 BEGIN
195 0193 2
196 0194 2 TIMEOUT[0] = 0;
197 0195 2
198 0196 2 TIMEOUT[1] = 0;
199 0197 2
200 0198 2 END;
201 0199 2
202 0200 2 !+
203 0201 2 ! Setup timer request.
204 0202 2 !-
205 0203 2
P 0204 2 STATUS = $SETIMR( ! Value of routine is $SETIMR status.
PP 0205 2 DAYTIM = TIMEOUT ! Address of 64-bit delta time.
PP 0206 2 ,ASTADR = RMSLOCK_TMO_AST !
PP 0207 2 ! Address of AST routine for timeout.
P 0208 2 ,REQIDT = .RLB ! ASTPRM (address of RLB).
0209 2 );
210 2
211 0210 2
212 0211 2 IF .STATUS ! If successful,
213 0212 2 THEN ! then
214 0213 2 RLB[RLBSV_TIMER_INPROG] = 1; ! set timeout in progress flag.
215 0214 2
216 0215 2 RETURN .STATUS; ! Return $SETIMR status.
217 0216 2
218 0217 2 ! End of routine RM$SET_LOCK_TMO
219 1 END;

```

```

.TITLE RMORCLCK2
.IDENT \V04-000\

.EXTRN RMSCHKAST_ANY, SYS$SETIMR

.PSECT RMSRMS0,NOWRT, GBL, PIC,2

```

```

51 DD 0000 RM$SET_LOCK_TMO::
SE 0A 08 C2 00002 PUSHL R1
0A A3 95 00005 SUBL2 #8, SP
12 13 00008 TSTB 10(RLB)
A3 9A 0000A BEQL 1$
8F C5 0000E MOVZBL 10(RLB), R0
01 CE 00016 MULL3 #-10000000, R0, TIMEOUT
02 11 0001A MNEGL #1, TIMEOUT+4
6E 7C 0001C 1$ BRB 2$
53 DD 0001E 2$ CLRQ TIMEOUT
0000V CF 9F 00020 PUSHL RLB
PUSHAB RMSLOCK_TMO_AST

```

```

: 0126
: 0181
: 0185
: 0188
: 0181
: 0194
: 0209

```


RMORCLCK2
V04-000

RMSSET_LOCK_TMO

L 9
16-Sep-1984 02:13:17
14-Sep-1984 13:00:51

VAX-11 Bliss-32 V4.0-742
[RMS.SRC]RMORCLCK2.B32;1

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		08	AE	9F	00024	PJSHAB	TIMEOUT	
			7E	D4	00027	CLRL	-(SP)	
00000000G	00		04	FB	00029	CALLS	#4, SYS\$SETIMR	
	04		50	E9	00030	BLBC	STATUS, 3\$	
	A3		01	88	00033	BISB2	#1, 4(RLB)	
	5E		08	C0	00037	ADDL2	#8, SP	
			02	BA	0003A	POPR	#*M<R1>	
			05	0003C	RSB			

```

:
:
: 0211
: 0213
: 0217
:

```

; Routine Size: 61 bytes, Routine Base: RMSRMS0 + 0000

```

0218 1 %SBTTL 'RMSLOCK_TMO_AST'
0219 1 GLOBAL ROUTINE RMSLOCK_TMO_AST( RLB: REF BBLOCK ): NOVALUE =
0220 1
0221 1 |++
0222 1 |
0223 1 | FUNCTIONAL DESCRIPTION:
0224 1 |
0225 1 |     This is the AST routine that fires when the timer for a lock
0226 1 |     request expires. It is declared by a $SETIMR in RM$SET_LOCK_TMO.
0227 1 |
0228 1 | CALLING SEQUENCE:
0229 1 |
0230 1 |     ret-status.wlc.v = RMSLOCK_TMO_AST( astprm.rlu.v )
0231 1 |
0232 1 | FORMAL PARAMETERS:
0233 1 |
0234 1 |     ASTPRM          RLB address.
0235 1 |
0236 1 | IMPLICIT INPUTS:
0237 1 |
0238 1 |     NONE
0239 1 |
0240 1 | IMPLICIT OUTPUTS:
0241 1 |
0242 1 |     NONE
0243 1 |
0244 1 | ROUTINE VALUE:
0245 1 |
0246 1 |     NONE
0247 1 |
0248 1 | SIDE EFFECTS:
0249 1 |
0250 1 |     Lock request is dequeued.
0251 1 | --
0252 1 |
0253 2 BEGIN
0254 2
0255 2 BUILTIN
0256 2     TESTBITSC
0257 2     ;
0258 2
0259 2 |++
0260 2 | Validate ASTPRM (RLB structure).
0261 2 | --
0262 2 |
0263 2 | ** should we probe RLB?
0264 2 | ** should we check RLB BID/BLN?
0265 3 IF ( .RLB[RLB$B_BID] NEQU RLB$C_BID ) OR ( .RLB[RLB$B_BLN] NEQU RLB$K_BLN/4 )
0266 2 THEN
0267 2     BUG_CHECK;
0268 2
0269 2 |++
0270 2 | Check if ASTs should be inhibited; if so, requeue this AST and do a RET
0271 2 | (e.g. the routine won't return). If ASTs are not inhibited, simply RSB
0272 2 | back here.
0273 2 | --
0274 2 |
0275 2 |
0276 2 |
0277 2 |

```


00002124	8F	50	D1	00034		CMPL	STATUS, #8484
		02	13	0003B		BEQL	3\$
		63	16	0003D		JSB	RM\$BUG3
			04	0003F	3\$:	RET	

:
:
: 0305
: 0310

: Routine Size: 64 bytes, Routine Base: RM\$RMS0 + 003D

: 314	0311	1		
: 315	0312	1	END	
: 316	0313	0	ELUDOM	! End of module RMORCLCK2

PSECT SUMMARY

Name	Bytes	Attributes
RM\$RMS0	125	NOVEC, NOWRT, RD, EXE, NOSHR, GBL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	Symbols		Pages Mapped	Processing Time
	Total	Loaded Percent		
_\$255\$DUA28:[RMS.OBJ]RMSINTDEF.L32;1	1484	16 1	83	00:00.3
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	5 0	581	00:02.4

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/LIS=LIS\$:RMORCLCK2/OBJ=OBJ\$:RMORCLCK2 MSRC\$:RMORCLCK2/UPDATE=(ENH\$:RMORCLCK2)

: Size: 125 code + 0 data bytes
 : Run Time: 00:07.4
 : Elapsed Time: 00:22.6
 : Lines/CPU Min: 2530
 : Lexemes/CPU-Min: 9113
 : Memory Used: 51 pages
 : Compilation Complete

The image displays a grid of 120 small screenshots, arranged in 10 rows and 12 columns. Each screenshot shows a terminal window with text-based output from various VAX/VMS system utilities. The utilities are labeled as follows:

- RMORECLK LIS (Row 2, Column 5)
- RMORSET LIS (Row 2, Column 11)
- RMORSCAN LIS (Row 3, Column 12)
- RMORPFLNM LIS (Row 4, Column 3)
- RMORCLK2 LIS (Row 4, Column 7)
- RMORABCHK LIS (Row 5, Column 7)
- RMORELEAS LIS (Row 8, Column 7)
- RMORNAMSTR LIS (Row 9, Column 2)

The screenshots show various system parameters, error messages, and utility-specific data, such as file names, directory structures, and system status information.