
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP

```
LL            000000      CCCCCCCC  KK      KK  DDDDDDDD    BBBBBBBB
LL            000000      CCCCCCCC  KK      KK  DDDDDDDD    BBBBBBBB
LL          00      00  CC          KK      KK  DD      DD  BB      BB
LL          00      00  CC          KK      KK  DD      DD  BB      BB
LL          00      00  CC          KK    KK    DD      DD  BB      BB
LL          00      00  CC          KK    KK    DD      DD  BB      BB
LL          00      00  CC          KKKKKK      DD      DD  BBBBBBBB
LL          00      00  CC          KKKKKK      DD      DD  BBBBBBBB
LL          00      00  CC          KK    KK    DD      DD  BB      BB
LL          00      00  CC          KK    KK    DD      DD  BB      BB
LL          00      00  CC          KK      KK  DD      DD  BB      BB    ....
LL          00      00  CC          KK      KK  DD      DD  BB      BB    ....
LLLLLLLLLL    000000      CCCCCCCC  KK      KK  DDDDDDDD    BBBBBBBB      ....
LLLLLLLLLL    000000      CCCCCCCC  KK      KK  DDDDDDDD    BBBBBBBB      ....

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
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0000     1          .TITLE  LOCKDB - LOCK AND UNLOCK I/O DATA BASE
0000     2          .IDENT  'V04-000'
0000     3
0000     4  ;
0000     5  ;*****************************************************************************
0000     6  ;*                                                                           *
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0000    23  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
0000    24  ;*                                                                           *
0000    25  ;*                                                                           *
0000    26  ;*****************************************************************************
0000    27  ;
0000    28
0000    29  ;++
0000    30  ;
0000    31  ; Facility:  F11ACP Structure Level 1
0000    32  ;
0000    33  ; Abstract:
0000    34  ;
0000    35  ;       These routines lock and unlock the I/O data base mutex.
0000    36  ;       needless to say, they must be called in kernel mode.
0000    37  ;
0000    38  ; Environment:
0000    39  ;
0000    40  ;       Starlet operating system, including privileged system services
0000    41  ;       and internal exec routine.
0000    42  ;
0000    43  ; Author:  Andrew C. Goldstein, Creation Date:  29-APR-1977  15:31
0000    44  ;
0000    45  ; Modified By:
0000    46  ;
0000    47  ;       V02-002 REFORMAT        K. E. Kinnear           31-Jul-1980     13:08
0000    48  ;
0000    49  ;--
0000    50
0000    51
0000    52          $PRDEF                          ; define procesor register numbers
```

```
                                0000     54
                                0000     55 ;++
                                0000     56 ; LOCK_IODB -- Routine to lock the I/O date base Mutex.
                                0000     57 ;
                                0000     58 ; Calling Sequence:
                                0000     59 ;
                                0000     60 ;       CALL LOCK_IODB ()
                                0000     61 ;
                                0000     62 ; Input Parameters:
                                0000     63 ;
                                0000     64 ;       none
                                0000     65 ;
                                0000     66 ; Implicit Inputs:
                                0000     67 ;
                                0000     68 ;       none
                                0000     69 ;
                                0000     70 ; Output Parameters:
                                0000     71 ;
                                0000     72 ;       none
                                0000     73 ;
                                0000     74 ; Implicit Outputs:
                                0000     75 ;
                                0000     76 ;       none
                                0000     77 ;
                                0000     78 ; Routine Value:
                                0000     79 ;
                                0000     80 ;       none
                                0000     81 ;
                                0000     82 ; Side Effects:
                                0000     83 ;
                                0000     84 ;       '/O data base mutex locked.
                                0000     85 ;
                                0000     86 ;--
                                0000     87
                           00000000     88          .PSECT  $LOCKEDC1$,NOWRT
                                0000     89
                                0000     90 LOCK_IODB::
                           003C 0000     91          .WORD   ^M<R2,R3,R4,R5>         ; save registers
50  00000000'9F      DE   0002     92          MOVAL   @#IOC$GL_MUTEX,R0       ; get i/o data base mutex
54  00000000'9F      D0   0009     93          MOVL    @#SCH$GL_CURPCB,R4      ; get own pcb address
    00000000'9F      16   0010     94          JSB     @#SCH$LOCKW             ; and lock it
                     04   0016     95          RET
```

```
                                ;++
                                ; UNLOCK_IODB -- routine unlocks the i/o data base mutex.
                                ;
                                ; Calling sequence:
                                ;
                                ;       CALL UNLOCK_IODB ()
                                ;
                                ; Input Parameters:
                                ;
                                ;       none
                                ;
                                ; Implicit Inputs:
                                ;
                                ;       none
                                ;
                                ; Output Parameters:
                                ;
                                ;       none
                                ;
                                ; Implicit Outputs:
                                ;
                                ;       none
                                ;
                                ; Routine Value:
                                ;
                                ;       none
                                ;
                                ; Side Effects:
                                ;
                                ;       I/o data base mutex unlocked.
                                ;       IPL lowered to 0
                                ;
                                ;--

                        .PSECT  $LOCKEDC1$,NOWRT

                        UNLOCK_IODB::
                        .WORD   ^M<R2,R3,R4,R5>         ; save registers
50  00000000'9F   DE    MOVAL   @#IOC$GL_MUTEX,R0       ; get i/o data base mutex
54  00000000'9F   D0    MOVL    @#SCH$GL_CURPCB,R4      ; and own pcb address
    00000000'9F   16    JSB     @#SCH$UNLOCK            ; and unlock it
                        SETIPL  #0                      ; also lower ipl
                        RET

                        .END
```

```
AQB_TYPE            =  00000005
FCB_TYPE            =  00000000
IOC$GL_MUTEX           ********    X   02
LOCK_IODB              00000000 RG     02
MVL_TYPE            =  00000004
PR$_IPL             =  00000012
RVT_TYPE            =  00000003
SCH$GL_CURPCB          ********    X   02
SCH$LOCKW              ********    X   02
SCH$UNLOCK             ********    X   02
UNLOCK_IODB            00000017 RG     02
VCB_TYPE            =  00000002
WCB_TYPE            =  00000001
```

Psect synopsis

```
PSECT name                      Allocation          PSECT No.  Attributes
----------                      ----------          ---------  ----------
. ABS .                         00000000  (    0.)  00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
$ABS$                           00000000  (    0.)  01 (  1.)  NOPIC   USR   CON   ABS   LCL NOSHR   EXE   RD    WRT NOVEC BYTE
$LOCKEDC1$                      00000031  (   49.)  02 (  2.)  NOPIC   USR   CON   REL   LCL NOSHR   EXE   RD  NOWRT NOVEC BYTE
```

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	39	00:00:00.09	00:00:01.66
Command processing	131	00:00:00.66	00:00:04.85
Pass 1	144	00:00:01.59	00:00:07.61
Symbol table sort	0	00:00:00.08	00:00:00.44
Pass 2	40	00:00:00.58	00:00:03.71
Symbol table output	3	00:00:00.02	00:00:00.02
Psect synopsis output	1	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	361	00:00:03.05	00:00:18.32

```
The working set limit was 1050 pages.
6752 bytes (14 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 92 non-local and 0 local symbols.
327 source lines were read in Pass 1, producing 13 object records in Pass 2.
16 pages of virtual memory were used to define 14 macros.
```

Macro library statistics

Macro library name	Macros defined
_255DUA28:[SYS.OBJ]LIB.MLB;1	1
_255DUA28:[SYSLIB]STARLET.MLB;2	4
TOTALS (all libraries)	5

```
146 GETS were required to define 5 macros.
```

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:LOCKDB/OBJ=OBJ$:LOCKDB MSRC$:MTADEF1/UPDATE=(ENH$:MTADEF1)+MSRC$:LOCKDB/UPDATE=(ENH$:LOCKDB)+EXECML$/LIB
```

LOCKDB LIS

LOGIO LIS

MATCHNAME LIS

IODONE LIS

LOCKDN LIS

NXTVOL LIS

MAIL LIS

MOUVOL LIS

OPRCOM LIS

INIMTA LIS

MODIFY LIS

PARSE LIS