STORAGE ALLOCATION.

ADDRESS	LENGTH
0	6
6	

BINARY CONTROL CARDS.

```
IDENT   CMMDA
END
```

BLOCKS	TYPE	ADDRESS	LENGTH
ABSOLUTE*	ABSOLUTE	0	10047
LITERALS*	LOCAL	0	6

ENTRY POINTS.

CALLR	-	7617	SETRET8	-	7741	CX.OPRS	-	10	SHPBLKD	-	377
RTNR	-	7624	CALLR7	-	7632	CX.SBPD	-	31	ASKBDG	-	3607
POPR	-	7630	RTNR7	-	7636	CMMDSBK	-	212	NAMEVEC	-	7725
FEXIT	-	4057	POPR7	-	7642	DSPLYWL	-	77	SETPRNT	-	7656
EEXIT	-	4044	OPENDF	-	4105	TNLCL	-	106	FINPRNT	-	7664
EEXITM	-	4047	ATCHBLK	-	4124	OUTBFSZ	-	12	DOPRNT	-	7673
ESAVE	-	636	DTCHBLK	-	4141	OUTBUF	-	110	SERVI	-	2706
ERSTR	-	640	CLOSDF	-	4155	STNDPFK	-	373	DRGBIT	-	2
CRUNXJ	-	635	DIRNAME	-	4200	PARAMBF	-	101	SRVBITS	-	135
LOGON2	-	1511	ATCHDRL	-	202	PRMBFSZ	-	40	DRGBLK	-	11
SETPI	-	4015	OPNFILE	-	201	MINUS0	-	652	NVARS	-	16
CLRPI	-	4017	FXTFLAG	-	177	TTYOUT	-	621	NEIXEDV	-	4
SETRET	-	7613	CAP.BSE	-	47	XJLOC	-	21	NPERMV	-	4
CRASH	-	4030	CAP.LIM	-	61	RETLOC	-	47	V.NAME	-	415
UNEXERR	-	4035	CX.NLKY	-	40	RUNBT	-	176	V.DVAL	-	433
UNEXFRT	-	4037	CX.SCNL	-	34	DKBDATA	-	222	V.CAP	-	61
EEXITSV	-	507	CX.TEMP	-	0	DKBDSZ	-	145	VAL.CAP	-	104
CMMDS	-	3474	CX.HOLD	-	46	TIMEMRA	-	367	GETSPC	-	4211
MSGOUT	-	7644	CX.PRMD	-	36	TICLRA	-	370	SPCLIST	-	4711
SET	-	7571	CX.LINE	-	11	VIEWX	-	371	MXSPCLV	-	4
TRAVEC	-	7733	CX.KICK	-	21	PMODE	-	372	BFAD	-	620
SETXJ7	-	7743	DIRTYPE	-	203	ERCLASS	-	503			
SETRET7	-	7737	TEMP1	-	204	DSKFTYP	-	376			

EXTERNAL SYMBOLS.

STASCIT	STANDP	F.SOFTL	INMDOCT	FCN.TMP	EC:COUT	AR:CRAK	EC:READ
CRASCIT	STANDPX	F.RENM	INMDDEC	EC:SETP	EC:DSCP	DN:ODN1	CA.DSKF
DISLINE	F.PWRD	F.KICK	EPRINT	CP:CHRG	EC:CCL	DN:CRDN	EC:SAVE
DSPLYW	F.TEMPD	F.FLOUT	SPCPRNT	FC:JUMP	EC:TIME	DN:CLAO	EC:RSTR
FNASCIT	F.CMMD	F.SYSDN	ETELL	FC:RPAR	EC:DSSE	DR:OPDR	F.ETTST
OCTBPK	F.CHPSW	F.DECML	FWDPMDE	EC:RERR	DF:ATCH	DR:ADPR	DF:EOCC
PKASCIT	F.CPUT1	E.TBL	INSPMDE	EC:RTRN	DF:READ	DR:HDLK	CA.DRCT
OCTPK	F.NEWUS	F.DCTBL	ASCPMDE	EC:FRET	DF:CLO	DR:UACC	DF.CTRS
OCTNPK	F.KILLU	F.LKTTY	BEADP	FC:DSAB	DF:PCLS	DR:RMOE	EC.AKN
DECNPK	F.OBJ	F.BLIST	FORDIR	FC:MVMT	DF:CAOF	DR:DRUG	EC.DNTN
DCBPK	F.DISP	F.SLIST	MVCAP	FC:MVSP	DF:DTCH	DF:DONE	I.ACKYN
LINEPK	F.SPC	SETTKN	T.CMMD	FC:GVMH	DF:OPRO	DF:DACF	I.DNTN

NXTPRM	F.MVSPC	SPCCMD	T.CLASS	EC:MCAP	DF:WRIT	DF:DRUG
SETGENA	F.OBJS	FL	ECN.PNC	EC:CEVC	DF:CFIL	DF:XSEC
ADDCHAP	F.MDOLS	S.LINE	ECN.CSH	EC:CCAP	DF:DSUB	DF:FUND
PARSEP	F.MUSRS	DKBINIT	ECN.UXE	EC:SEV	DR:CRDR	DF:FREZ
RUNFNC	F.CHAIN	PMDA	ECN.UXF	EC:GEVF	DR:DSPN	DA:DSP
SETPARS	F.UNCHN	PMDF	ECN.HSP	EC:GEVH	DF:OPRW	DA:MVSP
PARSEO	F.SHAZ	PMDI	ECN.TBS	EC:CIN	DR:CRFI	EC:ESML

```
                        IDENT   CMMDA
                        *
                        VERSION MICRO   1,,/2.0/
                        *
                        *               THIS MACRO CONVERTS ERR TO A CRASH AT RUN TIME
                        *
3                       ERR     MACRO
                                CALL    CRASH
                                ENDM
                        *
                        *
                        *
                                EXT     STASCII,CRASCII,DISLINE,DSPLYW,FNASCII
                                EXT     OCTBPK,PKASCII,OCTPK,OCTNPK,DECNPK
                                EXT     DCBPK,LINEPK
                                EXT     NXTPRM,SETGENA,ADDCHAR
                                EXT     PARSEP,RUNFNC,SETPARS
                                EXT     PARSE0,STANDP,STANDPX
                                EXT     F.PWRD,F.TEMPD,F.CMMD
                                EXT     F.CHPSW,F.CPUTI,F.NEWUS,F.KILLU,F.OBJ
                                EXT     F.DISP,F.SPC,F.MVSPC,F.OBJS
                                EXT     F.MDOLS,F.MUSRS
                                EXT     F.CHAIN,F.UNCHN,F.SHAZ,F.SOFTL,F.RENM
                                EXT     F.KICK,F.FLOUT,F.SYSDN
                                EXT     F.DECML,F.TBL,F.DCTBL,F.LKTTY
                                EXT     F.BLIST,F.SLIST
                                EXT     SETTKN,SPCCMD
                                EXT     FL
                                EXT     S.LINE
                                EXT     DKBINIT
                                EXT     PMDA,PMDF,PMDI
                                EXT     INMDOCT,INMDDEC
                                EXT     EPRINT,SPCPRNT
                                EXT     ETELL
                                EXT     FWDPMDE,INSPMDE,ASCPMDE
                                EXT     BEADP
                                EXT     FORDIR,MVCAP
                                EXT     T.CMMD,T.CLASS
                                EXT     ECN.PNC,ECN.CSH,ECN.UXE,ECN.UXF
                                EXT     ECN.HSP,ECN.TBS,ECN.TMP
                        *
                        *
                        *
100000          IND     EQU     100000B     INDIRECT REFERENCE FLAG FOR DOX)
    11          IN.LOG1 EQU     11B         ..LOGON1 CALL TO BILL
    12          IN.LOG2 EQU     12B         ..LOGON2 CALL TO BILL
    13          OUT.LOG1 EQU    13B         .. LOGOUT1 CALL TO BILL
    14          OUT.LOG2 EQU    14B         .. LOGOUT2 CALL TO BILL
   155          ASCIICR EQU     155B        .. ASCII CARRIAGE RETURN
     0          ASCIIBLN EQU    00B         .. ASCII BLANK
    12          LOGOUTPT EQU    10          .. NUM WDS RETURNED FROM LOGOUT2
     0          AL.RECS EQU     0           WORD IN ALLOCATION BLOCK WITH RESERVER ECS
     4          AL.RMOT EQU     4           WORD IN ALLOCATION BLOCK WITH RESERVED MOTS
```

```
                    *
                    * ERROR CLASS AND NUMBER AND MODIFIER INFORMATION
                    *
17                  EC.BEADS  EQU     17B
12                  EN.LOGT   EQU     12B
50                  EM.BPSW   EQU     50B
                    *
                    * EVENT DATA FOR TTYWTCHER ACTIONS
                    *
0                   EV.KIK    EQU     0         .. KICK A PROCESS
1                   EV.FRCLG  EQU     1         .. FORCE LOGOUT ON A PROCESS
2                   EV.SHTDN  EQU     2         .. SHUT DOWN THE SYSTEM
3                   EV.TTYON  EQU     3         .. TURN ON A TELETYPE
4                   EV.ALLON  EQU     4         .. TURN ON ALL TTYS
                                                USED FOR BIT FLAGS
                    *
                    *
                    *                   FLAGS FOR ASSEMBLY OF SPECIAL CODE
                    *                             EQU 1  IF ASSEMBLE
                    *                             EQU 0  IF NOT ASSEMBLE
                    *
0                   CPYBF     EQU     0         COPY BEAD FILE
0                   BRKCD     EQU     0         BREAK CODE
0                   DACCT1    EQU     0         DISK ACCOUNTING IN FORCE AT USER TIME
0                   DACCT2    EQU     0         JPROC MAKES ACCOUNTING BLOCKS ETC.
                    *
                    *
                    *
                    *
                    ENTRY     CALLR,RTNR,POPR,FEXIT,EEXIT,EEXITM
                    ENTRY     ESAVE,ERSTR,CRUNXJ
                    ENTRY     LOGON2
                    ENTRY     SETPI,CLRPI
                    ENTRY     SETRET
                    ENTRY     CRASH,UNEXERR,UNEXFRT,EEXITSV
                    ENTRY     CMMDS,MSGOUT,SET,TRAVEC,SETKJ7,SETRET7,SETRET8
                    ENTRY     CALLR7,RTNR7,POPR7
                    ENTRY     OPENDF,ATCHBLK,DTCHBLK,CLOSDF
                    ENTRY     DIRNAME
                    ENTRY     ATCHDBL,OPNFILE
                    ENTRY     FXTFLAG
                    ENTRY     CAP.BSE,CAP.LIM,CX.NIKY,CX.SCNL,CX.TEMP
                    ENTRY     CX.HOLD
                    ENTRY     CX.PRMD
                    ENTRY     CX.LINE
                    ENTRY     CX.KICK
                    ENTRY     DIRTYPE,TEMP1
                    ENTRY     CX.OPRS,CX.SBPD
                    ENTRY     CMMDSBK,DSPLYWL,INLCI,OUTBFSZ,OUTBUF
                    ENTRY     STNDPEK
                    ENTRY     PARAMBF,PRMBFSZ
                    ENTRY     MINUS0,TTYOUT,XJLOC
```

```
ENTRY   RETLOC
ENTRY   RUNB7
ENTRY   DKBDATA,DKBDSZ
ENTRY   UMEMRA,UCLRA,VIEWX
ENTRY   PMODE
ENTRY   ERCLASS
ENTRY   DSKFTYP,SHPBLKD
ENTRY   ASKBDG,NAMEVEC
ENTRY   SETPRNT,FINPRNT,DOPRNT
ENTRY   SERV1
ENTRY   DBGBIT,SRVBITS
ENTRY   DBGBLK
ENTRY   RUNB7
ENTRY   NVARS,NFIXEDV,NPERMV
ENTRY   V.NAME,V.DVAL,V.CAP
ENTRY   VAL.CAP
ENTRY   GETSPC,SPCLIST,MXSPCIV
```

```
*
*
*                       MASTER XJ MACRO
*
XJ          MACRO       LOC,FRTN,ERR,ERRTAG,RTN
*
            IFC         EQ,$RTN$$
+           VFD         12/0130B,18/LOC,12/0,18/2
            ENDIF
*
            IFC         NE,$RTN$$
+           VFD         12/0130B,18/LOC,12/1,18/3
            JP          *+1
-           VFD         30/RTN
            ENDIF
*
            SB7         *+1
*
            IFC         EQ,$FRTN$$
            JP          UNEXFRTN
            ENDIF
*
            IFC         NE,$FRTN$$
            JP          FRTN
            ENDIF
*
            IFC         EQ,$ERR$$
            JP          UNEXERR
            ENDIF
*
            IFC         NE,$ERR$$
            JP          ERR
            ENDIF
*
            IFC         EQ,$ERRTAG$$
-           VFD         30/0
            ENDIF
*
            IFC         NE,$ERRTAG$$
-           VFD         30/ERRTAG
            ENDIF
*
            ENDM
*
*
CALL        MACRO       LOC,A,B,C,D,E
            SETBS       A,B,C,D,E
+           SB7         *+1
            JP          LOC
            ENDM
*
*
SAVE7       MACRO       L
```

```
                    SX6     B7
                    SA6     L
                    ENDM
*
*
GET7        MACRO   L
                    SA1     L
                    SB7     X1
                    ENDM
*
*
CALLR       MACRO   L,A,B,C,D,E
                    SETBS   A,B,C,D,E
                    SB7     L
+                   SX6     *+1
                    JP      CALLR
                    ENDM
*
*
SETBS       MACRO   A,B,C,D,E
                    IFC     NE,$$A$
                    SB1     A
                    IFC     NE,$$B$
                    SB2     B
                    IFC     NE,$$C$
                    SB3     C
                    IFC     NE,$$D$
                    SB4     D
                    IFC     NE,$$E$
                    SB5     E
                    ENDIF
                    ENDM
*
*
RTNR        MACRO
                    JP      RTNR
                    ENDM
*
*
POPR        MACRO
+                   SB7     *+1
                    JP      POPR
                    ENDM
*
*
MCAP        MACRO   NAME
                    EXT     NAME
                    BSS     0
NAME:               EQU     *+IND
                    VFD     1/1,29/NAME,30/CX,OPRS
                    ENDM
*
*
```

```
MXCAP   MACRO   NAME
        EXT     NAME
+       VFD     1/1,29/NAME,30/CX,OPRS
        ENDM
*
*
ITEMS   MACRO   A,B,C,D,E,F,G,H
        VFD     60/A
        IFC     NE,$$B$
        VFD     60/B
        IFC     NE,$$C$
        VFD     60/C
        IFC     NE,$$D$
        VFD     60/D
        IFC     NE,$$E$
        VFD     60/E
        IFC     NE,$$F$
        VFD     60/F
        IFC     NE,$$G$
        VFD     60/G
        IFC     NE,$$H$
        VFD     60/H
        ENDIF
        ENDM
*
*
MAP     MACRO   NAME,X,FLAD,CMAD,LASTPI,RO
+       VFD     60/0L+NAME
        VFD     30/X,30/FLAD
        VFD     1/RO,29/CMAD,30/LASTPI
        ENDM
*
*
*                       MACRO FOR CLIST INDEX OF OBJECT TO RETURN TO CALLER
*
RTNCAP  MACRO   NAME
        DATA    0
        RMT
        DATA    0L+NAME
        RMT
        ENDM
*
*
*                       MACRO FOR CLIST INDEX OF OBJECT TO BE OBTAINED
*                       AT TIME OF THIS SUBPROCESS CONSTRUCTION
*
PARCAP  MACRO   NAME
        DATA    0L+NAME
        ENDM
*
*
*
```

```
                MACRO   MICROX,L,NAME
L               MICRO   1,,/NAME/
                ENDM
*
*
EVECN           MACRO   CLASS,NUM,LOC
+               VFD     6/0,1R/CLASS,1R/NUM,18/LOC
                ENDM
*
*
EVECT           MACRO   XFER
+               VFD     60/-XFER
                ENDM
*
*
*
NAMEZ           MACRO   NAME
                IFC     NE,$$NAME$
                VFD     60/0L-NAME
                ENDIF
                IFC     EQ,$$NAME$
                VFD     60/0
                ENDIF
                ENDM
*
*
BDMAP           MACRO   FNAME,UNAME,FLAD,CMAD,LASTP1,RO
                NAMEZ   FNAME
                NAMEZ   UNAME
                VFD     60/FLAD,6R/CMAD,1/1,3R/LASTP1
                VFD     60/RO
                ENDM
*
*
*
                MACRO   CAP,L,FNAME,UNAME
L               EQU     CXPNTR
CXPNTR          SET     CXPNTR+1
                NAMEZ   FNAME
                NAMEZ   UNAME
                ENDM
*
*
*
                MACRO   CAPZ,L
L               EQU     CXPNTR
CXPNTR          SET     CXPNTR+1
                ENDM
*
*
*
DEBUG           MACRO
```

```
                XJ      ESAVE
                SB6     4
                XJ      READ
                XJ      ERESTORE
                ENDM
*
*
MSGOUT          MACRO   MSG
                LOCAL   D,E
                CALLR   MSGOUT,D
                JP      E
D               DIS     /$/MSG/$/
E               BSS     0
                ENDM
*
*
DIRNAME         MACRO   NAME
                LOCAL   X,Y
                CALLR   DIRNAME,X
                JP      Y
X               DIS     /-/NAME/-/
Y               BSS     0
                ENDM
*
*
BREAK           MACRO   MSG
                LOCAL   X
+               RJ      BREAK
-               JP      X
                DIS     /-/MSG/-/
X               BSS     0
                ENDM
```

```
*
*
*                       BASIC MACRO
*
XSETXJ    MACRO         A,B,C,D,E
LOCALPXJ  SET           0
          IFC           NE,$$A$
          SX1           A
LOCALPXJ  SET           1
          IFC           NE,$$B$
          SX2           B
LOCALPXJ  SET           2
          IFC           NE,$$C$
          SX3           C
LOCALPXJ  SET           3
          IFC           NE,$$D$
          SX4           D
LOCALPXJ  SET           4
          IFC           NE,$$E$
          SX5           E
LOCALPXJ  SET           5
          ENDM
*
*
*                       FULL IO PARAM VERSION
*
YSETXJ    MACRO         A,B,C,D,E,F,G,H,I,J
          XSETXJ        A,B,C,D,E
          SB2           5
          CALL          SET
          XSETXJ        F,G,H,I,J
          ENDIF
          SB2           LOCALPXJ
          CALL          SET
          ENDM
*
*
*                       STANDARD XJ CALL
*
DOXJ      MACRO         A,B,C,D,E,F,G,H,I,J
          SB1           XJLOC
          YSETXJ        A,B,C,D,E,F,G,H,I,J
          XJ            XJLOC
          ENDM
*
*
*                       MULTI LINE VERSIONS
*
*                       INITIAL SET UP LINE
*
SETXJ     MACRO         A,B,C,D,E,F,G,H,I,J
          SB1           XJLOC
          YSETXJ        A,B,C,D,E,F,G,H,I,J
```

```
                ENDM
*
*                       FINAL CALL  ( USE YSETXJ IN BETWEEN)
*
XDOXJ           MACRO   A,B,C,D,E,F,G,H,I,J
                YSETXJ  A,B,C,D,E,F,G,H,I,J
                XJ      XJLOC
                ENDM
*
*
*
SETRET          MACRO   BDCNT,BDADR,BCCNT,BCX
                CALL    SETRET,BDCNT,BDADR,BCCNT,BCX
                ENDM
*
*
TATTLE          MACRO   LAB1,VAL1,LAB2,VAL2
                CALL    SETPRNT
                SA1     LAB1
                CALL    DISLINE,XT,40
                SA1     VAL1
                SB1     20
                CALL    OCTPK
                CALL    FINPRNT
SECOND          IFC     NE,**LAB2*
                CALL    SETPRNT
                SA1     LAB2
                CALL    DISLINE,XT,40
                SA1     VAL2
                SB1     20
                CALL    OCTPK
                CALL    FINPRNT
SECOND          ENDIF
                ENDM
*
*               SET UP TATTLE MESSAGE
*
                MACRO   TATLMG,LABL,MSG
                LOCAL   A
LABL            ITEMS   A
A               DIS     /MSG/
                ENDM
*
* SET UP RUNB7
*
DORUNB7         MACRO   ADDR
                SX7     ADDR
                SA7     RUNB7
                ENDM
*
* RNB7CTRL
*               SET UP RUNB7 CONTROLS
*
```

```
                        MACRO   RNB7CTRL,RB7,NRMJP,ERRJP,PRPTCHR,ID
                        ITEMS   ERRJP
                RB7     JP      NRMJP
                        IFC     NE,**PRPTCHR*,1
                -       VFD     30/PRPTCHR
                        IFC     NE,//ID/
                +       DIS     ,/+ID+/
                        ENDIF
                        ENDM
                EPRNT   MACRO
                        CALL    ETELL,EEXITSV-1,T.CMMD
                        SA1     RUNB7
                        SX1     X1+1
                        CALLR   MSGOUT,X1
                        ENDM
                *
                *
                *
                *
                *
                *               MICROS FOR SUBPROCESS DESCRIPTOR
                *
                *
0               CLASS   MICROX  CC.CMMD
0               FATHER  MICROX  CC.BEADG
0               ICALL   MICROX  CO.CMMDI
0               CLIST   MICROX  CL.CMMD
0               SCRFILE MICROX  EF.CMMDSF
0               CODEFILE MICROX EF.CMMDCD
                *
                *
                *
                *               SUBPROCESS DESCRIPTOR
                *
                *
                *
                *
0                       ORG     0
0  0000000000000000000001       DATA    1
1  0000000000000000000000       DATA    0
2  0303570315150400000000       DATA    0L=CLASS=
3  0303570205010407000000       DATA    0L=FATHER=
4  0317570315150411000000       DATA    0L=ICALL=
5  0314570315150400000000       DATA    0L=CLIST=
6  0506570315150423006000       DATA    0L=SCRFILE=
7  0000000000000000000005       DATA    5
10 0000000000000000000044       DATA    36
11 0000000000000000000000  X    ITEMS   FL
12 0000000000000000000662       ITEMS   ENTRY
13 0000000000000000000107       ITEMS   CLSTSZ
14 0000000000000000000514       ITEMS   SCRSZ
                *
15 0506570315150423006000       MAP     =SCRFILE=,0,0,0,SCRSZ,0
20 0506570315150403040000       MAP     =CODEFILE=,1,SCRSZ,SCRSZ,FL,1
```

```
                                *
      23  777777777777777777777        DATA    -0
                                *
       0                            LOC     0
                                *
       0                        CX.TEMP BSSZ    4
       4  115701141417030000000 CX.MSTAB PARCAP T.ALLOC
       5  010257061130050400000 CX.SNDRG PARCAP AB.FIXED
       6  140314011414170300000 CX.LCLAB PARCAP LCLALLOC
       7  050657031515040304000 CX.CODEF PARCAP =CODEFILE=
      10  031457172005222300000 CX.OPRS  PARCAP CL.OPERS
      11  031757141114050100000 CX.LINE  PARCAP CO.LINEA
      12  020501040000000000000 CX.BEAD  PARCAP BEAD
      13  030357031515040000000 CX.CLSCD PARCAP =CLASS=
      14  031757020501042303000 CX.CMMDS PARCAP CO.BEADSC
                               14 CX.LOGOP EQU   CX.CMMDS
      15  031757031416202217006 CX.CLPF  PARCAP CO.CLNPROF
      16  030357020501042300000 CX.BEADS PARCAP CC.BEADS
      17  250225071116112400000 CX.USRBG PARCAP UBUGINIT
      20  050357031515043500000 CX.SPCHN PARCAP EC.CMMD2
      21  050357033513110313260 CX.KICKV PARCAP EC.C2KICKV
                               21 CX.KICK  EQU   CX.KICKV
      22  031457252322172000000 CX.UMCL  PARCAP CL.USROP  PROTECTED OPERCL
      23  041757140422030114140 CX.KEITH PARCAP DO.LDRCALL
      24  031757060113050702000 CX.FGHST PARCAP CO.FAKEGB
      25  031757020501040702000 CX.BDGR  PARCAP CO.BEADGB
      26  031757020501040723000 CX.BDGS  PARCAP CO.BEADGS
      27  031457042203242331230 CX.SCRT  PARCAP CL.DRCTSYS
      30  031457031504232003000 CX.SPCO  PARCAP CL.CMDSPC HOLDS QUEUE EVET CHANS FOR SPACE (ETC.)
      31  000000000000000000000 CX.SBPD  DATA    0         HOLDS SUBPROCESS DESC WHILE IT IS RUNNING
      32                        CX.SBPC  BSSZ    1         HOLD SURP CALL WHILL CAP PARAMS BEING PROCESSED
      33  000000000000000000000 CX.NULL  DATA    0
      34  000000000000000000000 CX.SCNL  DATA    0         WILL CONTAIN STANDARD SCAN LIST
      35  000000000000000000000 CX.TDIR  DATA    0         WILL HOLD TEMPORARY DIR
      36  000000000000000000000 CX.PDIR  DATA    0         WILL HOLD PERMANENT DIR
                               36 CX.PRMD  EQU   CX.PDIR
      37  031457031515042324060 CX.CMSTF PARCAP CL.CMMDSTF
      40  000000000000000000000 CX.NLKY  DATA    0         NULL ACCESS KEY
      41  115715012324052200000 CX.MAST  PARCAP 1.MASTER
      42                        CX.PRMRT BSSZ    1         ROOT OF PERMANENT DIRECTORIES  (SCAN LIST)
      43                        CX.TMPRT BSSZ    1         ROOT OF TEMPORARY DIRECTORIES  (SCAN LIST)
      44                        CX.TDLST BSSZ    1         ROOT OF TEMP DIRS  ( DIRECTORY )
      45                        CX.USCNL BSSZ    1         HOLDS STANDARD SCAN LIST AT ALL TIMES
      46                        CX.HOLD  BSSZ    1         USED TO HOLD AN OBJECT BETWEEN PARAMS
                                *
      47                        CAP.BSE  BSSZ    10        CAP STACK FOR PARSER
      61                        CAP.LIM  BSS     0
                                *
      61                        V.CAP    BSSZ    2
      63                        CX.BDF   BSSZ    1         HOLDS FILE OBTAINED FROM OLD BEAD
      64                        CX.ROOTU BSSZ    1         HOLDS ROOT DIR ( TEST ONLY )
      65                                 BSSZ    15        THIS MUST BE AT LEAST AS LARGE AS NVARS
                                *
```

```
L     104                         VAL.CAP   BSSZ    3
                                  *
L     107                         RTNBASE   BSS     0
                                  *
                                  *
L     107                         CLSTSZ    BSS     0
                                  *
L     107   777777777777777777777           DATA    -0
                                  *
      134                                   LOC     *0
                                  *
                                  *
                                  *
                            0     PARLIMIT  SET     0
                          134     NZBASE    SET     *0
```

```
                    *
                    *
                    *                   GENERAL PARAMETERS
                    *
                            ORG     6
                    *
6                   HDDNPAR BSS     1
                    *
                7   INFOPARS EQU     *0
                    *
                            IFGT    *0,PARLIMIT
                7   PARLIMIT SET    *0
                            ENDIF
```

```
                                *
                                *
                                *                       PARAMETERS FOR DEBUG CALL
                                *
                                *
 7                                      ORG             INFOPARS
                                *
 7                              DBGTYPE BSS             1
                                *
10                              DBGBLKCN BSS            1
                                *
11                              DBGBLK  BSS             8
                                *
                                       IFGT             *0.PARLIMIT
                          21    PARLIMIT SET             *0
                                       ENDIF
                                *
                                *
                                *                       PARAMETERS FOR SPACE CALL
                                *
 7                                      ORG             INFOPARS
                                *
 7                              SPC.CNT BSS             1               COUNT OF BLOCK DATA
10                              SPC.DTA BSS             1               BLOCK DATA
                                *
                                       IFGT             *0.PARLIMIT
                                       ENDIF
                                *
                                *
                                *                       PARAMETERS FOR GET OBJECT CALL
                                *
 7                                      ORG             INFOPARS
                                *
                                       IFGT             *0.PARLIMIT
                                       ENDIF
                                *
                                *
                                *                       PARAMETERS FOR NAME LOOK UP CALL
                                *
 7                                      ORG             INFOPARS
                                *
 7                              NME.SCX BSS             1               HOLDS SCAN LIST INDEX (CX.TEMP)
10                                     BSS             1               HLODS BLOCK DATA COUNT
11                              NME.TXT BSS             1               HOLDS CHAR COUNT FOR TEXT
12                                     BSS             5               HOLDS BODY OF TEXT
                                *
                                       IFGT             *0.PARLIMIT
                                       ENDIF
```

```
                                *
                                *
                                *                 END OF PARAMETER DEFINITION AREA
                                *
21                              ORG     PARLIMIT
                                *
                                *
                                *
                                *
                                *                 MOST XJ S DONE HERE
                                *
21                              XJLOC   BSS     22
                                *
                                *
47                              RETLOC  BSS     2               USED FOR RETURNAUTHORIZATIONS
                                *
                                *
                                *
                                *
                                *                 CALL STACK DATA
                                *
                                *
51                              CALLSTK BSS     20      CALL STACK
                                *
75                              CSTKPNTR BSS    1               POINTER TO FIRST AVAIL CELL
                                *
76                              CSTKBASE BSS    1       EXIT RESET VALUE FOR CSTKPNTR
                                *
                                *
                                *                 DATA FOR ASCII ROUTINES
                                *
77                              DSPLYW  BSS     2
                                *
                                *
                              5 PARAMBX EQU     5
                             40 PARAMBSZ EQU    PARAMBX*8-8
                             40 PRMBFSZ EQU     PARAMBSZ
                                *
101                             PARAMBF BSS     PARAMBX
                                *
                                *
106                             INLCL   BSS     2
                                *
                                *
                             12 OUTBFSZ EQU     10
                                *
110                             OUTBUF  BSS     OUTBFSZ
                                *
                             12 INBFSZ  EQU     10
                                *
122                             INBUF   BSS     INBFSZ
                                *
                                *
```

```
134                    SETPRNT7  BSS     1
                       *
                       *
                       *                 GENERAL DATA FOR SERVICES
                       *
135                    SERVBITS  BSS     1
                       *
136                    DBGSTK    BSS     3*5       HOLDS PREVIOUS VALUES OF RUNB7, CSTKBASE,
155                    DBGSTKLM  BSS     0         AND SERVBITS
155                    DBGSTKPN  BSS     1         POINTER TO NEXT FIELD OF DBGSTK ( CHNGES)
                  135  SRVBITS   EQU     SERVBITS
                       *
                       *
                       *                 GENERAL DATA
                       *
156                    NREGS     BSS     20B
                       *
                       *
176                    RUNB7     BSS     1         WHO IS RUNNING, RESET OFTEN
                       *
                       *
177                    FXTFLAG   BSS     1         STATUS FOR CLOSE OUT AND DETACH ETC
                       *
200                    SPSCNFIG  BSS     1         SIGNALS THAT CX.SCNL MUST BE RESET
                       *
201                    OPNFILF   BSS     1         INDEX OF ECS CAP FOR OPEN FILE
202                    ATCHDBLK  BSS     1         FILE ADDRESS OF ATTACHED BLOCK
                  202  ATCHDBL   EQU     ATCHDBLK
                       *
                       *
203                    DIRTYPE   BSS     1         HOLDS TYPE FIELD OF DIRECTORIES
                       *
                       *
204                    TEMP1     BSS     1
205                    TEMP2     BSS     1
206                    TEMP3     BSS     1
207                    TEMP4     BSS     1
210                    TEMP5     BSS     1
211                    TEMP6     BSS     1
                       *
                       *
                       *                 END OF UNINITIALIZED CORE
                       *
                                 IFGT    NZBASE,*O
                                 ENDIF
```

```
                                    *
                                    *
                                    *                   DATA FOR CMMDS INTERFACE
                                    *
212                                 CMMDSBLK  BSSZ      4
                        212         CMMDSBK   EQU       CMMDSBLK
                                    *
216  0000000000000000000014         XCMMDS    ITEMS     CX.CMMDS
217                                            BSSZ      1
220  0000000004000000000212                    VFD       30/4,30/CMMDSBLK
221  0000000000000000000000                    ITEMS     CX.TEMP
                                    *
                                    *
                                    *
                                    *
                                    *                   DATA FOR PARSER AND RELATED ROUTINES
                                    *
                        145         DKBDSZ    EQU       145B
                                    *
222                                 DKBDATA   BSSZ      DKBDSZ
                                    *
367                                 UMEMRA    BSSZ      1           USER CM RA
370                                 UCLRA     BSSZ      1           USER CLIST RA
371                                 VIEWX     BSSZ      1           CALL STACK CORRECTION FOR BEAD GHOST
                                    *
372                                 PMODE     BSSZ      1                 CURRENT PRINT MODE
                                    *
                                    *
373                                 STNDPFX   BSSZ      2           FAKE FUNCTION HEADER FOR ARB NO. PARAMS
375  0200000000 x                              JP        STANDPX
                                    *
                                    *
                                    *
376                                 DSKFTYP   BSSZ      1           HOLDS A SAMPLE DISK FILE TYPE FIELD
                                    *
377  0000000030000000040l          SHPBLKD   VFD       30/3,30/FSHAPE+1    FIXED BLOCK DATA PARAM FOR
400  0000000000000000000003        FSHAPE    DATA      3                   DISKFILE. A SHAPE COMMAND
401  0000000000000000000020                  DATA      20B                   MUST RESET SHPBLKD COUNT
402  0000000000000000000040                  DATA      40B
403  0000000000000000000400                  DATA      400B
                                    *
                                    *
                                    *                   DATA FOR SPACE CONTROL
                                    *
404                                 SPACEFLG  BSSZ      1           NON ZERO IF SPACE AQUIZITION IN PROGRESS
405  0000000000000000000004         SPCLVL    VFD       60/MXSPCLV  CURRENT MAX LEVEL WITH SPACE
406  0400000000000000000000         SPCLVLS   VFD       1/0,1/0,1/0,1/1,1/0,55/0 BITS FOR LEVELS WITH SPACE
                                    *
407                                 SPCX      BSSZ      1           ADDRESS CURRENT SPACE TYPE DESCRIPTOR
410                                 SPCSIZE   BSSZ      1           SIZE OF CURRENT SPACE REQ
                                    *
411                                 SPCFLGS   BSSZ      1           HOLDS ASSORTED FLAG BITS
                                    *
```

```
412                     SPCHNGX   BSSZ   1          ADDRESS CURRENT QUEUE TYPE DESC
413                     SPCHNGCN  BSSZ   1          MOST RECENT COUNT VALUE
                        *                                 FOR DISK FILE SHAPE
                        *
                        *
                                  IFEQ   1,CPYRF
                                  ENDIF
                        *
                        *
                        *
414                     LIVEFLAG  BSSZ   1          SET NON ZERO IN TEST CASE ( BEAD AVAILABLE)
                        *
                        *
                        *                 VARIABLE INFO
                        *
415                     V.NAME    BSS    0
                        *
416  0514652613055000000*         VFD    4/1,7/46B,7/65B,7/54B,7/54B,7/55B,21/0  FULLM
417  0514652613043000000*         VFD    4/1,7/46B,7/65B,7/54B,7/54B,7/43B,21/0  FULLC
420  1504452051046000000*         VFD    4/3,7/42B,7/45B,7/41B,7/44B,7/46B,21/0  BEADF
421  0144572755044000000V.ROOTDN  VFD    4/0,7/62B,7/57B,7/57B,7/64B,7/44B,21/0  ROOTD (TEST)
                        *
422                     BSS    0
                        *
                   4    NPERMV    EQU    *-V.NAME
                        *
423                     BSSZ   10
                        *
                  10    NVARS     EQU    *-V.NAME  THIS MUST BE NO BIGGER THAN BSSZ ON V.CAP
                        *
                        *
433                     V.DVAL    BSS    0
                        *
434                     FMEMRA    BSSZ   1          FULL MEMORY RA CORRECTION
435                     FCLRA     BSSZ   1          FULL CLIST RA CORRECTION
436                               BSSZ   1          HOLDS FILE OBTAINED FROM OLD BEAD
437                               BSSZ   1          HOLDS ( TEMP FOR TEST )  ROOT DIRECTORY
                        *
                   4    NFIXEDV   EQU    *-V.DVAL
                        *
440                     BSSZ   NVARS-NFIXEDV
                                  USE    *
```

```
                                *
                                *
                                *                       DATA USED MAINLY BY ERROR PROCESSING
                                *
                                *
451                             ESTKBF      BSSZ        3
                                *
                                *
454                             OWNCLSCD    BSSZ        1
                                *
                                *
455                             EREGS       BSSZ        20B
                                *
                                *
475  4000000000 x               ESTPC       MXCAP       ECISETP
476  0000000000000000000013                  ITEMS       CX.CLSCD
477  0000000000000000000001                  DATA        1
500                                          BSSZ        1
                                *
                                *
                                *                       ERROR CAL DATA
                                *
                                *
501                             ERRNEXT     BSSZ        1           STACK PCNTR
502                             ERRTAG      BSSZ        1           ERROR TAG ON THE XJ
503                             ERRCLASS    BSSZ        1           CLASS
504                             ERRNUMB     BSSZ        1           NUMBER
505                             ERRCN       BSSZ        1           CLASS AND NUMBER PACKED
                                *
                                *
506                             EFLAG       BSSZ        1           FLAG TO FEXIT THAT ERROR PENDING
                                *
507                             EEXITSV     BSSZ        1           PENDING ERROR
                                *
                     503        ERCLASS     EQU         ERRCLASS
                                *
                                *
                                *                       PANIC CONTROL DATA
                                *
510                             EPFLAG      BSSZ        1           SIGNALS ERROR PROCESSING IN PROGRESS
                                *
511                             PFLAG       BSSZ        1           PENDING PANIC FLAG
512                             PIFLAG      BSSZ        1           PANIC INHIRIT FLAG
513                             PHFLAG      BSSZ        1           HANGING ON EVENT CHAN FLAG
                                *
                                *
                                            IFEQ        1,BRKCD
                                            ENDIF
```

```
                                *
                                *
                                *                       END OF SCRATCH AREA
                                *
514                             SCRSZ   BSS     0
                                *
                                *                       MISC REFERANCES TO MASTER CLIST
                                *
514                                     MCAP    CP:CHRG
515                                     MCAP    EC:JUMP
516                                     MCAP    EC:RPAR
517                                     MCAP    EC:RERR
520                                     MCAP    EC:RTRN
521                                     MCAP    EC:FRET
522                                     MCAP    EC:DSAB
523                                     MCAP    EC:MVMT
524                                     MCAP    EC:MVSP
525                                     MCAP    EC:SVMH
526                                     MCAP    EC:MCAP
527                                     MCAP    EC:CEVC
530                                     MCAP    EC:CCAP
531                                     MCAP    EC:SEV
532                                     MCAP    EC:SEVF
533                                     MCAP    EC:SEVH
534                                     MCAP    EC:CIN
535                                     MCAP    EC:COUT
536                                     MCAP    EC:DSCP
537                                     MCAP    EC:CCL
540                                     MCAP    EC:TIME
541                                     MCAP    EC:DSSE
542                                     MCAP    DF:ATCH
543                                     MCAP    DF:READ
544                                     MCAP    DF:CLO
545                                     MCAP    DF:PCLS
546                                     MCAP    DF:CAOF
547                                     MCAP    DF:DTCH
550                                     MCAP    DF:OPRO
551                                     MCAP    DF:WRIT
552                                     MCAP    DF:CFIL
553                                     MCAP    DF:DSUB
554                                     MCAP    DR:CRDR
555                                     MCAP    DR:DSPN
556                                     MCAP    DF:OPBW
557                                     MCAP    DR:CRFI
560                                     MCAP    AK:CRAK
561                                     MCAP    DN:ODNI
562                                     MCAP    DN:CRDN
563                                     MCAP    DN:CLAO
564                                     MCAP    DR:OPDR
565                                     MCAP    DR:ADPR
566                                     MCAP    DR:HDLK
567                                     MCAP    DR:UACC
570                                     MCAP    DR:RMOE
```

```
 571                MCAP    DR:DBUG
 572                MCAP    DF:DONE
 573                MCAP    DF:DACF
 574                MCAP    DF:DBUG
 575                MCAP    DF:XSEC
 576                MCAP    DF:FUND
 577                MCAP    DF:FREZ
 600                MCAP    DA:DSP
 601                MCAP    DA:MVSP
```

```
                                *
                                *
                                *                       FIXED IP LISTS
                                *
                                *
                                *
602  4000000000 x               RETURN      MXCAP       ECIRTRN
                                *
                                *
603  4000000000 x               SETEMSW     MXCAP       ECIESML
604  0000000000000000000605                 ITEMS       *+1
605  7777777777777777777777                 DATA        -0
                                *
                                *
606  4000000000 x               READSELF    MXCAP       ECIREAD
607  0000000000000000000007                 ITEMS       CX.CODEF,0,0,SCRSZ
                                *
                                *
613  4000000000 x               RDCLSCD     MXCAP       ECIDSCP
614  0000000000000000000013                 ITEMS       CX.CLSCD
                                *
                                *
                                            EXT         CA.DSKF
                                *
615  4000000000 x               RDDFTYPE    MXCAP       ECIDSCP
616  4000000000 x                           VFD         1/1,29/CA.DSKF,30/CX.SCRT
                 0000000027
                                *
                                *
617  4000000000 x               RDBUCALL    MXCAP       ECIDSCP
                                *
                                            ENTRY       READ
                                *
620  0000000000000000000012     BEAD        ITEMS       CX.BEAD
                                *
                                *
                                *                       FIXED IP LISTS USED WITH LINE COLLECTOR
                                *
621  0000000000000000000011     TTYOUT      ITEMS       CX.LINE
622  0000000000000000000002                 DATA        2
623  0000000012000000000110                 VFD         30/OUTBESZ,30/OUTBUF
                                *
624  0000000000000000000011     TTYIN       ITEMS       CX.LINE
625  0000000000000000000001                 DATA        1
626  0000000012000000000122                 VFD         30/INBFSZ,30/INBUF
                                *
627  0000000012000000000122     TTYINRP     VFD         30/INBFSZ,30/INBUF
630  0000000000000000000000                 VFD         30/0,30/0
                                *
                                *
                                *
631  4000000000 x               SAVE        MXCAP       ECISAVE
632  0000000000000000000156                 ITEMS       NREGS
```

```
                                *
                                *
  633  4000000000 v             RESTORF   MXCAP     ECIRSTR
  634  0000000000000000000156             ITEMS     NREGS
                                *
                                * DEBUG IPLIST
                                *
  635  0000000000000000000024   CRUNXJ    ITEMS     CX.FGWST
```

```
                                    *
                                    *
                                    *                   FIXED IP LISTS USED BY ERROR PROCESSOR MAINLY
                                    *
636  4000000000 x                  ESAVE     MXCAP     ECISAVE
637  0000000000000000000455                   ITEMS     EREGS
                                    *
                                    *
640  4000000000 x                  ERESTORE  MXCAP     ECIRSTR
                              640   ERSTR     EQU       ERESTORE
641  0000000000000000000455                   ITEMS     EREGS
                                    *
                                    *
642  4000000000 x                  EDSPSTK   MXCAP     ECIDSSE
643  0000000000000000000451                   ITEMS     ESTKBF
644  0000000000000000000001                   DATA      1
```

```
                                    *
                                    *
                                    *                   GENERAL FIXED DATA
                                    *
  645  000000000000000000000  CMMDSRTN  VFD     30/0,30/0
  646  000000000400000000000             VFD     30/4,30/CX.TEMP
                                    *
  647  000000000000000000000  RETICAD   VFD     30/0,30/0
  650  000000000100000000000             VFD     30/1,30/CX.TEMP
                                    *
  651  777777777777777777776  MINUS1    DATA    -1
  652  777777777777777777777  MINUS0    DATA    -0
  653  000000777777777777777  MANYBITS  VFD     18/0,42/-0
                                    *
                                    *
                                    *                   ASSORTED CONSTANTS
                                    *
                          2         OB.ACC    EQU     2           USER ACCESS BIT FOR DIRECTORIES
```

```
                                *
                                *
                                *
                                *                MAIN CODE
                                *
                                *
                                *
                                          BSSZ   5              ALTERNATE ENTRY POINTS
                                          JP     ERRCALL        ERROR ENTRY
654
661  0200003625
662  0130000603000000000002    ENTRY  XJ       SETEMSK        SET UP ERROR MASK
665  0130000631000000000002           XJ       SAVE           SAVE REGISTERS
670  6170000671                       CALL     SETPI
671                            ENTRYNT BSS      0              MARKS END OF ENTRY CODE
                                *
671  5110000006                        SA1      HDONPAR
                 6110000675            CALL     TRAVEC,ENTVEC,ENTVECSZ
674  6170000675                        ERR
                                *
675  0200000703                ENTVEC  JP       INIT           0
676  0200001044                        JP       DEBUG          1
677  0200000726                        JP       RUN            2
700  0200002176                        JP       SPCCALL        3
701  0200002217                        JP       OBJCALL        4
702  0200002245                        JP       NAMECLL        5
                                *
703                                       BSS      0
6                              ENTVECSZ   EQU      *-ENTVEC
```

```
                                *
                                *                       INITIAL ENTRY
                                *
 703  0130000 60 60000000002    INIT    XJ      READSELF  INITIALIZE LOW CORE
 706  0130000 61 30000000002            XJ      RDDCLSCD
 711  5170000454                        SA7     DWNCLSCD  SAVE FOR ERROR HANDLING
 712  0130000 61 50000000002            XJ      RDDFTYPE
 715  43052                             MX0     60-18
           15660                        BX6     -X0*X6
                5170000376              SA7     DSKFTYP   INITIALIZE FILE TYPE
 716  76600                             SX6     B0
           5160000177                   SA6     FXTFLAG
 717  6170000720                        CALL    DKBINIT
 720  0130000 60 20000000002            XJ      RETURN
                                *
                                *
 723  0200002 706               INITX   JP      SERV1
 724  1116112411011 4113201     *       DIS     ..INITIALIZATION.
```

```
                                *
                                *                       RUN ENTRY
                                *
726  716000013636               RUN     SX6     DBGSTK
                 5160000155             SA6     DBGSTKPN
                                *
727  7160000024                         SX6     CSTKPNTR-CALLSTK
                 5160000075             SA6     CSTKPNTR
730  5160000076                         SA6     CSTKBASE
                                *
                                        SX6     B0
731  5160000135 766600                  SA6     SERVBITS
                                *
                 7160001040             SX6     RUNX
732  5160000176                         SA6     RUNB7
                                *
                 6110000021             DOXJ    EC,CINI,CX.CMSTF,B0,CX.TEMP
                 6110000021             DOXJ    EC,DSCPI,CX.TEMP
750  0306001000                         ZR      X6.RUN1                 NO ROOT DIR IN EXISTENCE
                                *
                 6110000021             DOXJ    EC,DSCPI,CX.PDIR
757  0306001026                         ZR      X6.RUN2                 NO PERMINANT DIR YET
                                *
                                *
                                *                       PURGE ENTRY
                                *
760  7160002331             RUN0        SX6     CMMDX
                 5160000176             SA6     RUNB7
                                *
761  6110000021                         DOXJ    CX.BDGS     ALLOW INTERRUPTS
                                *
767  6170004540                         CALLR   PRGSPC                  PURGE SPACE
771  6110000021                         DOXJ    DRI,OPDRI,CX.PRMD       OPEN PERMDIR
                                *
                                *
777  0200002676                         JP      COMMANDB
                                *
                                *
                                *                       JPROC ENTRY
                                *
                          45    JBITS   EQU     XJLOC+20  .. WORD OF FLAG BITS IN JPROC
                                *
1000 6110000021             RUN1        DOXJ    CX.BDGS     ALLOW INTERRUPTS
1006 6170001007                         CALL    CLBPI
1007 6170005161                         CALLR   INITFXD
1011 6170005217                         CALLR   INITSWP
1013 6170004540                         CALLR   PRGSPC
1015 6110000021                         DOXJ    DFIXSEC,50000B
1023 76600                              SX6     B0
                 5160000045             SA6     JBITS       .. INITIALIZE WORD WHICH HOLDS BIT FLAGS
                                *
                                *
1024 7170005326             DORUNB7     JPROCX
```

```
                                *
1025  0200005301                JP        JPROC
                                *
                                *
                                *         LOG ON ENTRY
                                *
1026  7170001744                RUN2      DORUNB7   LOGONX
1027  6110000021                          DOXJ      CX.BDGS   ALLOW INTERRUPTS
1035  6170001036                          CALL      CLRPI
1036  0200001311                          JP        LOGON
                                *
                                *
1037  0000000000000004054               ITEMS     EEXIT2    ERROR HANDLING IS PRNT
1040  0200001264                RUNX      JP        OBGDSKW
1041  0000000000000000000000            DATA      0
1042  5522251655051424231               DIS       .. RUN ENTRY .
```

```
                                *
                                *                       DEBUG ENTRY
                                *
1044  5110000007                DEBUG   SA1     DBGTYPE
                  0331001073            NG      X1,DEBUGR
                                *
1045  5120000011                        SA2     DBGBLK-1+1          PICK UP USER CM RA
                  5136000016            SA3     DBGBLK-1+6          PICK UP BEAD GHOST FL
1046  10622                             BX6     X2
            37732                       IX7     X3-X2       CORRECTION TO REACH BASE OF USER CORE
                  5166000367            SA6     UMEMRA
1047  5170000433                        SA7     FMEMRA
                                *
                  5126000012            SA2     DBGBLK-1+2          PICK UP USER CLIST RA
1050  5130000017                        SA3     DBGBLK-1+7          PICK UP BEAD GHOST CLIST SIZE
                        10632           BX6     X2
                              37732     IX7     X3-X2       CORRECTION TO REACH BASE OF USER CLIST
1051  5160000370                        SA6     UCLRA
                  5176000434            SA7     FCLRA
                                *
1052  6110001042                        CALL    PUSHDBUG,DEBUGX
                                *
1054  5110000007                        SA1     DBGTYPE
                  6116001065            CALL    TRAVEC,DBGVEC,DBGVECSZ
1057  6170001060                        ERR
                                *
                                *
1060  6170001061                DEBUGET CALL    CRASH       DEBUG STACK FULL
                                *
1061  0000000000000000040504           ITEMS   EEXIT2      ERROR HANDLING IS PRINT
1062  0200002706                DEBUGX  JP      SERVI
                        0000000040      =       VFD         30/40R      (AT SIGN )
1063  0205010455071017232400            DIS     ..BEAD GHOST.
                                *
1065  0200001167                DBGVEC  JP      DBG..STP    0
1066  0200001174                        JP      DBGERRC     1
1067  0200001204                        JP      DBGINTC     2
1070  0200001211                        JP      DBGDSKST    3
1071  0200001217                        JP      DBGDSKER    4
1072  0200001227                        JP      DBGKIK      5
                                *
1073                                    BSS     0
                        6       DBGVECSZ EQU    *-DBGVEC
                                *
                                *
                                *                       RETURN CALL FROM BEAD GHOST
                                *
1073  6170001074                DEBUGR  CALL    CLRPI
1074  5110000007                        SA1     DBGTYPE
                        1411            BX1     X1
1075  6110001100                        CALL    TRAVEC,DBGVECR,DBGVCRSZ
1077  6170001100                        ERR
                                *
```

```
                                *
1100  617000l101                DBGVECR   CALL    CRASH     0         IMPOSSIBLE
1101  042000076l4                         JP      RTNR      1         OK RESPONSE
1102  020000l106                         JP      DBUGR1    2         PARAM OUT OF RANGE
1103  617000l104                         CALL    CRASH     3         BAD ACTION REQUEST
1104  042000l117                         JP      DBUGR2    4         ERROR OCCURED IN BEADG
1105  042000l131                         JP      DBUGR3    5         F RETURN OCCURED IN BFADG
                                *
110 6                                     BSS     0
                                6 DBGVCRSZ EQU    *-DBGVECR
                                *
                                *
                                *
110 6 611000l111                DBUGR1    MSGOUT  (PARAM OUT OF RANGE ON CALL TO BEAD GHOST)
1116  020000405 7                         JP      FEXIT
                                *
1117  611000l122                DBUGR2    MSGOUT  (ERROR DURING CALL TO BEAD GHOST)
1126  6110000014                          CALLR   EPRINT,DBGBLK-1+4
1130  020000405 7                         JP      FEXIT
                                *
1131  611000l134                DBUGR3    MSGOUT  (FRETURN DURING CALL TO BEAD GHOST)
1140  020000405 7                         JP      FEXIT
                                *
                                *
                                *
```

```
                                *
                                *
                                *                       PUSH DOWN DEBUG STACK
                                *
                                *                       B1 CONTAINS NEW VALUE OF RUNB7
                                *
                                *
1153  5110000155                PUSHDBUG  SA1           DBGSTKPN
                  7721777622              SX2           X1=DBGSTKLM
1154  0322001060                          PL            X2,DEBUGET1           DEBUG SAVE STACK FULL
                                *
                     6721 0               SB2           X1
1155  7261000003                          SX6           X1+3
                     5461 0               SA6           A1                    INCREMENT POINTER
                                *
1156  5110000176                          SA1           RUNB7
                     1061 1               BX6           X1
                          56620           SA6           B2
                                *
1157  5110000076                          SA1           CSTKBASE
                     1061 1               BX6           X1
1160  5066000001                          SA6           A6+1
                                *
                     5111 0000135         SA1           SERVBITS
1161  10611                               BX6           X1
                          5066000001      SA6           A6+1
1162  7170000004                          SX7           BITS3                 BITS TO BE PRESERVED
                     1174 7               BX7           X6*X7
1163  5170000135                          SA7           SERVBITS
                                *
                     7661 0               SX6           B1
1164  5160000176                          SA6           RUNB7
                                *
                     5110000075           SA1           CSTKPNTR
1165  10611                               BX6           X1
                          5160000076      SA6           CSTKBASE
                                *
1166  0270000000                          JP            B7
```

```
                                *
                                *                       DEBUG ENTRY POINTS
                                *
1167  6110001172        DBG..STP  MSGOUT    (..STOP)
1173  0200003123                  JP        SERVB
                                *
1174  6110001177        DBGERRC   MSGOUT    (USER ERROR)
1201  6110000014                  CALL      ETELL,DBGBLK-I+4,T.CLASS
1203  0200003123                  JP        SERVB
                                *
1204  6110001207        DBGINTC   MSGOUT    (PANIC)
1210  0200003123                  JP        SERVB
                                *
1211  6110001214        DBGDSKST  MSGOUT    (SYSTEM  ..STOP)
1216  0200001264                  JP        DBGDSKW
                                *
1217  6110001222        DBGDSKER  MSGOUT    (SYSTEM ERROR)
1224  6110000014                  CALL      ETELL,DBGBLK-I+4,T.CLASS
1226  0200001264                  JP        DBGDSKW
                                *
1227  6110001232        DBGKIK    MSGOUT    (OUCH. I'VE BEEN KICKED)
1235  6170001236                  CALL      PROGHR
                                *
                                *  NOW WE SEE IF COMMAND PROCESSOR WAS RUNNING WHEN SYSTEM CRASHED.
                                *  IF SO, WE MODIFY P-COUNTER IN STACK AND DO A JUMP RETURN.
                                *  OTHERWISE WE PROCEDE TO SERVB   (JUMP RETURN TO SERVB,TOO)
                                *
1236  6110000021                  DOXJ      EC IDSSE!,ESTKBF+2
1245  5110000454                  SA1       OWNCL,SCD
                  5172000452      SA2       ESTKBF+1
1246  1200212                     BX2       X1-X2
      0312003123                  NZ        X2,SERVB
1247  7160008312003123            SX6       SERVB     .. MODIFY THE PCOUNTER AND DO A JUMP RETURN
                  5162000500      SA6       ESTPC+3
1250  7160000002                  SX6       2         .. FAKE GHOST IS DIRECTLY UNDERNEATH
                  5162000477      SA6       ESTPC+2
1251  0130000475000000000002     XJ        ESTPC
1254  7160000001                  SX6       1
                  5162000477      SA6       ESTPC+2   .. RESET NUM STACK ENTRIES TO SKIP;USED BY
                                                      ERROR CODE.
                                *
                                *
1255  6110000021                  DOXJ      EC JUMP!,PX.CLSCD.1
                                *
1264  5110001135        DBGDSKW   SA1       SERVBITS
                  7172000004      SX2       SYSTMBIT
1265  11112                       BX1       X1*X2
      0311003123                  NZ        X1,SERVB  SYSTEM PROGRAMMER PRESENT
                                *
1266  6110001271                  MSGOUT    (CALL SHIFT SUPERVISOR, (64)2-3043)
1275  0130000624000171000003      XJ        TTYIN,,,,TTYINRP
1301  6110000122                  CALLR     DSPLYW,INBUF,10
1304  0312001264                  NZ        X2,DBGDSKW
                  5172003331      SA2       SYSCHKWD
```

```
1305  13212
            031200 1264
1306  032001264
1307  617000 1310
1310  020000 3123
```

```
BX2     X1-X2
NZ      X2,DBGDSKW
NG      X2,DBGDSKW
CALL    PROGHR    SIGNAL SYSTEM PROG PRESENT
JP      SERVB
```

```
*
*
*
*
*
*
*
*
```

IN ORDER TO ALLOW A LOCK TO WORK HERE.
CMMD MUST NOT PERMIT INTERRUPTS UNTIL
PASSED ANY POSSIBLE JUMP TO HERE

```
                                *
                                *
                                *                LOG ON CODE
                                *
1311  611000131 4               LOGON    MSGOUT  (CAL TSS VERSION *VERSION*)
                                *
1317  6110000021                        DOXJ    EC,CIN,'CX.CMSTF'1,CX.NLKY
1326  6110000021                        DOXJ    EC,CIN,'CX.CMSTF'0,CX.ROOTU     (TEST ONLY)
1335  6110000021                        DOXJ    EC,CIN,'CX.CMSTF'2,CX.TMPRT
1344  6110000021                        DOXJ    EC,CIN,'CX.CMSTF'10,CX.PRMRT
1353  6110000021                        DOXJ    EC,CIN,'CX.CMSTF'3,CX.TDLST
1362  6110000021                        DOXJ    EC,CIN,'CX.PRMRT'RO'CX.TEMP
1371  6110000021                        DOXJ    EC,DSCP,'CX.TEMP
1377  43052                             MX0     60-18
          15660                         BX6     -X0*X6
              51 6 0000203              SA6     DIRTYPE
                                *
1400  617000516 1               CALLR   INITFXD
1402  617000521 7               CALLR   INITSWP
1404  617000454 0               CALLR   PRGSPC
1406  617000776 0               CALLR   DOTIME
                                *
1410  71700017 50               LOGUNO  DORUNB7 LOGONX0
                                *
1411  611000141 4               MSGOUT  (PERMANENT DIRECTORY?)
1417  6110000042                CALLR   SETSL,CX.PRMRT
1421  617000770 2               CALLR   ASKUSER
1423  5120001741                SA2     OUTWD1
          1321 2                BX2     X1-X2
1424  030200261 6               ZR      X2,LGOUT20
              51 2 0001742        SA2     OUTWD2
1425  13212                     BX2     X1-X2
          030200261 6           ZR      X2,LGOUT20
1426  6110000122                CALLR   SETGENA*INBUF,INLCL
1431  6110000000 X              CALLR   STANDP,F*OBJ,1
1434  6110000000                CALLR   MVCAP,CX.TEMP,CX.PRMD
1437  617000417 3               CALLR   CLRSL
                                *
1441  611000144 4               MSGOUT  (GIVE PASSWORD)
1446  617000770 2               CALLR   ASKUSER
1450  5110000122                SA1     INBUF
          4300 4                MX0     4
1451  5120000123                SA2     INBUF+1
          62 1 7777776            SB1     X1-1
              000007              DUP     7,1
                                  AX0     B1,X0
                  11102           BX1     X0*X2
1454  43004                     MX0     4
          15610                 BX6     =X0*X1
              51 6 0000205      SA6     TEMP2
                                *
                                *       GET PROFILE INFO
                                *
```

```
1455  6110000021                    SETXJ   CX,LOGOP,IN,LOG1,LOGNTA1+IND,CX,PRMD
1461  6110000012                    SETRET  10,XJLOC,B0,B0
                                    *
                                    *
1464  7170001754                    DORUNB7 LOGONX01
                                    *
1465  0130000021000I000003          XJ      XJLOC,,,,RETLOC
                                    *
                                    **      CALLR   LOGSPACE,XJLOC
                                    *
                                    *
1471  7170001760                    DORUNB7 LOGONXI
                                    *
1472  6110001475            LOGON1  MSGOUT  (TEMPORARY DIRECTORY?)
1500  6170007702                    CALLR   ASKUSER
1502  10611                         BX6     X1
            5160002I1               SA6     TEMP6     . SAVE BCD NAME FOR LOGON2 CALL TO BILL
1503  6110000122                    CALLR   SETGENA,INBUF,INLCL
1506  6110000000 x                  CALLR   STANDP,F.TEMPD,1
                                    *
                                    *       LOGON2 IS ENTERED AS PART OF THE STANDARD FUNCTION
                                    *       F.TEMPD.
                                    *       X1=8 CHAR (OR LESS) ASCII NAME
                                    *
1511  10611                 LOGON2  BX6     X1        . X1=PTR TO TEXT STRUCTURE
            5160002004              SA6     TEMP1
1512  6170001513                    CALL    FORDIR    . GET PTR TO SPECIALLY PREPARED NAME IN X6
1513  5160002006                    SA6     TEMP3
                  5211000001        SAI     X1+1
1514  10611                         BX6     X1
            5160002005              SA6     TEMP2
1515  6110000021                    SETXJ   DR:CRDR!,CX,TDLST,TEMP3*IND,500,0
1524  66100                         SETRET  B0,B0,1,CX,TEMP
1527  0130000021000I000003          XJ      XJLOC,,,,RETLOC
                                    *
                                    *
1533  7170001771                    DORUNB7 LOGONX3
                                    *
1534  6110000000            LOGON3  CALLR   MVCAP,CX,TEMP,CX,TDIR
                                    *
                                    *       CREATE SCAN LIST
                                    *
1537  6110000021                    DOXJ    EC!CCLI!,CX,LCLAB,CX,USCNL,10
1546  6110000045                    CALLR   MVCAP,CX,USCNL,CX,SCNL
                                    *
                                    *       INSTALL TEMP DIRECTORY AND NULL ACCESS KEY
                                    *
1551  6110000021                    DOXJ    EC!COUT!,CX,SCNL,B0,CX,TEMP
1560  6110000021                    DOXJ    EC!COUT!,CX,SCNL,1,CX,NLKY
                                    *
                                    *       INSTALL PERMANENT DIRECTORY ON NULL ACCESS KEY
                                    *
1567  6110000021                    DOXJ    EC!COUT!,CX,SCNL,2,CX,PRMD
```

```
1576  6110000021                    DOXJ    EC!COUT!,CX.SCNL,3,CX.NLKY
                                    *
                                    *       INSTALL S DIRECTORY AND PUBLIC ACCESS KEY
                                    *
1605  6110000021                    DOXJ    EC!CIN!,CX.CMSTF,4,CX.TEMP
1614  6110000021                    DOXJ    EC!COUT!,CX.SCNL,4,CX.TEMP
1623  6110000021                    DOXJ    EC!CIN!,CX.CMSTF,3,CX.TEMP+1
1632  6110000021                    DOXJ    EC!COUT!,CX.SCNL,5,CX.TEMP+1
                                    *
                                    * OPEN THE PERMANENT DIRECTORY
                                    *
1641  6110000021                    DOXJ    DRIOPDR!,CX.PRMD
                                    *
                                    *       RECOVER BCD NAME AND GIVE IT TO LOGON2
                                    *
1647  5110000211          LOGON4    SA1     TEMP6
                  1006011           BX6     X1
1650  5160000205                    SA6     TEMP2
                  5111000204        SA1     TEMP1
1651  53110                         SA1     X1          .. FETCH NUM CHARS. PTR SAVED BY LOGON2
                  7221777746        SX2     X1-9
1652  0322001702                    PL      X2,LOG2MG2          .. PROFILES WILL ONLY TAKE
                                    *                               8 CHARACTERS OR FEWER
                                    *
                                    *
1653  6110000021          LOG40     SETXJ   CX.LOGOP,IN.LOG2,LOGRTA1+IND,CX.TDIR
1657  6110000001                    SETRET  1,XJLOC,B0,80
                                    *
                                    *
1662  7170001775                    DORUNB7 LOGONX4
                                    *
1663  0130000021000010000003       XJ      XJLOC,,,,RETLOC
1667  5110000021                    SA1     XJLOC
                  0331001715        NG      X1,LOG2MG3
                                    *
                                    *
1670  7160002331          LOGFIN    SX6     CMMDX
                  5116000176        SA6     RUNB7
1671  0200002676                    JP      COMMAND8
                                    *
                                    *       ERROR MESSAGES
                                    *
1672  0200004054          LOG1MG    JP      EEXIT2      .. IMMEDIATE ERROR PRINTING
1673  6110001676          LOG2MG1   MSGOUT  (ERROR! NULL USERNAME)
1701  0200004057                    JP      FEXIT
1702  6110001705          LOG2MG2   MSGOUT  (WARNING: USER NAME CUT TO 8 CHARS FOR TDLIST)
1712  5110000211                    SA1     TEMP6
                  4300400           MX0     -8          .. 8 CHARACTER MASK
                        11606       BX6     X0*X6
1713  5160000205                    SA6     TEMP2
                  0200001653        JP      LOG40
1714  0200004057                    JP      FEXIT
1715  6110001720          LOG2MG3   MSGOUT  (WARNING: PROFILE RUNNING OUT OF MONEY)
```

```
1724  0200001670                    JP      LOGFIN
1725  6110001730        LOG2MG4     MSGOUT  (ERROR:TOO LITTLE MONEY)
1733  0200004057                    JP      FEXIT
                        *
                        * BLOCK PARAM AND OTHER DATA THINGS
                        *
1734  0000000001000000000205  LOGDTA1  VFD     30/1,30/TEMP2
1735  0000000000000000000011  LOGDTA2  ITEMS   11R3  ,, 17,11,6 ERROR IN LOGIN2 FORCES LOGOUT2
                        *
                        *
                        *                     OBTAIN TEMP DIRECTORY DIR SPACE
1736  7170002001        LOGON5      DORUNB7 LOGONX5
                        *
                                    IFEQ    1,DACCT1
                                    ENDIF
                        *
                        *                     ALL DONE
                        *
1737  7170002331                    DORUNB7 CMMDX
1740  0200002676                    JP      COMMANDB
                        *
                        *
1741  1417071725240000000000  OUTWD1  DATA    0LLOGOUT
1742  1417071706040000000000  OUTWD2  DATA    0LLOGOFF
                        *
1743  0000000000000000004054  LOGONX  RNB7CTRL LOGON,EEXIT2,16B,(INITL,LOGON)
1747  0000000000000000002005  LOGONX0 RNB7CTRL LOGON0,LOG0ER,16B,(LOGON1;PRMDIR)
1753  0000000000000000002013  LOGONX1 RNB7CTRL LOGON1,LOG1ER,16R,(LOGON1;BADPSW)
1757  0000000000000000002063  LOGONX2 RNB7CTRL LOGON1,LOG1ER,16B,(LOGON2;CRT,TMPDR)
1763  0000000000000000002144  LOGONX11 RNB7CTRL LOG4ER2,LOG4ER1,16B,(LOGON;NO MONEY CLEANUP)
1770  0000000000000000002071  LOGONX3 RNB7CTRL DBGDSKW,LOG3ER,16R,(LOGON3;DIR,INIT)
1774  0000000000000000002104  LOGONX4 RNB7CTRL LGOUT20,LOG4ER,16B,(LOGON2;PROFILES)
2000  0000000000000000002153  LOGONX5 RNB7CTRL DBGDSKW,LOG5ER,16R,(LOGON; INI,TEMP DSK)
                        *
2005  6110002010        LOG0ER      MSGOUT  (BAD ERMDIR)
2012  0200004057                    JP      FEXIT
                        *
2013  5110000503        LOG01ER     SA1     ERRCLASS
                  7721777760        SX2     X1-EC,BEADS
2014  0312002054                    NZ      X2,LOG01ER2             . BAD ERROR CLASS
                        *
                  5111000504        SA1     ERRNUMB
2015  43052               15210     MX0     60-18
                  7723777765        BX2     -X0*X1                  . ERROR NUMBER
2016  0313002054                    SX3     X2-ENDLOG1
                                    NZ      X3,LOG01ER2             . BAD ERROR NUMBER
                        *
                  2111252           AX1     18
                        15210       BX2     -X0*X1
2017  7232777727                    SX3     X2-EMBPSW
                  0303002046        ZR      X3,LOG01ER1             . BAD PASSWORD
                        *
```

```
2020  6110002023          MSGOUT  (IF UNABLE TO LOGON, CONTACT VANCE VAUGHAN)
2030  6110002033          MSGOUT  (AT 642-5823. LEAVE MESSAGES WITH GIL COSTA)
2040  6110002043          MSGOUT  (AT 642-4775)
2045  0200004057          JP      FEXIT
                  *
2046  6110002051  LOG1ER1  MSGOUT  (BAD PASSWORD)
2053  0200004057          JP      FEXIT
                  *
2054  6110000506  LOG1ER2  EPRNT
2061  0200002161          JP      LOGONF1
2062  0200004057          JP      FEXIT
                  *
2063  6110002066  LOG1ER   MSGOUT  (BAD TEMPDIR)
2070  0200004057          JP      FEXIT
                  *
2071  6110000506  LOG3ER   EPRNT
2076  6110002101          MSGOUT  (SYSTEM ERROR)
2103  0200004057          JP      FEXIT
                  *
2104  6110000506  LOG4ER   EPRNT
2111  6110002114          MSGOUT  (LOGOUT IS FORCED)
                  *
                  * KILL TEMPDIR BEFORE ENTERING LOGOUT2
                  *
2116  7170001764          DORUNB7 LOGONX1
                  *
2117  66100               SETRET  R0,B0,I'CX,TEMP
2122  6110000021          SETXJ   DR;UACC;,CX,TDLST,TEMP3+IND,CX,NLKY
2126  0130000021000100000 XJ      XJLOC,,',RETLOC
2132  6110000006          CALLR   CMMDS,6         . KILL OBJ
2134  6110000021          DOXJ    DR;RMODE;,CX,TDLST,TEMP3+IND,CX,NLKY
2143  0200004057          JP      FEXIT
                  *
2144  6110000506  LOG4ER1  EPRNT
2151  0200004057          JP      FEXIT
                  *
                  *
2152  0400002616  LOG4ER2  JP      LOGOUT20        . FINISH LOGOUT
                  *
2153  6110000506  LOG5ER   EPRNT
2160  0200004057          JP      FEXIT
                  *
2161  6110002164  LOGONF1  MSGOUT  (PASS WORD NOT CONFIRMED)
2167  0200004057          JP      FEXIT
2170  6110002173  LOGONF2  MSGOUT  (BAD TEMPDIR)
2175  0200004054          JP      EEXIT2
```

```
                                *
                                *
                                *                       SPACE CALL
                                *
2176  6110002273                SPCCALL   CALL    PUSHDRUG,CALLX
2200  6170002201                          CALL    CLRPI
2201  5110000007                          SAT     SPC.CNT    PICK UP PARAM COUNT
            6110002212                    CALLR   SPCCMD,SPCCALLT
2204  0331002210                          NG      X1,SPCCALLX
            6110000021                    SETXJ   EC!RTBN!
2207  0200002311                          JP      CALLXIT
                                *
2210  6110000000 X              SPCCALLX  CALL    FEXIT,ECN.TMP         (TOO MANY PARAMS)
                                *
2212  0000000000000000010       SPCCALLT  ITEMS   SPC.DTA,SPC.DTA+1
2214  0000000000000000012                 ITEMS   SPC.DTA+2,SPC.DTA+3
2216  0000000000000000014                 ITEMS   SPC.DTA+4
```

```
                                *
                                *
                                *                       USER CALL TO GET AN OBJECT. CMMD ASKS USER
                                *                       TO NAME OBJECT ON TTY
                                *
2217  611000224 3               OBJCALL   CALL          PUSHDRUG,OBJCALLX
2221  617000222 2               OBJCALL1  CALL          CLRPI
                                *
2222  617000770 2               OBJCALL1  CALLR         ASKUSER
2224  611000012 2               OBJCALL1  CALLR         SETGENA,INBUF,INLCL
2227  611000000 0 x             OBJCALL1  CALLR         STANDP,F,OBJ,1
2232  06100                     OBJCALL1  SETRET        R0,B0,1,CX,TEMP     (PROVIDES BLKC PARAMS FOR RTN)
2235  611000002 1               OBJCALL1  SETXJ         ECSRPAR!,RETLOC+IND,RETLOC+1+IND
2241  020000231 1               OBJCALL1  JP            CALLXIT
                                *
                                *
2242  000000000000000004054    OBJCALL1  ITEMS         EEXIT2                  IMMEDIATE PRINT OF ERROR
2243  020000222 2               OBJCALL1  JP            OBJCALL1
                    0000000002  -         VFD           30/2        DOUBLE QUOTE
2244  031515040000000000000    OBJCALL1  DIS           ,,CMMD,
```

```
                                *
                                *
                                *                       CALL FROM USER SUBPROCESS TO DECODE A TEXT NAME
                                *
2245  6110002276                NAMECLI   CALL    PUSHDRU0,CALLF
2247  6170002250                          CALL    CLRPI
2250  6110000000                          CALLR   SETSL,CX,TEMP
2252  6110000011                          CALLR   SETGENA,NME,TXT,INLCI
2255  6110000000  X                       CALLR   STANDP,F,OBJ,I
2260  6170004173                          CALLR   CLRSL
2262  066100                              SETRET  R0,BJ,I,CX,TEMP      (PROVIDES BLK PARMS FOR RTN)
2265  6110000021                          SETXJ   EC,RP,AR,I,RETLOC,IND,RETLOC+1,IND
2271  0200002311                          JP      CALLXIT
```

```
                                *
                                *.
                                *                       NORMAL RUNBY LOC FOR SUBPROCSS CALLS
                                *
                                *                       ERRORS WILL BE RETURNED TO USER
                                *
2272  0000000000000002304                   ITEMS     CALLY
2273  0200004030                CALLX       JP        CRASH
                    0000000002              =         VFD       30/2        DOUBLE QUOTE
2274  0315150400000000000                   DIS       *.CMMD.
2275  0000000000000002300                   ITEMS     CALLFRET
2276  0200004030                CALLF       JP        CRASH
2277  0315150400000000000                   DIS       *.CMMD.
                                *
                                *                       FRETURN TO USER SUBPROCESS
                                *
2300  6110000021                CALLFRET    SETXJ     EC!FRET!
2303  0200002311                            JP        CALLXIT
                                *
                                *
                                *                       RETURN WITH ERROR TO USER SUBPROCESS
                                *
                      20        E.CMMD      EQU       20B
                                *
2304  6110000021                CALLY       SETXJ     EC!RERR!*E.CMMD*EFXITSV*IND
2310  0200002311                            JP        CALLXIT
                                *
                                *
                                *
                                *                       STANDARD AND OTHER RETURNS FROM SUBPROCESS CALLS
                                *                       XJLOC ALREADY SET
                                *
2311  6170002312                CALLXIT     CALL      SETPI       (TROUBLE UNTIL VV STUVV ALL IN)
2312  6170002313                            CALL      POPDERUG
2313  0130006330000000002                  XJ        RESTORE
2316  0130000210000000002                  XJ        XJLOC
2321  6170002322                            CALL      CRASH
```

```
                                *
                                *
                                *                       THIS IS THE COMMAND PROCESSOR ITSELF
                                *
                                *
2322  6170007702                COMMAND1  CALLR   ASKUSER
2324  6110002334                          CALLR   NAMEVEC,COMMLIST
2326  0301002353                          ZR      X1,COMMAND2           ( NOT A SPECIAL COMMAND )
                                          SB1     X1
2327  0210000000 6377770                  JP      B1                    GO DO SPECIAL COMMAND
                                *
                                *
2330  0000000000000004054               ITEMS   EEXIT2                FRROR HANDLING IS PRINT
2331  0200002322                CMMDX     JP      COMMAND1
                    0000000001            -       VFD     30/1          (EXCLAMATION POINT)
2332  0317151501146045520022            +       DIS     ..COMMAND PROCESSOR.
                                *
                                *
                                NMENTC    MACRO   NAME,VAL
                                          DATA    0L,NAME
                                          ITEMS   VAL
                                          ENDM
                                *
                                *
2334                              COMMLIST  BSS     0
2334  2305222600000000000000             NMENTC  SERV,SERV4
2336  2305222611030523000000             NMENTC  SERVICES,SERV4
2340  2710170000000000000000             NMENTC  WHO,WHO
2342  1417071725240000000000             NMENTC  LOGOUT,LOGOUT
2344  1417071706040000000000             NMENTC  LOGOFF,LOGOUT
2346  0310012207052300000000             NMENTC  CHARGES,CHARGES
2350  2411150500000000000000             NMENTC  TIME,TIME
2352  0000000000000000000000             DATA    0
                                *
                                *
                                *
2353  6110000122                COMMAND2  CALLR   SETGENA,INBUF,INCL
2356  6170000000 X                        CALLR   SETPABS
2360  6170000000 X                        CALLR   PARSEP        PARSE ONE PARAM
2362  0410002413                          EQ      B1,B0,COMMAND3        WAS NONE
                    6377700000000 X                 CALLR   RUNFNC,F.OBJ          GET PARAM AS AN OBJECT
2365  6110000000                          CALLR   MVCAP,CX,TEMP,CX,SBPD         SAVE FOR CLOSE MAPS
                                *
2370  7160002440                        SX6     CMMDY
                    5160000176            SA6     RUNB7         RESET RUNBY TO CATCH ALL ERRORS AND DO A PURGE
                                *
2371  7160000001                        SX6     1
                    5160000217            SA6     XCMMDS+1
2372  0130000216000100000003           XJ      XCMMDS,,CMMDSER,,CMMDSRTN     (CREATE THE SUBP)
2376  0316002420                        NZ      X6,COMMAND4           (IS NEW TYPE WITH CAP ARGS)
                                *
                    6377700000021       SETXJ   CX,TEMP       PREPARE TO CALL USER WITH READ PARAMS
2401  6170000000 X                      CALLR   READP         GET 1ST READ STYLE PARAM
```

```
2403  10611                          BX6   X1
            516000204                SA6   TEMP1
2404  6170000000 X                   CALLR READP     GET 2ND
2406  10511                          BX5   X1
            514000204                SA4   TEMP1
2407  013000002100000000002         XJ    XJLOC     CALLUSER
2412  020000040057                   JP    FEXIT
                        *
                        *
2413  611000241016      COMMAND3  MSGOUT  (BAD SUB)
2417  020000040057                JP    FEXIT
                        *
                        *                NEW STYLE CALL WITH CAPABILITY PARAMS
                        *
2420  6110000000        COMMAND4  CALLR   MVCAP,CX.TEMP.CX.SBPC          SAVE CALL OP
2423  6110000000 X              CALLR   STANDP,F.OBJS,-1     COLLECT PARAMS
2426  43036                       MX0   60-30
            151110                BX1   -X0*X1
                15220             BX2   -X0*X2
                    20236         LX2   30
2427  12612                       BX6   X1+X2
            516000204             SA6   TEMP1       BLK CAP ACTUAL PARAM FOR IP LIST
2430  611000021                   DOXJ  CX.SBPC,TEMP1+IND    CALL USER
2436  020000040057                JP    FEXIT
                        *
                        *
                        *                RUNB7 VALUE WHILE A USER SUBPROCESS EXISTS
                        *
243700000000000000040054            ITEMS EEXIT2    ERROR HANDLING IS PRINT
2440  020000002443      CMMDY     JP    COMMAND5
                  000000000001    -     VFD   30/1        (EXCLAMATION POINT)
2441  550317151501104045520       DIS   .. COMMAND PROCESSOR.
                        *
                        *
                        *
                        *                ERRORS AND PANICS COME HERE ( OR FEXIT ALSO) WHILE
                        *                USER SUBPROCESS MIGHT EXIST
                        *
2443  617000002444      COMMAND5  CALL  SETPI
2444  020000003135                JP    PURGE       DO PURGE TO FORCE CLEAN UP
```

```
                                *
                                *
                                * LOG OUT CODE
                                *
2445  717000 2531               LOGOUT    DORUNB7   LGOUTX0
                                *
2446  617000 2447                         CALL      SETPI       .. INHIBIT INTERRUPTS
                                *
2447  7160000002                          SX6       2           .. BEGIN OCTAL PRINT WITH WD 2
                  5176000204                SA6       TEMP1
2450  6110000021                LOGOUT1   SETXJ     CX.LOGOP.OUT.LOG1.0.0
2454  6110000011                          SETRET    9.XJLOC.B0.B0
2457  0130000021000100000 3               XJ        XJLOC,,,RETLOC
                                *
                                *
2463  717000 2535                         DORUNB7   LGOUTX1
                                *
                                *         PRINT PROFILE THINGS RETURNED FROM BILL
                                *
                                *
                                *
2464  6110000021                          CALLR     CRGPRNT.XJLOC
2466  6110002471                          MSGOUT    (GOOD DAY)
                                *
                                *
2472  717000 2541               LOGOUT3   DORUNB7   LGOUTX2
                                *
                                *
2473  6110000021                          DOXJ      DFICADF!    .. CLOSE ALL OPEN FILES
2501  6110000021                          DOXJ      DNICLAO!    .. CLOSE ALL OPEN DYNAMIC NAME TAGS
2507  6170004540                          CALLR     PRGSPC      .. RELEASE ALL SPACE ABOVE NOMINAL
                                *
                                *
                                *
2511  717000 2546               LGOUT3    DORUNB7   LGOUTX3
2512  6110000021                LOGOUT3   SETXJ     CX.LOGOP.OUT.LOG2.B0.B0
2516  0130000021000000000 2               XJ        XJLOC
2521  6110002524                          MSGOUT    (RETURN FROM LOGOUT2 BADS)
2527  0200002625                          JP        BADOUT
                                *
                                *         RUNB7/ERROR THINGS
                                *
2530  0000000000000002566       LGOUTX0   RNB7CTRL  DBGDSKER,LGOUTF1,16B,(LOGOUT1:ACCOUNTING)
2534  0000000000000002551       LGOUTX1   RNB7CTRL  DBGDSKER,LGOUTF0,16B,(LOGOUT1:PROF.PRNT)
2540  0000000000000002602       LGOUTX2   RNB7CTRL  DBGDSKER,LGOUTF2,16B,(LOGOUT2:CMMD CLEANUP)
2545  0000000000000002620       LGOUTX3   RNB7CTRL  DBGDSKER,LGOUTF3,16B,(LOGOUT2:KILL PROC)
                                *
                                *         ERROR MESSAGES, ETC.
                                *
2551  6110002554                LGOUTF0   MSGOUT    (ERROR WHILE PRINT PROFILE STUFF)
2560  6110000506                          EPRNT
2565  0200002625                          JP        BADOUT
2566  6110002571                LGOUTF1   MSGOUT    (ERROR IN LOGOUT1 XJ)
```

```
2574  6110000506                    EPRNT
2601  0200002625                    JP      BADOUT
2602  6110002605          LGOUTF    MSGOUT  (ERROR IN LOGOUT2 XJ)
2610  6110000506                    EPRNT
2615  0200002625                    JP      BADOUT
                          *
2616  6170002617          LGOUT2    CALL    SETPI     . ENTERED FROM LOGON WHEN "LOGOUT" OR
2617  0200002472                    JP      LOGOUT2   "LOGOFF" IS ENTERED AS PERMJR
2620  6110000506          LGOUTF    EPRNT
2625  6170002626          BADOUT    CALL    CLRPI
2626  7170002737                    DORUNB7 SERVX     .. NASTY LOOP IF WE DONT DO THIS
2627  0200004057                    JP      FEXIT
                          *
                          *
2630  0000000000000000000000  LOGMSVEC  ITEMS  0,0,OUTMG1,OUTMG2,OUTMG3,OUTMG4,OUTMG5,OUTMG6
2640  0000000000000000002655            ITEMS  OUTMG7
2641  0317161605032455241 1   OUTMG1    DIS    ..CONNECT TIME = .
2643  0320255524111505555 4   OUTMG2    DIS    ..CPU TIME = .
2645  0611300504550503235 5   OUTMG3    DIS    ..FIXED ECS = .
2647  1517245523141772423 55  OUTMG4    DIS    ..MOT SLOTS = .
2651  2327012020050455050 3   OUTMG5    DIS    ..SWAPPED ECS = .
2653  2405152055041 1231355   OUTMG6    DIS    ..TEMP DISK = .
2655  1517160531555453000 0   OUTMG7    DIS    ..MONEY =$.
```

```
                                *
                                * CHARGES              GET CHARGES FROM PROFILE
                                *
2656  6110000021                CHARGES   SETXJ       CP!CHBG!
2661  6110000012                          SETRET      LOGOUTRT,XJLOC,B0,B0
2664  0130000021000?000003              XJ          XJLOC,,,*RETLOC
2670  6110000021                          CALLR       CRGPRNT,XJLOC
2672  0200004057                          JP          FEXIT
                                *
                                * GIVE USER TIME AND DATE
                                *
2673  6170007760                TIME      CALLR       DOTIME
2675  0600004057                          JP          FEXIT
                                *
```

```
                                *
                                *                ENTRY POINTS FOR THE COMMAND PROCESSOR CODE
                                *
                                *                RETURN FROM OTHER ACTIVITY
                                *
2676  6110002701                COMMANDB  MSGOUT   (COMMAND PROCESSOR HERE)
2704  7160002331                          SX6      CMMDX
                    5176000176              SA6      RUNB7
2705  0400004057                          JP       FEXIT
```

```
                                *
                                *                THIS IS SERVICES
                                *
2706  6170007702                SERV1     CALLR  ASKUSER
2710  6110002741                SERV1A    CALLR  NAMEVEC,SERVLIST
2712  0301002730                          ZR     X1,SERV4          NOT RECOGNIZED
                    631770                SB1    X1                SAVE TENTATIVE XFER
                          10411           BX4    X1
2713  43060                               MX0    60-12
            20452                         LX4    60-18
                  15440                   BX4    -X0*X4            GET SELECTION BITS
2714  5120000135                SERVBITS  SA2    SERVBITS          CURRENT SELECTION BITS
                    7730000004            SX3    BITS1             REQUIRED BITS
2715  11343                               BX3    X4*X3             BITS THIS ACTION REQUIRES
            11523                         BX5    X2*X3             BITS THIS ACTION REQUIRES THAT ARE ON
                  13535                   BX5    X3-X5
2716  0315002722                          NZ     X5,SERV3          NOT ALL ON
                                *
                    7730000003            SX3    BITS2             ANY ON IN ACTION, THEN AT LEAST ON ON IN STATE
2717  11343                               BX3    X4*X3
            0300302721                    ZR     X3,SERV2A         NON ON IN ACTION
                          11523           BX5    X2*X3
2720  0305002722                          ZR     X5,SERV3          AT LEAST ONE WAS NEEDED, NONE ON
                                *
2721  0210000000                SERV2A    JP     B1                OK, PASSES ALL TESTS
                                *
                                *
2722  6110002725                SERV3     MSGOUT (SAY AGAIN)
2727  0200004057                          JP     FEXIT
                                *
                                *                INVOKE FANCY GRAMMAR
                                *
2730  6110001122                SERV4     CALLR  SETGENA'INBUF,INLGL
2733  6110000000                          CALLR  PARSEO,S,LINE
2735  0200004057                          JP     FEXIT
                                *
2736  0000000000000000004054               ITEMS  FEXIT2
2737  0200002706                SERVX     JP     SERV1
                          0000000012      VFD    30/12B            (ASTERISK)
2740  2305222611030B230000      +         DIS    ..SERVICES.
                                *
                                *
                                *
                                NMENTS    MACRO  NAME,VAL,BITS
                                          DATA   0L*NAME
                                          VFD    12/0,18/0,12/BITS,0,18/VAL
                                          ENDM
                                *
                                *
                                FNMENTS   MACRO  NAME,FNC,PCNT,BITS
                                          DATA   0L*NAME
                                +         VFD    12/PCNT,18/FNC,12/BITS,0,18/STAND
                                          ENDM
```

```
                                *
                                *
2741                    SERVLIST  BSS       0
2741  0611160000000000000000             NMENTS    FIN,COMMANDB,CMMDBIT
2743  2205242231000000000000             NMENTS    RETRY,RETRY,DBGBIT
2745  2205242522160000000000             NMENTS    RETURN,DBGDONE,DBGBIT
2747  2025220705000000000000             NMENTS    PURGE,PURGE
2751  0225070000000000000000             NMENTS    BUG,BUG,SYSTMBIT
2753  2057012303111100000000             NMENTS    P.ASCII,PMDA
2755  2057062514140000000000             NMENTS    P.FULL,PMDF
2757  2057111623240000000000             NMENTS    P.INST,PMDI
2761  1116571703240000000000             NMENTS    IN.OCT,INMDOCT
2763  1116570405030000000000             NMENTS    IN.DEC,INMDDEC
2765  0322251603100000000000             NMENTS    CRUNCH,CRUNCHS,SYSTMBIT
2767  0205010423051523070 0              NMENTS    BEADSEMSG,CMMDSEM
2771  0205010423040225070 0              NMENTS    BEADSDBUG,BEADSDBG,SYSTMBIT
2773  0705240204061111405 0              NMENTS    GETBDFILE,GETBDF,CMMDBIT
2775  2710170000000000000000             NMENTS    WHO,WHO
2777  0310012207052300000000             NMENTS    CHARGES,CHARGES
3001  2411150500000000000000             NMENTS    TIME,TIME
3003  3020040124010000000000             FNMENTS   XPDATA,F.PWRD,1
3005  1605272023270000000000             FNMENTS   NEWPSW,F.CHPSW,1,CMMDBIT
3007  1605272500000000000000             FNMENTS   NEWU,F.NEWUS,-1,CMMDBIT
3011  1311141425000000000000             FNMENTS   KILLU,F.KILLU,1,CMMDBIT
3013  0411232014013100000000             FNMENTS   DISPLAY,F.DISP,1
3015  0414112324000000000000             FNMENTS   DLIST,F.SLIST,1
3017  0622110516042000000000             NMENTS    ERIENDP,FRIENDP
3021  0622110516042400000000             NMENTS    FRIENDT,FRIENDT
3023  2320010305000000000000             FNMENTS   SPACE,F.SPC,-1
3025  1523200103050000000000             FNMENTS   MSPACE,F.MVSPC,3
3027  1504171423000000000000             FNMENTS   MDOLS,F.MDOLS,3
3031  1525230522300000000000             FNMENTS   MUSERS,F.MUSRS,3
3033  0524051414000000000000             FNMENTS   ETELL,F.ETTST,-1
                                         EXT       F,ETTST
3035  2324172000000000000000             NMENTS    STOP,STOP,SYSTMBIT
3037  0717160500000000000000             NMENTS    GONE,GONE
3041  0211072417310000000000             NMENTS    BIGTOY,BIGTOY
3043  2523052202250700000000             NMENTS    USERBUG,USERBUG,SYSTMBIT
3045  1220222170300000000000             NMENTS    JPROC,JPROC,SYSTMBIT
3047  0211144140000000000000             NMENTS    BILL,BILL
3051  0222250305000000000000             NMENTS    BRUCE,BRUCE,SYSTMBIT
3053  2001251400000000000000             NMENTS    PAUL,PAUL,SYSTMBIT
3055  0310011116000000000000             FNMENTS   CHAIN,F.CHAIN,2
3057  2516031001111240000000             FNMENTS   UNCHAIN,F.UNCHN,1
3061  2310013201150000000000             FNMENTS   SHAZAM,F.SHAZ,2
3063  2317052414000000000000             FNMENTS   SOFTL,F.SOFTL,2
3065  2205160115050000000000             FNMENTS   RENAME,F.RENM,2
3067  1311031300000000000000             FNMENTS   KICK,F.KICK,1,SYSTMBIT
3071  0617220305172524000000             FNMENTS   FORCEOUT,F.FLOUT,1,SYSTMBIT
3073  2331230417271400000000             FNMENTS   SYSDOWN,F.SYSDN,0,SYSTMBIT
3075  0405031115140000000000             FNMENTS   DECIML,F.DECML,3
3077  2402141116050000000000             FNMENTS   TBLINE,F.TBL,2,SYSTMBIT
3101  0405032402140000000000             FNMENTS   DECTBL,F.DCTBL,3,SYSTMBIT
```

```
3103  141703132424310000000          FNMENTS  LOCKTTY,F.LKTTY,0
3105  021411232400000000000          FNMENTS  BLIST,F*BLIST,1
3107  211411232400000000000          FNMENTS  @LIST,F*SLIST,1
3111  000000000000000000000          DATA     0
                        *
                        *
                        *
                        *                      DEFINITION OF SERVICE CONTROL BITS
                        *
                   1    CMMDBIT    EQU       1          CALLED BY COMMAND PROCESSOR AS SERVICES
                   2    DBGBIT     EQU       2          CALLED BY READ GHOST AS DEBUGGER
                   4    SYSTMBIT   EQU       4          SYSTEM PROGRAMMER PRESENT
                        *
                        *
                        *                      DEFINITION OF BIT COLLECTIONS
                        *
                   4    BITS1      EQU       SYSTMBIT   ALL ON IN ACTION REQUIRED
                   3    BITS2      EQU       CMMDBIT+DBGBIT   IF ANY ON IN ACTION, AT LEAST ON REQUIRED
                   4    BITS3      EQU       SYSTMBIT   PRESERVED ON CALL AND RETURN
```

```
                                    *
                                    *                   ENTRY POINTS FOR SERVICES
                                    *
3112  6110003115                    SERVA     MSGOUT    (SERVICES HERE)
3117  7160000001                              SX6       CMMDBIT
                5110000135                    SA1       SERVBITS
3120  12616                                   BX6       X1+X6
          5160000135                          SA6       SERVBITS
                    76600                     SX6       B0
3121  5160000371                              SA6       VIEWX
                7160002737                    SX6       SERVX
3122  5160000176                              SA6       RUNB7
                0200004057                    JP        FEXIT
                                    *
                                    *
3123  6110003126                    SERVB     MSGOUT    (BOOT READ GHOST HERE)
3131  7160000002                              SX6       DBGBIT
                5110000135                    SA1       SERVBITS
3132  12616                                   BX6       X1+X6
          5160000135                          SA6       SERVBITS
3133  7160000001                              SX6       1         ALLOW FOR READ GHOST
                5160000371                    SA6       VIEWX
3134  0200004057                              JP        FEXIT
```

```
                                *
                                *
                                *                       PURGE
                                *
3135  6110000021                PURGE   DOXJ    EC.JUMP.*CX.BEADS.MINUS1*IND
3144  6170003145                        ERR
                                *
                                *                       BUG
                                *
3145  0130000617000000000002    BUG     XJ      RDBDCALL
3150  0307003155                        ZR      X7,BUG1
                  6160000004            SB6     4
3151  0130000620000000000002            XJ      BEAD
3154  0200004057                        JP      FEXIT
                                *
3155  6110003160                BUG1    MSGOUT  (BEAD CALL NOT AVAILABLE)
3163  0200004057                        JP      FEXIT
                                *
                                *
                                *                       RETRY SUBPROCESS ACTION THAT FAILED
                                *
3164  6170003165                RETRY   CALL    POPDEBUG
3165  7110000000                        SX1     0               (DONE)
                  7120000001            SX2     1               (SPECIAL RETURN)
3166  6170003607                        CALLR   ASKBDG
3170  6170003171                        CALL    CRASH
                                *
                                *
                                *                       RETURN TO SUBPROCESS
                                *
3171  6170003172                DBGDONE CALL    POPDEBUG
3172  76100                             SX1     B0              (DONE)
            76200                       SX2     B0              (ORDINARY RETURN)
                  6170003607            CALLR   ASKBDG
3174  6170003173                        CALL    CRASH
                                *
                                *
                                *                       CALL FAKE GHOST
                                *                               THINGS WILL BE A MESS AFTERWORDS
                                *
3175  6110000021                CRUNCHS SETXJ   CX.FGHST
3200  6160000004                        SB6     4
3201  0130000021000000000002            XJ      XJLOC
3204  0200004057                        JP      FEXIT
                                *
                                *
                                *                       GET AN ECS FILE ( OR OTHER OBJECT ) FROM
                                *                       OLD BEAD AN PLACE IN VARIABLE BEADF
                                *
3205  6170003206                GETBDF  CALL    SETTKN
3206  6170000000                        CALLR   BEADP
3210  10611                             BX6     X1
            5160000204                  SA6     TEMP1
```

```
3211  6170000000 x                CALLR   READP
3213  10211                       BX6     X1
            5110000204            SA1     TEMP1
3214  6110000021                  SB1     XJLOC
                  6170000063      SB7     CX.BDF
3215  66600                       SB6     B0
3216  0130000620000000000002      XJ      READ
3221  6110000021                  SB1     XJLOC
                  6160000001      SB6     1
3222  6170000063                  SB7     CX.BDF
3223  0130000620000000000002      XJ      READ
3226  0200004057                  JP      FEXIT

                            *
                            *
                            *     WHO ( USED BY ALL SECTIONS )
                            *
3227  5110000176            WHO   SA1     RUNB7
                  6211000001      SB1     X1+1
3230  6170007644                  CALLR   MSGOUT
3231  0200004057                  JP      FEXIT

                            *
                            *
                            *     COMMAND WITH STANDARD PARAMS
                            *
3233  20136                 STAND LX1     30
            631100                SB1     X1          FUNCTION
                  2001562         LX1     60-18
                        43060     MX0     60-12
3234  15110                       BX1     -X0*X1
            632100                SB2     X1          NOMINAL PARAM COUNT
                  7211770001      SX1     X1-1000B+2  SEE IF ANY NUMBER
3235  0311000000 x                NZ      X1,STANDP   NO
                  6120777776      SB2     -1          YES
3236  0200000000 x                JP      STANDP

                            *
                            *
                            *     OBTAIN SOMEONE ELSES PER DIR
                            *
3237  6110000042            FRIENDP CALLR   SETSL.CX.PRMRT
3241  6170000000 x          FRIENDP1CALLR   SETPARS
3243  6170000000 x                CALLR   PARSEP
3245  6111777775                  SB1     B1-2
                  0511003454      NE      B1,B0,BADSYNTX
3246  6110000000 x                CALLR   RUNFNC.F.OBJ
3250  6110000021                  DOXJ    FC:DSCP1,CX.TEMP
3256  43052                       MX0     60-18
            150660                BX6     -X0*X6          GET TYPE FIELD
                  5111000203      SA1     DIRTYPE         GET DIRECTORY TYPE
3257  13116                       BX1     X1-X6
            0311003277            NZ      X1,FRIENDPF     NOT A DIRECTORY
3260  6110000021                  DOXJ    EC:MCAP1,CX.TEMP,CX.HOLD,OB.ACC     ALLOW ONLY AC BIT
3267  6170004173                  CALLR   CLRSL
3271  6170000000 x                CALLR   PARSEP
```

```
3273  6111777776                        SBI     B1-1
                  051A003454            NE      B1,B0,BADSYNTX
3274  6110000000 X                      CALLR   RUNFNC.F.CPUT1
3276  6170003277                        CALL    CRASH
                                *
                                *
3277  6110003302                FRIENDOF MSGOUT  (NOT A DIRECTORY)
3304  0200004057                       JP      EXIT
                                *
                                *               OBTAIN SOMEONE ELSES TEMPDIR
                                *
3305  6110000043                FRIENDT  CALLR   SETSL.CX.TMPRT
3307  0200003241                       JP      FRIENDP1
                                *
                                *
                                *
                                *               SYSTEM PROGRAMMER PRESENT, CLAIM
                                *
3310  6110003313                BIGTOY   MSGOUT  (BAD SYNTAX)   FAKE UNRECOGNIZED
3315  6170007702                       CALLR   ASKUSER
3317  0312002710                       NZ      X2,SERVIA
                  513A003331           SA3     SYSCHKWD
3320  133313                           BX3     X1-X3
            0333002710                 NG      X3,SERVIA
3321  0313002710                       NZ      X3,SERVIA
                  611A003325           MSGOUT  (BAD SYNTAX)
                                *
3327  6170003330                       CALL    PROGHR          A.K.
3330  0200004057                       JP      EXIT
                                *
                                *
3331  0417162427172213000       SYSCHKWD DATA   OLDONTWORK   ALSO USED BY SYSTEM ERR AND ...STOP*
                                *
                                *
                                *
                                *               SYSTEM PROGRAMMER GONE
                                *
3332  6170003333                GONE     CALL    PROGGN
3333  0200004057                       JP      EXIT
                                *
                                *
                                *
                                *
                                *               CALL BRUCES DEBUGGER
                                *
3334  6110000021                USERBUG  UOXJ    CX.USRBG
3342  0600004057                       JP      EXIT
                                *
                                *
                                *
                                *               CALL ON FAKE READ GHOST
                                *
3343  6110000021                CRUNCH   SETXJ   CX.FGHST
3346  6160000004                       SB6     4
```

```
SERVICES
  3347  013000002100000000002          XJ      XJLOC
  3352  020000040057                   JP      FEXIT
                                *
                                *
                                *               TEST OF BILL BRIDGE CODE
                                *
                                *               WITH READ CALL ON BEAD
                                *
  3353  617000335 4               BILL    CALL    SETTKN
  3354  617000000 X                     CALLR   READP
  3356  10611                           BX6     X1
            516000002 4                 SA1     TEMP1
  3357  617000000 X                     CALLR   READP
  3361  10211                           BX2     X1
            511000002 4                 SA1     TEMP1
  3362  611000002 1                     SB1     XJLOC
                617000006 3             SB7     CX.BDF
  3363  66600                           SB6     B0
  3364  013000342500000000002          XJ      BEADGB
                                *
  3367  511000037 2                     SA1     PMODE
                617700002 1             CALLR   SPCPRNT.XJLOC+0.X7
  3372  511000037 2                     SA1     PMODE
                617700002 2             CALLR   SPCPRNT.XJLOC+1.X7
  3375  511000037 2                     SA1     PMODE
                617700002 3             CALLR   SPCPRNT.XJLOC+2.X7
  3400  511000037 2                     SA1     PMODE
                617700002 4             CALLR   SPCPRNT.XJLOC+3.X7
  3403  611000340 6                     MSGOUT  ( )
  3407  611000002 1                     DOXJ    ECIDSCPI.CX.TEMP
  3415  516000002 5                     SA6     XJLOC+4
                517000002 6             SA7     XJLOC+5
  3416  611000002 5                     CALLR   SPCPRNT.XJLOC+4.FWDPMDE
  3421  611000002 6                     CALLR   SPCPRNT.XJLOC+5.FWDPMDE
                                *
  3424  020000040057                   JP      FEXIT
                                *
                                *
  342 5 000000000000000000002 5 BEADGB  ITEMS   CX.BDGB
                                *
                                *
                                *               DEBUG CALL ON DIRECTORY SYSTEM
                                *
  342 6 611000002 1             PAUL    DOXJ    DRIDBUG!
  3434  020000040057                   JP      FEXIT
                                *
                                *
                                *               DEBUG CALL DISK SYSTEM
                                *
  343 5 611000002 1             BRUCE   DOXJ    DFIDBUG!.0
  3443  020000040057                   JP      FEXIT
                                *
                                *
```

```
                                *       CAUSE A PROGRAM STOP IN THE FAKE GHOST; FOR PM DUMPS
                                *
3444  6110000021                STOP    SETXJ   CX.FGHST
3447  6160000014                        SB6     14B         ..PARAMETER PASSED IN A REGISTERS
3450  0130000021000000000C              XJ      XJLOC
3453  6170003454                        ERR                 .. WE AIN'T SUPPOSED TO GET BACK HERE
```

```
                                *
                                *
                                *
3454  611000 3457               BADSYNTX  MSGOUT  (BAD SYNTAX)
3461  020000 4057                         JP       EXIT
                                *
                                *
                                *                   SYSTEM PROGRAMMER PRESENT
                                *
3462  5110000 135               PROGHR    SA1      SERVBITS
                  7120000004              SX2      SYSTMBIT
3463  12612                               BX6      X1+X2
            5160000135                    SA4      SERVBITS  TURN ON SYSTEM BIT
                                *
3464  5110000 420                         SA1      V.ROOTDN
                  7120000003              SX2      3         OBJVTYPE
3465  20270                               LX2      60-4
            7130000007                    SX3      7
                      20370               LX3      60-4
3466  15613                               BX6      -X3*X1
            12626                         BX6      X2+X5
                  5160000420              SA6      V.ROOTDN  TURN ON ROOTD
3467  0270000000                          JP       B7
                                *
                                *
                                *                   SYSTEM PROGRAMMER GONE
                                *
3470  5110000 135               PROGGN    SA1      SERVBITS
                  7120000004              SX2      SYSTMBIT
3471  15612                               BX6      -X2*X1
            5460 10                       SA6      A1        TURN OFF SYSTEM BIT
                                *
                  5110000420              SA1      V.ROOTDN
3472  7120000007                          SX2      7
                  20270                   LX2      60-4
                        15612             BX4      -X2*X1
3473  5460 10                             SA4      A1        TURN OFF ROOTD
            0270000000                    JP       B7
```

```
                                *
                                *
                                *                       CALL ON CMMDS
                                *
                                *                       ANY OBJECT MUST ALREADY BE AT CX.TEMP
                                *
                                *                       ANY BLOCK DATA MUST BE AT BEADSBLK
                                *
                                *                       CALLR  CMMDS.TYPE
                                *
3474  766100                    CMMDS     SX6     B1
                 516000002017             SA6     XCMMDS.1
3475  013000021600001000003               XJ      XCMMDS.=CMMDSER=,=CMMDSRTN
3501  020000076240                        RTNR
                                *
                                *
                                *                       ERROR OCCURED
                                *
3502  101660                    CMMDSER   BX1     X6            PARAMETER PASSED TO CMMDS
                 611000035060             CALL    TRAVEC,CMMDSJP,CMMDSSIZ
3505  020000040300                        JP      CRASH
3506  020000035310              CMMDSJP   JP      CMMDSER3  0           BEADSDBG
3507  020000035310                        JP      CMMDSER3  1           CREATE SUBPROC (CMMDB)
3510  020000035170                        JP      CMMDSER1  2           LOGON
3511  020000035310                        JP      CMMDSER3  3           JPROC
3512  020000040300                        JP      CRASH     4
3513  020000040300                        JP      CRASH     5
3514  020000035310                        JP      CMMDSER3  6           KILL OBJ (CMMDB)
3515  020000040300                        JP      CRASH     7
3516  020000035330                        JP      CMMDSER4  8           LOGOUT (FINAL RETURN TO BEADS)
                                *
3517                                    BSS     0
                                11  CMMDSSIZ  EQU     *-CMMDSJP



3517  611000035220              CMMDSER1  MSGOUT  (DUPLICATE TEMPDIR)
3524  617000035250                        POPR
3525  511000001760                       SA1     RUNB7
                 637100                     SB7     X1
3526  027000000000                        JP      B7


3527  716000000000              CMMDSER2  SX6     0
                 516000020400             SA6     TEMP1
3530  020000035350                        JP      CMMDSMG


3531  716000000001              CMMDSER3  SX6     1
                 516000020400             SA6     TEMP1
3532  020000035350                        JP      CMMDSMG
```

```
3533  7160000002                CMMDSER4  SX6     2
                  5161000204              SA6     TEMP1
3534  0200003535                          JP      CMMDSMG


3535  6110003540                CMMDSMG   MSGOUT  (ERROR IN CMMDS)
3542  6110000503                          CALLR   EPRINT,ERCLASS
3544  5110000204                          SAT     TEMP1
                  0301003575              ZR      X1,CMMDSFIN
3545  6110003550                          MSGOUT  (ADDITIONAL INFORMATION FROM CMMDS IS)
                                *
                                *
                                *                 PRINT INFO FROM CMMDS
                                *
3554  7160000004                CMMDSEM1  SX6     4
                  5161000217              SA6     XCMMDS+1
3555  0130002160001000003                 XJ      XCMMDS+2,,,CMMDSERT
3561  6110000212                          CALLR   SPCPRNT,CMMDSBLK,CMMDSERX
3564  6110000213                          CALLR   SPCPRNT,CMMDSBLK+1,CMMDSERX
3567  6110000214                          CALLR   SPCPRNT,CMMDSBLK+2,CMMDSERX
3572  6110000215                          CALLR   SPCPRNT,CMMDSBLK+3,CMMDSERX
3575  5110000204                CMMDSFIN  SA1     TEMP1
                  7211777775              SX1     X1-2
3576  0331004057                          NG      X1,FEXIT
                  0200004030              JP      CRASH
                                *
3577  0000000004000000000212   CMMDSERT  VFD     30/4,30/CMMDSBLK
3600  0000000000000000000000              VFD     30/0,30/0
                                *
3601  007400                    CMMDSERX  VFD     6/0,6/60,6/0

                                * BEADGEMSG CODE
                                *
3602  7160000001                CMMDSEM   SX6     1
                  5161000204              SA6     TEMP1       SET STATE INFO
3603  0200003554                          JP      CMMDSEM1
                                *
                                *                 FORCE BEADS TO DEBUG
                                *
3604  6110000000                BEADSDBG  CALLR   CMMDS,0
3606  0200004057                          JP      FEXIT
```

```
                                *
                                *
                                *
                                *                       RETURN TO BEAD GHOST, POSSIBLY REQUESTING RESPONSE
                                *
                                *                       X1 = TYPE OF REQUEST ( SEE BEADG AT DRGVEC )
                                *                       X2 = AN ADDRESS OR INDEX
                                *                       X3 = DATUM TO BE PASSED, IF ANY
                                *                       CX.TEMP = A CAPABILITY
                                *
                                *                       ENTER WITH CALLR ASKRDG
                                *
3607  106110000000000000      ASKBDG    BX6     X1
                  5160000052              SA6     XJLOC+1
                        10622             BX6     X2
3610  5160000023                          SA6     XJLOC+2
                      10623               BX6     X3
3611  5160000024                          SA6     XJLOC+3
                                *         XJ      KILLCP
3612  0130003616000000000002             XJ      BEADG
3615  6170003616                         CALL    CRASH
                                *
3616  4000000000 X            BEADG     MXCAP   EC.RP.AR
3617  0000000003000000000022            VFD     30/3,30/XJLOC+1
3620  0000000001000000000000            VFD     30/1,30/CX.TEMP
                                *
                                *
3621  4000000000 X            KILLCP    MXCAP   EC.MCAP
3622  0000000000000000000033            ITEMS   CX.NULL
3623  0000000000000000000000            ITEMS   CX.TEMP
3624  7777777777777777777777            DATA    -0
```

```
                                *
                                *
                                *                       ERROR HANDLING
                                *
                                *
                                *
                          6     ECLASS    EQU         6
                          7     ENUM      EQU         7
                                *
                         14     E.PANIC   EQU         14B
                                *
                                *
3625  0130000636000000000002    ERRCALL   XJ          ESAVE       SAVE REGISTERS
                                *
3630  5110000006                          SA1         ECLASS      SAVE
                  5120000007              SA2         ENUM          ERROR
3631  10611                               BX6         X1              CLASS
            5160000503                    SA6         ERRCLASS          AND
                      10622               BX6         X2                  NUMBER
3632  5160000504                          SA6         ERRNUMB
                  40052                   MX0         60-18
                      15220               BX2         -X0*X2      AND PACK THEM
3633  15610                               BX6         -X0*X1
            20622                         LX6         18
                  12642                   BX6         X6+X2
3634  5160000505                          SA6         ERRCN       AND SAVE
                                *
3635  0130000642000000000002              XJ          EDSPSTK     READ TOP OF STACK
3640  5110000452                          SA1         ESTKBF+1    CHECK CLASS CODE
                  5120000454              SA2         OWNCLSCD
3641  13212                               BX2         X1-X2
            0312003645                    NZ          X2,ERRCALL3             WRONG
3642  0332003645                          NG          X2.ERRCALL3               CODE
                                *
                  5170000503              SA1         ERRCLASS                SEE IF PANIC
3643  7211777763                          SX1         X1-E.PANIC
            0301003720                    ZR          X1.PANIC                YES
3644  7160000001                          SX6         1
                  5160000510              SA6         EPFLAG                  SET ERROR PROCESSING FLAG
3645                            ERRSAFF   BSS         0
                                *
                                *                       NEXT INSTRUCTIONS WILL HAVE TO CHANGE
                                *                       WHEN FORM OF STACK ENTRIE CHANGES
                                *
3645  5110000451                          SA1         ESTKBF
            2001001                       LX1         1
3646  0331003657                          NG          X1,ERRCALL1             INTERRUPTED BIT ON
            2001773                       LX1         60-1
                  73110                   SX1         X1                      NOW HAVE ADDRESS OF XJ + 1
3647  5221777776                          SA5         X1-1                    PICK UP THE XJ
                                *
                                *
                  73250                   SX2         X2          GET OFFSET
                      36612               IX6         X1+X2       NOMINAL NEXT ADDRESS
```

```
3650  5160000501                    SA6     ERRNEXT   SAVE IT
                 7564777776         SX6     X6-1
3651  5160000500                    SA6     ESTPC+3   FIX PCNTR OF OLD STACK ENTRY
3652  0130000475000000000002       XJ      ESTPC       TO TAKE ERROR EXIT
                      *
3655  53160                         SA1     X6
            43036                   MX0     30
                  15610             BX6     -X0*X1    GET ERROR TAG
3656  5160000502                    SA6     ERRTAG    SAVE IT
                      *
                  0200000367[4]     JP      ERRRTN
                      *
                      *
                      *
                      *                     NOT IN MIDDLE OF XJ
                      *
3657  7160003664          ERRCALL1  SX6     ERRCALL2
                 5140000500         SA6     ESTPC+3   PREPARE PCNTR
3660  0130000475000000000002       XJ      ESTPC     OF OLD STACK ENTRY
3663  0200003674                    JP      ERRRTN
                      *
                      *
3664  0[4]000040[3]5      ERRCALL2  JP      UNEXERR
                      *
                      *                     WRONG CLASS CODE
                      *
3665  6110003[6]70        ERRCALL3  MSGOUT  (ERROR WITH WRONG CLASS CODE )
3673  0[4]00004035                  JP      UNEXERR
                      *
                      *
                      *
                      *                     RETURN FROM ERRCALL DONE HERE
                      *                          ( TO ALLOW FOR TEST FOR FINAL ERROR
                      *                            PROCESSING IN PANIC TESTS )
                      *
3674  76600               ERRRTN    SX6     B0
                 5160000510         SA6     EPFLAG              TURN OFF ERROR PROCESSING FLAG
3675  0130000640000000000002       XJ      ERESTORE
3700  0130000603000000000002       XJ      SETEMSK
3703  0130000602000000000002       XJ      RETURN
                      *
3706                  ERRRTNT   BSS     0
```

```
                                *
                                *      THIS CODE DECIPHERS AN ERROR XFER VECTOR
                                *
                                *      VECTOR STARTS AT B1
                                *
                                *      EACH WD IN VECTOR OF FORM
                                *
                                *              VFD  6/0,1A/ECLASS,18/ENUMB,18/XFER
                                *
                                *      OR      VFD  60/-MORE VECTOR
                                *
                                *      OR      VFD  60/0     ( END OF VECTOR )
                                *
                                *

3706  43030                     ERRVEC   MX0    60-36
            5111000005                   SA1    ERRCN
                      15110              BX1    -X0*X1     PREPARE OBSERVED ERRCLASS AND NUMBER
3707  56210                              SA2    B1         PICK UP FIRST CANDIDATE
                                *
3710  0332003714                ERRVEC1  NG     X2,ERRVEC2          XFER ENTRY
            0302003715                   ZR     X2,ERRVEC3          ALL DONE
3711  63220                              SB2    X2         PREPARE FOR POSSIBLE XFER
            20252                          LX2    60-18
                      15220                BX2    -X0*X2
                                           BX2    X1-X2
3712  0302003716                         ZR     X2,ERRVEC4          FOUND
            5022000001                     SA2    A2+1
3713  0200003710                         JP     ERRVEC1
                                *
3714  53220                      ERRVEC2  SA2    X2         NEW PORTION OF LIST
            0200003710                     JP     ERRVEC1
                                *
3715  0200007624                 ERRVEC3  RTNR
                                *
3716  6170003717                 ERRVEC4  POPR
3717  0220000000                         JP     B2
```

```
                                *
                                *
                                *
                                *
                                *
                                *
                                *
3720  5110000051                PANIC   SA1     PROCESS A PANIC
                  0311003770            NZ      FIRST SEE IF ERRORS WERE BEING PROCESSED
3721  5110000451                        SA1     EPFLAG
                  7221777110            SX2     X1,PANICY ERRORS BEING PROCESSED
3722  0302003770                        ZR      ESTKBE
                  7221774152            SX2     X1=ENTRY+1          (ERROR ENTRY POINT)
3723  0332003727                        NG      X2,PANIC
                  7221774132            SX2     X1=ERRCAL
3724  0332003770                        NG      X2,PANIC1
                  7221774103            SX2     X1=ERRSAFE
3725  0332003727                        NG      X2,PANICY  (WAS IN INITIAL ERROR PROCESSING)
                  7221774071            SX2     X1=ERRRIN
3726  0332003770                        NG      X2,PANIC1
                                                X1=ERRBINI
                                                X2,PANICY (WAS IN FINAL STAGES OF ERROR PROCESSING)
                                *
                                *
                                *
                                *               NOW SEE IF HUNG ON EVENT CHAN OR
                                                      PANICS INHIBITED
3727  5110000051                PANIC1  SA1     PHFLAG      SEE IF HUNG ON EVENT CHAN
                  0301003737            ZR      X1,PANIC2   NO
                                *
3730  5110000473                        SA1     FREGS+16B   YES, PICK UP X6
                  0311003756            NZ      X1,PANICX   EVENT HAS BEEN RECIEVED, SO PANICS LOCKED
                                *
3731  5110000051                        SA1     PHFLAG      ACCEPT PANIC BY FORCING XFER
                  7446B0                SX6     B0          TO ADDRESS GIVEN
                        54610           SA6     A1          IN PHFLAG AND
3732  10611                             BX6     X1          REINSTATE PANIC
            5160000550                  SA6     ESTPC+3     INHIBIT
3733  0130000475000000000002           XJ      ESTPC
3736  0200003756                        JP      PANICX
                                *
                                *
3737  5110000512                PANIC2  SA1     PIFLAG      NOW CHECK PANIC INHIBIT FLAG
                  0311003756            NZ      X1,PANICX   YES, LOCKED
3740  5110000451                        SA1     ESTKBE
                  7221777106            SX2     X1=ENTRY+1          SEE IF IN ENTRY PROCEDURES
3741  0332003756                        NG      X2,PANICX           YES, SO PANICS LOCKED
                                *
                                *
                                *
                                *               PANIC IS TO BE ACCEPTED
3742  7160003754                PANICGO SX6     PANICGO1
                  5160000500            SA6     ESTPC+3
3743  0130000475000000000002           XJ      ESTPC
3746  0130000603000000000002           XJ      SETEMSK
```

PANIC CODE

```
3751  0130000602000000002          XJ      RETURN
                                   *
3754  6110000000 x      PANICG01   CALL    EEXIT,ECN,PNC
```

```
                                *
                                *
                                *                       PANICS ARE INHIBITED
                                *
3756  7160000001                PANICX    SX6     1
                  5160000511              SA6     PFLAG
3757  0130000640000000002               XJ      ERESTORE
3762  0130000603000000002               XJ      SETEMSK
3765  0130000602000000002               XJ      RETURN
                                *
                                *
                                *
                                *                       PANIC OCCURED DURING PROCESSING OF AN ERROR
                                *
3770  6110003773                PANICY    MSGOUT  (PANIC OCCURED DURING ERROR PROCESSING)
3777  6110004002                          MSGOUT  (COULD BE VERY BAD NEWS)
4005  6110004010                          MSGOUT  (WILL PURGE TO ATTEMPT TO CLEAN UP)
4014  0200003135                          JP      PURGE
```

```
                                *
                                *
                                *                       SET PANIC INHIBIT
                                *
4015  7160000001                SETPI   SX6     1
                  5161000512            SA6     PIFLAG
4016  0270000000                        JP      R7
                                *
                                *
                                *                       CLEAR PANIC INHIBIT
                                *
4017  76600                     CLRPI   SX6     B0
                  5160000512            SA6     PIFLAG
4020  5160000510                        SA6     EPFLAG
                  5111000511            SA1     PFLAG
4021  54610                             SA6     A1
                  0311003754            NZ      X1,PANICG01
4022  0270000000                        JP      R7
```

```
                                *
                                *                       ALLOW PANICS BEFORE GETING AN EVENT
                                *                       BUT IF RECIEVED, JUMP TO B1
                                *                       LOCK OUT PANICS AFTER GETTING EVENT
                                *
                                *                       ASSUMS SETPI ALREADY CALLED
                                *
                                *                       X6 TESTED, 0 MEANS NO EVENT YET
                                *
                                *                       CLEAR BY SETTING PHFLAG TO 0
                                *
4023  766000                    SETPH     SX6     B0
            767710                        SX7     B1
                  517700051300            SA7     PHFLAG
4024  511000051100                        SA1     PFLAG
                  031100402600            NZ      X1,SETPH1       PANIC PENDING
4025  027000000000                        JP      B7
                                *
4026  516000051300              SETPH1    SA6     PHFLAG
                  516600051100            SA6     PFLAG
4027  021000000000                        JP      B1              PROCESS THE PENDING PANIC
                                *
                                *
                                          IFEQ    I,BRKCD
                                          ENDIF
```

```
                                *
                                *
                                *
                                *                       ERRORS, RETURNS AND CRASHES COME HERE
                                *
                                *                       CRASH
                                *
4030  0130000636000000000002    CRASH     XJ          ESAVE
4033  6110000000 x                        CALL        EEXIT,ECN.CSH
                                *
                                *
                                *                       UNEXPECTED ERROR
                                *
4035  6110000000 x              UNEXERR   CALL        EEXIT,ECN.UXE
                                *
                                *
                                *
                                *                       UNEXPECTED RETURN
                                *
4037                            UNEXFRTN  BSS         0
4037  0130000636000000000002    UNEXFRT   XJ          ESAVE
4042  6110000000 x                        CALL        EEXIT,ECN.UXF
```

```
                                *
                                *
                                *                       CALL EEXIT,ERNUM
                                *
                                *                       GENERATES ERROR, CLASS = CMMD CLASS
                                *                                 NUMBER = ERNUM
                                *                                 MODIFIER = 0
                                *
                                *
                                *
                                *                       CALL EEXITM,ERNUM,MOD
                                *
                                *                       GENERATE ERROR AS ABOVE EXCEPT
                                *                                 MODIFIER = MOD
                                *
4044  766 10                    EEXIT   SX6     B1
4045  5160000567                EEXITX  SA6     EEXITSV   SAVE ERROR NUMBER
            7160000001                  SX6     1
4046  5160000506                        SA6     EFLAG     SET FLAG FOR PENDING ERROR
                0200004057              JP      FEXIT
                                *
                                *
4047  766 10                    EEXITM  SX6     B1
            76720                       SX7     B2
                20752                   LX7     18
                    12667               BX6     X6+X7     COMBINE ERROR NUMBER AND MODIFIER
4050  0400004045                        JP      EEXITX
                                *
                                *
                                *                       XFER HERE FROM FEXIT IF EFLAG ON
                                *
4051  5110000176                EEXITI  GET7    RUNB7
4052  5117777776                        SA1     R7-1      PICK UP ERROR XFER ADDRESS
                    6377 10             SB7     X1
4053  0270000000                        JP      R7        GO PROCESS ERROR
                                *
                                *
                                *                       ERROR XFER TO GIVE IMMEDIATE PRINT OF ERROR
                                *                                 (MAKE LOOK LIKE THIS IS AN ERRNUMBER
                                *                                       AND MODIFIER WORD )
                                *
                                *
4054  6110000506                EEXIT2  CALL    ETELL,EEXITSV-1,T.CMMD
4056  0200004057                        JP      FEXIT
```

```
                                *
                                *
                                *                FINAL CLEAN UP, USED DURING COMPLETION OR
                                *                      ABORT OF AN ACTION
                                *
4057  5110000076                FEXIT    SA1     CSTKBASE  RESET INTERNAL CALL STACK
                  10671                   BX6     X1
4060  5160000075                         SA6     CSTKPNTR
                                *
                    6170004547            CALLR   CLRSPC    CLEAR UP SPACE CODE
                                *
4062  5110000177                         SA1     FXITFLAG
                  67110                   SB1     X1
4063  0710004103                        LT      B1,B0,FEXITX
                    6120000002            SB2     2
4064  0721004103                        GT      B1,B2,FEXITX
                    0210004065            JP      FEXITSWT+B1
                                *
4065  0200004074                FEXITSWT JP      FEXIT0
4066  0200004072                         JP      FEXIT1
4067  0200004070                         JP      FEXIT2
                                *
                                *
                                *                DETACH A BLOCK
                                *
4070  6170004141                FEXIT2   CALLR   DTCHBLK
                                *
                                *                CLOSE FILE
                                *
4072  6170004145                FEXIT1   CALLR   CLOSDF
                                *
                                *
4074  5110000260                FEXIT0   SA1     SPSCNFLG  SEE IF SCAN LIST NEEDS FIXING
                    0210004077            ZR      X1,FEXITA NO
                                *
4075  6170004173                         CALLR   CLRSL     YES
                                *
                                *
                                *                ALL DONE
                                *
4077  6170004100                FEXITA   CALL    CLRPI     CLEAR PANIC INHIBIT, AND PROCESS WAITING PANICS
                                *
4100  5110000506                         SA1     EFLAG     SEE IF ERROR PENDING
                    74600               SX6     B0
                      54610             SA6     A1        CLEAR FLAG IF IT WAS ON
4101  0311004051                        NZ      X1,EEXIT1 YES, ERROR WAS PENDING
                                *
                      5111000176        GET7    RUNB7
                  0270000000            JP      B7
                                *
                                *
                                *                BAD FEXIT FLAG
                                *
```

```
4103  76600                FEXITX   SX6     B0
                5160000177           SA6     EXTFLAG
4104  6170004105                    CALL    CRASH
```

```
                                *
                                *
                                *      OPEN A DISK FILE
                                *
                                *      R1        OPEN ACTION ( DF:OPRO: OR DF:OPRW: )
                                *      R2        INDEX OF DISK CAP
                                *      R3        DESIRED INDEX OF ECS CAP
                                *
                                *      ONLY ONE FILE CAN BE OPEN AT A TIME
                                *
4105  5110000177                OPENDF    SA1     FXTFLAG
                  0301004107              ZR      X1,OPENDFI
4106  6170004107                          CALL    CRASH              A FILE ALREADY OPEN
                                *
4107  76110                     OPENDFI   SX1     B1
                76220                     SX2     B2
                  76630                   SX6     B3
4110  5160000201                          SA4     OPNFILE            REMEMBER WHERE FILE IS
                  7176000001              SX7     1
4111  20736                               LX7     30
                12667                     BX6     X6+X7              CAP RTN AUTH
                  5160000050              SA6     RETLOC+1
4112  76600                               SX6     B0
                  5160000047              SA6     RETLOC
4113  6110000021                          SETXJ   X1,X2
4116  0130000021000100000 3               XJ      XJLOC,,,RETLOC
4122  7160000001                          SX6     1
                  5176000177              SA6     FXTFLAG            SIGNAL AN OPEN FILE
4123  0400007624                          RTNR
                                *
                                *
                                *      ATTACH A FILE BLOCK IN
                                *      CURRENTLY OPEN FILE
                                *
                                *      X1        FILE ADDRESS OF BLOCK
                                *
                                *      ONLY ONE BLOCK CAN BE ATTACHED AT ANY TIME
                                *
4124  5120000177                ATCHBLK   SA2     FXTFLAG
                  7725777775              SX2     X2-2
4125  0332004127                          NG      X2,ATCHBLK1
4126  6170004127                          CALL    CRASH              EITHER NO OPEN FILE OR A BLOCK
                                *                                    ALREADY ATTACHED
                                *
4127  10311                     ATCHBLK1  BX3     X1
                10611                     BX6     X1
                  5176000202              SA6     ATCHDBLK   REMBER THE ADDRESS FOR DETACH
4130  6110000021                          DOXJ    DF:ATCH!,OPNFILE+IND,X3,1
4137  7160000002                          SX6     2
                  5176000177              SA6     FXTFLAG    SIGNAL THAT A BLOCK ATTACHED
4140  0200007624                          RTNR
                                *
                                *
```

```
                                *
                                *      DETACH CURRENTLY ATTACHED DISK FILE BLOCK
                                *
4141  5120000177                DTCHBLK  SA2    FXTFLAG
                7777777775               SX2    X2-2
4142  0302004144                         ZR     X2,DTCHBLK1
4143  6170004144                         CALL   CRASH                NO BLOCK ATTACHED
                                *
4144  7160000001                DTCHBLK1 SX6    1
                54620                    SA6    A2          SIGNAL NO ATTACHED BLOCK
4145  6110000021                         DOXJ   DF:DTCH1,OPNFILE+IND,ATCHDBLK+IND,1
4146  0200007624                         RTNR
                                *
                                *
                                *      CLOSE CURRENTLY OPEN FILE
                                *
                                *      MUST BE NO ATTACHED BLOCK
                                *
4155  5120000177                CLOSDF   SA2    FXTFLAG
                7777777776               SX2    X2-1
4156  0302004160                         ZR     X2,CLOSDFT
4157  6170004160                         CALL   CRASH      NO OPEN FILE OR AN ATTACHED BLOCK
                                *
4160  7660000                   CLOSDFT  SX6    B0
                54620                    SA6    A2          SIGNAL NO OPEN FILE
                6110000021               DOXJ   DF:CLO1,OPNFILE+IND
4167  0200007624                         RTNR
4170  0400004070                         JP     EXIT2
```

```
                                *
                                *
                                *                       SPECIAL SET OF STANDARD SCAN
                                *
4171  7160000001                SETSL     SX6     1
                 5760000200               SA6     SPSCNFLG
4172  6120000034                         SB2     CX.SCNL
                 0200000000 X             JP      MVCAP
                                *
                                *
                                *                       CLEAR STANDARD SCAN LIST
                                *
4173  6110000045                CLRSL     CALLR   MVCAP,CX.USCNL,CX.SCNL
4176  76600                             SX6     B0
                 5760000200               SA6     SPSCNFLG
4177  0600007624                        RTNR
```

```
                                    *
                                    *
                                    *                   PREPARE NAME FOR DIRECTORY ACTION
                                    *
                                    *                   NAME AT B1 IN DISPLAY
                                    *                   PLACE BLOCK DATUM PARAM AT TEMP1
                                    *
4200  614000011O                    DIRNAME   SB4       OUTBUF
                6150000012                    SB5       OUTBF SZ
4201  06600                                   SB6       B0
4202  617000*203                               CALL      STASCII
4203  6120000050                              SB2       40
4204  617000*205                               CALL      DISLINE
4205  617000*206                               CALL      FNASCII
4206  7110000110                              SX1       OUTBUF
4207  617000*210                               CALL      FORDIR
4210  5160000204                              SA1       TEMP1
                0200007624                    RTNR
```

```
                                *
                                *
                                *       OBTAIN SPACE OF SOME TYPE
                                *
                                *               B1 POINTS TO A DESCRIPTOR OF THE TYPE
                                *               X1 CONTIANS SIZE OF THE REQUEST
                                *
                                *               FORM OF A DESCRIPTOR IS AS FOLLOWS
                                *
 4211                                   BSS     0
                        4211    SAVEORG SET     *O
 L       0                              LOC     0
                                *
 L       0                      SPC.S   BSS     1       PRIORITY LEVEL
 L       1                      SPC.MXS BSS     1       MAX SPACE REQUEST
 L       2                      SPC.MXM BSS     1       MAX MODERATE SPACE REQUEST
 L       3                      SPC.EC  BSS     1       INDEX OF FIRST EVENT CHAN IN THIS GROUP
                                *
 L       4                      SPC.GS  BSS     1       ADDRESS OF ROUTINE TO GET SPACE
                                *                       ( MUST CATCH ALL ERRORS. ON RETURN
                                *                          X1 = 0  IF GOT ALL NEEDED
                                *                               1  IF GOT SOME
                                *                              -1  IF GOT NONE.
                                *                            100000B  IF BAD TROUBLE
                                *                         AMOUNT OF REQUEST WILL BE AT SPC.SZE.
                                *                       IF SPC.SZE = -1 RELEASE ALL EXCESS )
                                *
 L       5                      SPC.FLG BSS     1       INDEX OF FIRST FLAG BIT FOR THIS TYPE
 L       6                      SPC.RV  BSS     1       ROUTINE TO SEE HOW MUCH RESERVED,
                                *                         AND IN USE ( X1 AND X2 RESPECTIVELY )
 L       7                      SPC.BS  BSS     1       BASE SPACE, TO BE ADDED TO REQUEST
 L      10                      SPC.NOM BSS     1       NOMINAL AMOUNT TO HOLD ( SMALL SIZE )
 L      11                      SPC.GET BSS     1       ROUTINE TO TRY TO GET AMT IN X1
 L      12                      SPC.RLS BSS     1       ROUTINE TO RELEASE AMOUNT IN X1
 L      13                      SPC.NME BSS     1       DISPLAY CORE NAME FOR TYPE OF SPACE
                                *
 4211                                   ORG     SAVEORG
 4211                                   LOC     40
```

```
                                *
                                *
4211  10611                     GETSPC    BX6     X1          SAVE PARAMETERS
            516000041O                    SA6     SPCSIZE
                      76610               SX6     B1
4212  5160000407                          SA6     SPCX
                                *
                      7164000001          SX6     1
4213  5160000404                          SA6     SPACEFLG    SIGNAL SPACE COLLECTION IN PROGRESS
                                *
                      0331004253          NG      X1,GETSPCE              RELEASE SPACE
                                *
4214  5121000000                          SA2     B1+SPC.S    PROSPECTIVE NEW LEVEL
            513000405                     SA3     SPCLVL      CURRENT LEVEL
4215  37432                               IX4     X3-X2
            0324004256                    PL      X4,GETSPCF1             ALREADY HAVE SPACE AT THIS LEVEL
                                *                                         OR HIGHER
4216  5121000001                          SA2     B1+SPC.MXS
            37321                         IX3     X2-X1
4217  0433004261                          NG      X3,GETSPCF2             SPACE REQUEST TOO LARGE
                                *
                      5121000002          SA2     B1+SPC.MXM
4220  37321                               IX3     X2-X1
            0323004254                    PL      X3,GETSPCT              SPACE REQUEST IS MODERATE
                                *
                                *
                                *                 SPACE REQUEST IS VERY LARGE
                                *
4221  6110004532                          CALLR   SPCHNGI*SPC.V
4223  0200004226                          JP      GETSPC1A
                                *
                                *                 JUMP TO HERE ON MODERATE REQUST
                                *
4224  5121000010                GETSPCT   SA2     B1+SPC.NOM
            5131000007                    SA3     B1+SPC.BS
4225  36223                               IX2     X2+X3
            37321                         IX3     X2-X1
                      0323004250          PL      X3,GETSPC4              REQUST IS FOR NOMINAL OR LESS
                                *
4226  6110004525                GETSPCTA  CALLR   SPCHNGI*SPC.Q           WAIT IN MODERATE QUEUE
                                *
4230  6110004517                          CALLR   SPCHNGI*SPC.W           WAIT FOR SIGNAL THAT SOME
                                *                                         SPACE MAY BE AVAILABLE
                                *
4232  6170004304                GETSPC2   CALLR   SPCALLOC
4234  0331004242                          NG      X1,GETSPC3              NOT NONE
            5111000410                    SA1     SPCSIZE
4235  0331004242                          NG      X1,GETSPC3              RELEASED SPACE
                                *
                      5111000407          SA1     SPCX
4236  5211000000                          SA1     X1+SPC.S
            1061                          BX6     X1
4237  5160000405                          SA6     SPCLVL      SET LEVEL
```

```
                    63110                   CALL    SETFLAG,X1,SPCLVLS  SET FLAG FOR THIS LEVEL
                                    *
4242  617000424 3                   GETSPC3 CALL    CLRPI       RELEASE PANICS
4243  5110000204                              SA1     TEMP1
                          03010042 50           ZR      X1,GETSPC4          GOT ALL NEEDED
4244  7211767777                              SX1     X1-1000B
                          03210042 67           PL      X1,GETSPCFY         (BAD TROUBLE)
                                    *
4245  6110004517                              CALLR   SPCHNG2,SPC.W       WAIT FOR SIGNAL THAT SOME SPACE
4247  0200004232                              JP      GETSPC2             SPACE MAY BE AVAILABLE
                                    *
                                    *
                                    *                   ALL DONE WAITING FOR THIS SPACE REQUEST
                                    *
4250  617000457 1                   GETSPC4 CALLR   CLRSPCX     (CLEAN UP)
4252  0400007624                              RTNR
                                    *
                                    *                   RELEASE SPACE
                                    *
4253  617000454 7                   GETSPC5 CALLR   CLRSPC
4255  0200007624                              RTNR
                                    *
                                    *
                                    *
                                    *                   ERROR CASES
                                    *
                                    *
                                    *                   ALREADY HAVE SPACE OF EQUAL OR HIGHER PRIORITY
                                    *
4256  617000457 1                   GETSPCF1 CALLR  CLRSPCX
4260  6110000000 X                              SB1     ECN.HSP
                          0200004264            JP      GETSPCFX
                                    *
                                    *
                                    *                   REQUEST TOO BIG
                                    *
4261  617000457 1                   GETSPCF2 CALLR  CLRSPCX
4263  6110000000 X                              SB1     ECN.TBS
                          0200004264            JP      GETSPCFX
                                    *
                                    *
                                    *
4264  5110000407                    GETSPCFX SA1    SPCX
                          53110               SA1     X1
                                66110           CALL    EEXITM,B1,X1
                                    *
                                    *
4267  6110004272                    GETSPCFY MSGOUT (BAD TROUBLE IN SPACE ROUTINES FOR )
4276  6170004277                             CALL    SETPRNT
4277  5110000407                             SA1     SPCX
                          62110000013           CALL    DISLINE,X1+SPC.NME,100
4302  6170004303                             CALL    FINPRNT
```

SPACE CODE

```
4303  0200001264                JP      DBGDSKW
```

```
                                *
                                *
                                *                       AT THIS POINT WE APPROACH THE
                                *                       ALLOCATION MECHANISM ITSELF
                                *
                                *
                                *                       PANICS MUST BE RELEASED BY CALLING ROUTINE
                                *                             THIS ROUTINE INHIBITS THEM AND
                                *                             LEAVES THEM INHIBITED
                                *
4304  61700004305               SPCALLOC  CALL    SETPI_      INHIBIT PANICS
4305  6110000000                          CALL    SPC.CRFX,SPC.L
4307  10622                               BX6     X2
            5160000052                    SA6     XJLOC+I
4310  6110000021                          DOXJ    EC,GEVH,     OBTAIN LOCK ON ALLOC MECHANISM
4316  5110000407                          SA1     SPCX
            5211000004                    SA1     X1+SPC.QS
4317  63710                               CALLR   X1
                                *
4321  10611                               BX6     X1
            5160000204                    SA6     TEMPI       (SAVE RESULT FLAG)
4322  6110000000                          CALL    SPC.CRFX,SPC.L
4324  10622                               BX6     X2
            5160000052                    SA6     XJLOC+I
4325  6110000021                          DOXJ    EC,SEV,,XJLOC+I+IND,T           (RELEASE LOCK)
                                *
4334  5110000204                          SA1     TEMPI
            0250007624                    RTNR
```

```
                                *
                                *
                                *       THIS ROUTINE DOES GENERAL SPACE GET AND RELEASE
                                *
4335  5110000407                GENSPC  SA1     SPCX
                  5211000006            SA1     X1+SPC.RV
4336  63710                             CALLR   X1                      SEE WHAT WE HAVE
                                *
4340  5130000410                        SA3     SPCSIZE
                  0332004347            NG      X3,GENSPC1              RELEASE SPACE
                                *
4341  5140000407                        SA4     SPCX
                  5244000007            SA4     X4+SPC.BS
4342  36334                             IX3     X3+X4                   TARGET AMOUNT
            37131                       IX1     X3-X1                   AMOUNT TO MOVE
                  0331004356            NG      X1,GENSPC2              ALREADY HAVE IT
                                *
4343  5120000407                        SA2     SPCX
                  5225000011            SA2     X2+SPC.GET
4344  63720                             CALLR   X2                      GET SPACE
4346  0220000624                        RTNR
                                *
                                *               RELEASE SPACE
                                *
4347  5130000407                GENSPC1 SA3     SPCX
                  5243000007            SA4     X3+SPC.BS
4350  5233000010                        SA3     X3+SPC.NOM
                        34343           IX3     X4+X3
                              37432     IX4     X3-X2
4351  0334004357                        NG      X4,GENSPC3                      TOO MUCH IN USE
                        37113           IX1     X1-X3                   AMOUNT TO RELEASE
4352  0331004356                        NG      X1,GENSPC2              ALREADY BELOW NOMINAL
                  0301004356            ZR      X1,GENSPC2              AT NOMINAL
4353  5120000407                        SA2     SPCX
                  5225000012            SA2     X2+SPC.RLS
4354  63720                             CALLR   X2                      RELEASE SPACE
                                *
4356  76100                     GENSPC2 SX1     B0
            0200007654                  RTNR
                                *
                                *
4357  37612                     GENSPC3 IX6     X1-X2
            5160002404                  SA6     TEMP1
4360  6170004361                        CALL    SETPRNT
4361  6110004404                        CALL    DISLINE,GENSPC3M,100
4363  5110000407                        SA1     SPCX
                  6211000013            CALL    DISLINE,X1+SPC.NME,100
4366  6110004406                        CALL    DISLINE,GENSPC3N,100
4370  6170004371                        CALL    FINPRNT
4371  6110004374                        MSGOUT  (WILL REDUCE TO AMOUNT IN USE)
4377  5110002404                        SA1     TEMP1
                  0331004403            NG      X1,GENSPC3A
4400  0301004403                        ZR      X1,GENSPC3A
```

```
                    5120000407                  SA2     SPCX
4401  5222000012                                SA2     X2+SPC.RLS
                    63700                       CALLR   X2                  RELEASE SOME SPACE
                                        *
4403  7110777776                    GENSPC.A    SX1     -1
                    0200007624                  RTNR
                                        *
4404  5524171755152031000           GENSPC.M    DIS     ** TOO MUCH.
4406  5511165525230552417           GENSPC.N    DIS     ** IN USE TO GO SMALL.
                                        *
                                        *
                                        *                 ROUTINES COME HERE IN EVENT OF BAD TROUBLE
                                        *
                                        *                 ( ASSUMES ONLY ONE CALLR TO POPR )
                                        *
4411  6170004412                    GENSPC.G    POPR
4412  7110010000                                SX1     100000B
                    0200007624                  RTNR
```

```
                *
                *
                *
```

4413 LOC 40

*
*
*

```
                                *
                                *
                                *                       THIS ROUTINE HAS TWO ENTRANCES
                                *
                                *                       SPCHNG1   1ST ENTRANCE, CLEARS MSG FLAG,
                                *                                 ADDS TO COUNT.
                                *
                                *                       SPCHNG2   2ND AND LATER ENTRANCES, CHECKS MSG
                                *                                 FLAG, DOES NOT ADD TO COUNT.
                                *
                                *
                                *
                                *                       1ST ENTRY
                                *
4413  766 10                    SPCHNG1   SX6     B1
      516000044 12                        SA6     SPCHNGX   (SAVE DESCRIPTOR INDEX)
                                *
4414  611000000 0                         CALL    CLRFLAG,SPCMSGF,SPCFLGS
4416  617000441 7                         CALL    SETPI     (INHIBIT PANICS)
                                *
4417  611000000 1                         CALL    SPC.QRF,1
4421  617000463 6                         CALL,R  UPCNTR    CNT := CNT + 1
                                *
4423  511000002 4                         SA1     XJLOC+3
                  1061 1                    BX6     X1
4424  516000041 3                         SA6     SPCHNGCN  SAVE COUNT
                                *
                  02 00 00442 32        JP      SPCHNGA
                                *
                                *
                                *                       2ND ENTRY
                                *
4425  766 10                    SPCHNG2   SX6     B1
      516000041 2                         SA6     SPCHNGX   SAVE DESCRIPTOR INDEX
                                *
4426  617000442 7                         CALL    SETPI     (INHIBIT PANICS)
                                *
4427  611000000 0                         CALL    TSTFLAG,SPCMSGF,SPCFLGS       (TEST MSG FLAG)
4431  033100447 5                         NG      X1,SPCHNGD                    (WAITING MSG HAS BEEN SENT)
                  02 00 00443 2         JP      SPCHNGA                       (NOT YET SENT)
                                *
                                *
                                *                       WAITING MSG NOT YET SENT
                                *
4432  661 00                    SPCHNGA   CALL    SPC.QRF,B0
4434  106 22                              BX6     X2
      516000000 2                         SA6     XJLOC+1
4435  611000002 1                         SETXJ   EC:GEVF:
4440  013000002 10000000002               XJ      XJLOC.SPCHNGC
                                *
                                *                       GOT IT
                                *
4443  617000444 4               SPCHNGB   CALL    SPC.QFLG  (COMPUTE FLAG INDEX IN X1)
```

```
4444  63110                          CALL    SETFLAG,X1,SPCFLGS
4446  6170004447                     CALL    CLRPI
4447  0200007624                     RTNR
                                *
                                *
                                *              MUST SEND A WAITING MESSAGE
                                *
4450  6110000000                SPCHNGC CALL    SETFLAG,SPCMSGF,SPCFLGS
                                *
4452  6170004453                     CALL    SETPRNT
4453  5110000412                     SA1     SPCHNGX
                    621i000002       CALL    DISLINE,X1+2,100
4456  5110000407                     SA1     SPCX
                    621i000013       CALL    DISLINE,X1+SPC,NMF,100
4461  6170004462                     CALL    FINPRNT
                                *
4462  5110000412                     SA1     SPCHNGX
                    522i000001       SA2     X1+1
4463  0332004475                     NG      X2,SPCHNGR              (NO COUNT CAHNNEL)
4464  6170004465                     CALL    SETPRNT
4465  5110000413                     SA1     SPCHNGCN  (PICK UP SAVED COUNT)
                    611i000024       SB1     20
4466  6170004467                     CALL    OCTBPK
4467  6110004473                     CALL    DISLINE,SPCHNGM,100
4471  6170004472                     CALL    FINPRNT
4472  0200004475                     JP      SPCHNGD
                                *
4473  5501100501045611111655   SPCHNGM DIS     .. AHEAD IN QUEUE .
                                *
                                *
                                *              WAITING MESSAGE HAS BEEN SENT
                                *
4475  66100                    SPCHNGR CALL    SPC+QRF,B6
4477  10622                          BX6     X2
                    516000000032       SA6     XJLOC+I
4500  6110000021                     SETXJ   EC!GEVH!
4503  6110004512                     CALL    SETPH,SPCHNGP
4505  0130000021000000000002         XJ      XJLOC           TRY TO GET EVENT
                                *
4510  5170000025                     SA7     XJLOC+4   GOT IT, SAVE VALUE
                    7767i0           SX7     B0
4511  5170000513                     SA7     PHFLAG    TURN OFF HANGING FLAG
                    020000004443     JP      SPCHNGB
                                *
                                *
                                *              PANIC INTERCEPTED
                                *
4512  6110000001               SPCHNGP CALL    SPC+QRF,1
4514  6170004660                     CALLR   DWNCNTR
4516  0200004057                     JP      FEXIT
                                *
                                *
                                *              DESCRIPTORS OF EVENT CHAN TYPES
```

```
                                *
4517  0000000000000000000001    SPC.W     ITEMS   SPC.WEV,SPC.WC
4521  5527011241114075501               DIS       .. WAITING AT TOP OF QUEUE FOR .
                                *
4525  0000000000000000000002    SPC.Q     ITEMS   SPC.QEV,SPC.QC
4527  5527011241114075506               DIS       .. WAITING FOR ACCESS TO .
                                *
4532  0000000000000000000004    SPC.V     ITEMS   SPC.VEV,SPC.VC
4534  5527011241114075506               DIS       .. WAITING FOR VERY LARGE AMOUNT OF .
```

```
                                *
                                *
                                *                CLEAN UP SPACE CONTROL AFTER A PURGE
                                *
                                *                (SETS UP CALLS TO CLRSPC, SORT OF FAKED)
                                *
4540  5110000405                PRGSPC  SA1      SPCLVL
                  7777777775            SX2      X1-2
4541  0332007624                        NG       X2,RTNR    ALL DONE IF LEVEL IS 0 OR 1
                                *
                  5211100471B           SA1      X1+SPCLIST-1        SIMULATE SPACE ACQ IN PROGRESS
4542  10611                             BX6      X1
                  5160000407            SA6      SPCX
4543  7160000001                        SX6      1
                  5160000404            SA6      SPACEFLG
                                *
4544  6170004547                        CALLR    CLRSPC     CLEAR UP AT THIS LEVEL
4546  0200004540                        JP       PRGSPC     CONTINUE
```

```
                                *
                                *
                                *
                                *       CLEARS UP AN IN PROGRESS SPACE ACQUIZATION
                                *       THAT HAS BEEN INTERRUPTDC
                                *
                                *       ALSO USED TO CLEAN UP AT END OF GET SPACE
                                *             BY ENTRY AT CLRSPCX
                                *
                                *       ALSO USED IN FAKE MANNER BY PURGE
                                *
                                *
                                *   ALSO USED FOR SPACE RELEASE BY GETSPACE
                                *
4547  5110000404                CLRSPC  SA1     SPACEFLG
                  0301007624            ZR      X1,RTNR                 NOT INPROGRESS
                                *
4550  5110000407                        SA1     SPCX            LEVEL AT WHICH
                  5211000000            SA1     X1+SPC.S        WAS BEING ACQUIRED
4551  5120000405                        SA2     SPCLVL          CURRENT LEVEL
                  3211                  IX1     X2-X1
4552  0431004567                        NG      X1,CLRSPCT              NO SPACE YET AQUIRED AT THIS LVL
                                *
                  7160777776            SX6     -1
4553  5160000410                        SA6     SPCSIZE
                  6172004304            CALLR   SPCALLOC
4555  0431004562                        NG      X1,CLRSPCA              COULD NOT RELEASE ENOUGH
                  7211767777            SX1     X1-10000B
4556  0321004267                        PL      X1,GETSPCEY             (BAD TROUBLE)
                  5111000407            SA1     SPCX
4557  5211000000                        SA1     X1+SPC.S        TURN OFF FLAG FOR SPACE
                  6311                  CALL    CLRFLAG,X1,SPCLVLS      AT THIS LEVEL
                                *
4562  7160004517            CLRSPCA     SX6     SPC.W
                  5111000412            SA6     SPCHNGX
4563  6170004564                        CALL    SPC.QFLG
4564  6311                              CALL    SETFLAG,AT,SPCFLGS      (FAKE HAVE W )
4565  6170004567                        CALL    CLRPI
                                *
4567  6110004532            CLRSPCT     CALLR   CLRHVEV,SPC.V           CLEAR LARGE EVENT CHN
                                *
4571  6110004517            CLRSPCX     CALLR   CLRHVEV,SPC.W           CLEAR UP
4573  6110004525                        CALLR   CLRHVEV,SPC.Q           THE EVENT CHANS
                                *
                                *       NOW COMPUT MAX LEVEL WITH SPACE
                                *
4575  5110000405            CLRSPC2     SA1     SPCLVL
                  0301004603            ZR      X1,CLRSPC3              NONE HAVE SPACE
4576  6311                              CALL    TSTFLAG,X1,SPCLVLS
4600  0331004603                        NG      X1,CLRSPC3              HAVE SPACE AT THIS LEVEL
                  5111000405            SA1     SPCLVL
4601  7261777776                        SX6     X1-1
                  5461                  SA6     A1
4602  0400004575                        JP      CLRSPC2
                                *
```

```
                                *                       NOW EXIT
                                *
4603  76600                     CLRSPC  SX6     B0
                  5160004604            SA6     SPACEFLG
4604  02000076024               RTNR
```

```
                                *
                                *                CLEAR UP A PARTICULAR EVENT CHAN AND COUNT
                                *
                                *                ADDRESS OF DESCRIPTOR IN B1
                                *
 4605  766110                  CLRHVEV   SX6      B1
             5160000041 2                SA6      SPCHNGX
 4606  6170004607                       CALL     SETPI
 4607  6170004610                       CALL     SPC.QFLG
 4610  63110                            CALL     TSTFLAG,X1,SPCFLGS
 4612  0321004634                       PL       X1,CLRHVEV1          DO NOT HAVE THE EVENT
                                *
 4613  6170004614                       CALL     SPC.QFLG
 4614  63110                            CALL     CLRFLAG,X1,SPCFLGS   (CLEAR THE FLAG)
 4616  66100                            CALL     SPC.QRF,B0
 4620  106322                           BX6      X2
             5160000032                  SA6      XJLOC+1
 4621  6110000021                       DOXJ     EC:SEV:,XJLOC+1,IND,1          (SEND THE EVENT)
 4630  6110000001                       CALL     SPC.QRF,1
 4632  6170004660                       CALLR    DWNCNTR    (CNT != CNT - 1)
                                *
 4634  6170004635             CLRHVEV1  CALL     CLRPI
 4635  0200007624                       RTNR
```

```
                                *
                                *
                                *               MANIPULATE COUNTERS IN EVENT CHANS
                                *
                                *               ASSUMES PANICS INHIBITED
                                *
                                *               LEAVES ORIGINAL COUNT AT XJLOC+3
                                *
                                *               IP LIST WORD FOR EVENT CHAN IN X2
                                *                       ( -0 MEANS IGNORE )
                                *
                                *
                                *       INCREMENT COUNT BY 1
                                *
4636  0332004640                UPCNTR  NG      X2,UPCNTR1
                      0311004640        NZ      X2,UPCNTR1
4637  0200007624                        RTNR
                                *
4640  1022                      UPCNTR1 BX6     X2
                        5160000002      SA6     XJLOC+1
4641  6110000021                        DOXJ    EC:GEVH!
4647  5170000024                        SA7     XJLOC+3
                    7111000001          SX1     1
                                *
4650  36771                     UPCNTR2 IX7     X7+X1
                        5170000003      SA7     XJLOC+2
4651  6110000021                        DOXJ    EC:SEV!
4657  0200007624                        RTNR
                                *
                                *
                                *       DECREMENT COUNT BY 1
                                *
4660  0332004662                DWNCNTR NG      X2,DWNCNTR1
                      0311004662        NZ      X2,DWNCNTR1
4661  0200007624                        RTNR
                                *
4662  1022                      DWNCNTR1 BX6    X2
                        5160000002      SA6     XJLOC+1
4663  6110000021                        DOXJ    EC:GEVH!
4671  5170000024                        SA7     XJLOC+3
                    7111777776          SX1     -1
4672  0200004650                        JP      UPCNTR2
```

```
                                *
                                *
                                *                COMPUTE IN X1 A FLAGBIT INDEX FOR A QUEUE CHAN
                                *
4673  5110000412                SPC*QFLG  SA1     SPCHNGX
                  5311?0                  SA1     X1
4674  5120000407                          SA2     SPCX
                  5225000005              SA2     X2+SPC.FLG
4675  36112                               IX1     X1+X2
                  0276000000              JP      B7
```

```
                                *
                                *
                                *                       CONSTRUCT AN INDIRECT CLIST REF TO ONE OF
                                *                       THE W.Q OR V EVENT CHANS, OR THEIR COUNT CHANS
                                *
                                *                       B1 = 0 FOR W, Q OR V
                                *                            1 FOR THEIR COUNT CHANS
                                *
                                *                       REF PLACED IN X2     ( 0 IF NO CHAN )
                                *
4676  5120000412                SPC.QRF   SA2     SPCHNGX
                  53221                     SA2     X2+B1
                      73220                 SX2     X2
4677  0332004704                            NG      X2,SPC.QRF2           (NO CHANNEL)
                        5110000407          SA1     SPCX
4700  5211000003                            SA1     X1+SPC.EC
                  36212                     IX2     X1+X2
                                *
4701  43101                     SPC.QRF1  MX1     1
                    20236                   LX2     30
                  12212                     BX2     X1+X2
4702  7110000030                            SX1     CX,SPCQ
                  12212                     BX2     X1+X2
4703  0270000000                            JP      B7
                                *
4704  76200                     SPC.QRF2  SX2     B0
                    0270000000              JP      B7
                                *
                                *
                                *                       CONSTRUCT AN INDEIRECT CLIST REF TO AN
                                *                       OBJECT SPECIFIED AT WD B1 IN
                                *                       TYPE SPACE DESCRIPTR
                                *
                                *                       LEAVE REF IN X2
                                *
4705  5110000407                SPC.CRF   SA1     SPCX
                  53211                     SA2     X1+B1
4706  0200004701                            JP      SPC.QRF1
                                *
                                *
                                *                       CONSTRUCT AN INDIRECT CLIST REF
                                *                       TO OBJECT INDEX B1 WITHIN OBJECTS OF
                                *                       CURRENT SPACE TYPE
                                *
4707  5110000407                SPC.CRFX  SA1     SPCX
                        5211000003          SA1     X1+SPC.EC
4710  73211                               SX2     X1+B1
                    0200004701              JP      SPC.QRF1
```

```
                                    *
                                    *
                                    *
                                    *
                                    *
                                    *                   LIST OF DESCRIPTORS FOR SPACE TYPES
                                    *
                                    *                   ( INDEX IN SPCLIST MUST AGREE WITH PRIORITY
                                    *                         IN DESCRIPTOR )
                                    *
4711                                SPCLIST   BSS       0
4711  0000000000000004715                    ITEMS     TMPDSKSP  1
4712  0000000000000004733                    ITEMS     MOTSP     2
4713  0000000000000004750                    ITEMS     FXDSP     3
4714  0000000000000004765                    ITEMS     SWPECSP   4
                                    *
4715                                          BSS       0
                                    *
                          4         MXSPCLV   EQU       *-SPCLIST
                                    *
                                    *
                                    *                   ASSIGNMENT OF BITS IN SPCFLGS
                                    *
4715                                          BSS       0
                                              SAVEORG   SET       *0
                                    *
                                    *
                                              LOC       0
                                    SPCMSGF   BSS       1
                                    TMPDSKF   BSS       6
                                    MOTSPF    BSS       6
                                    FXDSPF    BSS       6
                                    SWPECF    BSS       6
                                    *
4746                                          LOC       *0
                                    *
                                    *
                                    *
                                    *                   ASSIGNMENT OF EVENT CHNS IN CMMDSPC
                                    *
                                              LOC       0
                                    *
                                    TMPDSKF   BSS       6
                                    MOTSPE    BSS       6
                                    FXDSPE    BSS       6
                                    SWPECE    BSS       6
                                    *
                                              ORG       SAVEORG
4715                                          LOC       *0
```

```
                                *
                                *
                                *                       DESCRIPTORS FOR SPACE TYPES
                                *
                                *                       ( PRIORITY HERE MUST AGREE WITH INDEX
                                *                               IN SPCLTST )
                                *
 4715  0000000000000000000001  TMPDSKSP  ITEMS   1
 4716  0000000000000020000     DATA    20000B      MAX TEMP DISK SPACE
 4717  0000000000000004000     DATA    4000B       MAX MODERATE TEMPD DISK SPACE
 4720  0000000000000000000000  ITEMS   TMPDSKE,GENSPC,TMPDSKF
 4723  0000000000000005024     ITEMS   TMPDSKV
 4724  0000000000000000000000  DATA    0           BASE AMOUNT TO ADD TO REQ
 4725  0000000000000002000     DATA    2000B       NOMINAL ( SMALL ) SIZE
 4726  0000000000000005040     ITEMS   TMPDSKG,TMPDSKR
 4730  5524051520172012231     DIS     .. TEMPORARY DISK SPACE .
                                *
                                *
 4733  0000000000000000000002  MOTSP     ITEMS   2
 4734  0000000000000000000200  DATA    200B        MAX MOT SLOTS
 4735  0000000000000000000050  DATA    50B         MAX MODERATE REQUEST
 4736  0000000000000000000006  ITEMS   MOTSPE,MOTSPC,MOTSPF
 4741  0000000000000000005070  ITEMS   ECSPV
 4742  0000000000000000000000  MOTBAS    DATA    0           BASE AMT TO ADD TO MOT REQUEST
 4743  0000000000000000000024  DATA    20          NOMINAL ( SMALL SIZE )
 4744  0000000000000000051020  ITEMS   ECSPGT,ECSPRT
 4746  5515172455231417242 3   DIS     .. MOT SLOTS .
                                *
 4750  0000000000000000000003  FXDSP     ITEMS   3
 4751  0000000000000200000     DATA    200000B     MAX FIXED ECS SPACE
 4752  0000000000000010000     DATA    10000B      MAX MODERATE REQ
 4753  0000000000000000000014  ITEMS   FXDSPE,FXDSPC,FXDSPF
 4756  0000000000000000005070  ITEMS   ECSPV
 4757  0000000000000000000000  FXDBAS    DATA    0           BASE AMT TO ADD TO REQUEST
 4760  0000000000000001000     DATA    1000B       NOMINAL ( SMALL ) SIZE
 4761  0000000000000000061020  ITEMS   ECSPGT,ECSPRT
 4763  5506113005045605032 3   DIS     .. FIXED ECS SPACE .
                                *
 4765  0000000000000000000004  SWPECSP   ITEMS   4
 4766  0000000000000100000     DATA    100000B     MAX SWAP ECS SPACE
 4767  0000000000000100000     DATA    10000B      MAX MODERATE REQUEST
 4770  0000000000000000000022  ITEMS   SWPECE,GENSPC,SWPECF
 4773  0000000000000000005244  ITEMS   SWPECV
 4774  0000000000000000000000  DATA    0           BASE AMT TO ADD TO REQ
 4775  0000000000000000004000  DATA    4000B       NOMINAL ( SMALL ) SIZE
 4776  0000000000000000052520  ITEMS   SWPECG,SWPECR
 5000  5523270120200504550 5   DIS     .. SWAPPED ECS SPACE .
```

```
                                *
                                *
                                *                       INITIALIZE TEMP DISK SPACE
                                *
5003  5110004725                INITTDS   SA1     TMPDSKSP+SPC.NOM
                  5120004724              SA2     TMPDSKSP+SPC.BS
5004  36612                               IX6     X1+X2
            5160000024                    SA6     XJLOC+3
5005  6110000021                          SETXJ   DA:MVSPI.CX.TDLST.CX.TDIR.XJLOC+3+IND
5011  0130000021000000000002              XJ      XJLOC.INITTDS1.INITTDS1
5014  0200007624                          RTNR
                                *
5015  6110005020                INITTDS1  MSGOUT  (NO ROOM. TEMP DISK SPACE)
5023  0200002512                          JP      LOGOUT3
                                *
                                *
                                *                       SEE HOW MUCH TEMP DISK SPACE WE HAVE
                                *
5024  6110000021                TMPDSKV   SETXJ   DA:DSPI.CX.TDIR
5027  6110000010                          SETRET  B.XJLOC.B0.B0
5032  0130000021000100000003              XJ      XJLOC.GENSPCBG.GENSPCBG.RETLOC
5036  5110000024                          SA1     XJLOC+3
                  4300036                 MXU     30
                        15210             BX2     -X0*X1
5037  20136                               LX1     30
            1511110                       BX1     -X0*X1
                  0200007624              RTNR
                                *
                                *
                                *                       OBTAIN TEMP DISK SPACE
                                *
5040  10611                     TMPDSKR   BX6     X1
            5160000024                    SA6     XJLOC+3
5041  6110000021                          SETXJ   DA:MVSPI.CX.TDLST.CX.TDIR.XJLOC+3+IND
5045  0130000021000000000002              XJ      XJLOC.TMPDSKG1.TMPDSKG1
5050  76100                               SX1     B0
            0200007624                    RTNR
                                *
5051  7110777776                TMPDSKG1  SX1     -1
                  0200007624              RTNR
                                *
                                *
                                *                       RELEASE TEMP DISK SPACE
                                *
5052  10611                     TMPDSKR   BX6     X1
            5160000024                    SA6     XJLOC+3
5053  6110000021                          SETXJ   DA:MVSPI.CX.TDIR.CX.TDLST.XJLOC+3+IND
5057  0130000021000000000002              XJ      XJLOC.GENSPCBG.GENSPCBG
5062  76100                               SX1     B0
            0200007624                    RTNR
```

```
                                *
                                *
                                *                       THIS ROUTINE GETS OR RELEASES FIXED ECS SPACE
                                *
5063  7160100524                FXDSPC    SX6     ECIMVSP!
                  76770                     SX7     B0
5064  0600005066                          JP      ECSSPC
                                *
                                *                       THIS ROUTIEM GETS OR RELEASES MOT SLOTS
                                *
5065  7160100523                MOTSPC    SX6     ECIMVMT!
                  7170000007                SX7     7
                                *
                                *
5066  5160000204                ECSSPC    SA6     TEMP1     MOVING OPERATEION
                  5170000205                SA7     TEMP2     COUNTER INRES
5067  0600004335                          JP      GENSPC
```

```
                                *
                                *
                                *                       THIS ROUTINE DETERMINES AMOUNT OF FIXED ECS SPACE
                                *                       OR MOT SLOTS RESERVED AND IN USE
                                *
5070  6110000021                ECSPV     SETXJ       ECIDSAB!*CX.LCLAB.XJLOC*8
5074  0130000021000000000002             XJ          XJLOC.GENSPCBG.GENSPCBG
5077  5110002005                         SA1         TEMP2
            5211000021                   SA1         XJLOC+X1
5100  43036                              MX0         30
          15210                          BX2         -X0*X1
              11101                      BX1         X0*X1
                  20136                  LX1         30
5101  0200007624                         RTNR
                                *
                                *
                                *                       THIS ROUTINE OBTAINS FIXED SPACE OR MOT SLOTS
                                *
5102  10611                      ECSPGT    BX6         X1
            5160000024                   SA6         XJLOC+3
5103  5110002004                         SA1         TEMP1
            6111000021                   SETXJ       X1
5106  6110000005                         CALLR       ECSPGP.CX.SNDBG*CX.MSTAB*ECSPGT1
5111  6110000004                         CALLR       ECSPGP.CX.MSTAB*CX.LCLAB*GENSPCBG
5114  76100                              SX1         B0
            0200007624                   RTNR
                                *
5115  6110000004                ECSPGT1   CALLR       ECSPGP.CX.MSTAB*CX.SNDBG*ECSPGT2
5120  7110777776                         SX1         -1
            0200007624                   RTNR
                                *
                                *
5121  6110005124                ECSPGT2   MSGOUT      (SPACE ERROR*ECSPGT RECOVERY)
5127  0200001264                         JP          DBGDSKW
                                *                       THIS ROUTINE RETURNS ECS FIXED SPACE OR MOT SLOTS
                                *
5130  10611                      ECSPRT    BX6         X1
            5160000024                   SA6         XJLOC+3
5131  5110002004                         SA1         TEMP1
            6111000021                   SETXJ       X1
5134  6110000006                         CALLR       ECSPGP.CX.LCLAB*CX.MSTAB*GENSPCBG
5137  6110000004                         CALLR       ECSPGP.CX.MSTAB*CX.SNDBG*GENSPCBG
5142  76100                              SX1         B0
            0200007624                   RTNR
                                *
                                *
                                *                       THIS ROUTIEN DOES A FIXED ECS SPACE OR MOT SLOT MOVE
                                *
                                *                       B1          FROM ALLOC BLOCK
                                *                       B2          TO ALLOC BLOCK
                                *                       B3          FRETURN JUMP
                                *
5143  76610                      ECSPGP    SX6         B1
```

```
                  5160000002
                        76620
5144  5160000023
                      76630
5145  5160000025
5146  0130000021000000002
5151  0200007624

5152  5160000024

5153  6170005154
5154  5110000025
                      63110
5155  0210000000
5156  6170005157
5157  5110000025
                      63110
5160  0210000000

5161  6110000021
5170  5110000033
                      43036
                        15710
5171  5170000032
                    6110000021
5203  5110000037
                      15710
5204  5170000032
                    6110000021
5216  0200007624
```

```
                SA6     XJLOC+1
                SX6     B2
                SA6     XJLOC+2
                SX6     B3
                SA6     XJLOC+4
                XJ      XJLOC,ECSPGP1,ECSPGPT
                RTNR
*
*
ECSPGPT         SA6     XJLOC+3     ECS SYSTEM RETURNS AMT ACTUALLY MOVED
*                                   IN X6.  SAVE IT
                POPR
                SA1     XJLOC+4
                SB1     X1
                JP      B1
                POPR
                SA1     XJLOC+4
                SB1     X1
                JP      B1
*
*
*
* INITIALIZE THE MOT AND FIXED ECS BASE AMOUNTS
INITFXD         DOXJ    EC,DSAB,,CX,LCLAB,XJLOC+10,10
                SA1     XJLOC+10+AL.RECS
                MX0     30
                BX7     -X0*X1
                SA7     XJLOC+9
                DOXJ    DF,WRITE,,CX,CODEF,FXDBAS,XJLOC+9,1
                SA1     XJLOC+10+AL.RMOT
                BX7     -X0*X1
                SA7     XJLOC+9
                DOXJ    DF,WRITE,,CX,CODEF,MOTBAS,XJLOC+9,1
                RTNR
```

```
                                *
                                *
                                *                       INITIALIZE SWAP ECS
                                *
5217  6110000021                INITSWP   DOXJ    DFIFUND!*CX.LCLAB
5225  5110004775                          SA1     SWPECSP+SPC.NOM
                  5120004774              SA2     SWPECSP+SPC.BS
5226  36612                               IX6     X1+X2
                  5160000022              SA6     XJLOC+1
5227  6110000021                          SETXJ   DFIXSEC!*XJLOC+1*IND          (GET NOMINAL AMOUNT)
5232  0130000021000000000002              XJ      XJLOC.INITSWPX
5235  0200007624                          RTNR
                                *
                                *
5236  6110005241                INITSWPX  MSGOUT  (NO ROOM. SWPECS)
5243  0200002512                          JP      LOGOUT3
                                *
                                *
                                *                       OBTAIN RESERVED AND IN SWAP SPACE VALUES
                                *                       IN X1 AND X2 RESPECTIVELY
                                *
5244  0130005264000071000003    SWPECV    XJ      EOCC*,*EOCCRET
5250  5110000021                          SA1     XJLOC       . VFD 30/RSVERED, 30/IN_USED
                  4300036               MX0     30
                        15210           BX2     -X0*X1
5251  2013                                LX1     30          . RIGHT JUSTIFY RESERVED FIELD
                  1511110               BX1     -X0*X1
                  0200007624            RTNR
                                *
                                *
                                *                       OBTAIN SWAP SPACE AMOUNT X1
                                *
5252  10611                     SWPECG    BX6     X1
                  5160000022              SA6     XJLOC+1
5253  6110000021                          SETXJ   DFIXSEC!*XJLOC+1*IND
5256  0130000021000000000002              XJ      XJLOC.SWPECG!*GENSPCRG
5261  76100                               SX1     B0
                  0200007624              RTNR
                                *
5262  7110777776                SWPECGI   SX1     -1
                  0200007624              RTNR
                                *
                                *
                                *                       RELEASE SWAP SPACE AMOUNT IN X1
                                *
5263  14111                     SWPECR    BX1     -X1
                  0200005252              JP      SWPECG
                                *
                                *
                                *                       VIEW SWAP ECS XJ AND RETURN PARAM AUTH
                                *
                                          EXT     DFIEOCC
                                *
```

```
5264  4000000000 x          EOCC      VFD     1/1,29/DF,EOCC,30/CX,OPRS
                  0000000010
                            *
5265  0000000003000000021   EOCCRET   VFD     30/3,30/XJLOC
5266  0000000000000000000   *         VFD     30/0,30/0
```

```
                                *
                                *
                                *                       BIT FLAG HANDLING ROUTINES
                                *
                                *                       B1      INDEX OF FLAG BIT
                                *                       B2      ADDRESS OF WORD HOLDING BITS
                                *
5267  616000052700              CLRFLAG SB6     *+1
                  02000052775           JP      FLGSETUP
                                *
5270  15660                     BX6     -X0*X6
                  02000052777           JP      FLGFIN
                                *
                                *
5271  616000052702              SETFLAG SB6     *+1
                  02000052775           JP      FLGSETUP
                                *
5272  15606                     BX6     X0+X6
                  02000052777           JP      FLGFIN
                                *
                                *
5273  616000052704              TSTFLAG SB6     *+1
                  02000052775           JP      FLGSETUP
                                *
5274  11106                     BX1     X0*X6
                  02700000000           JP      B7
                                *
                                *
                                *
                                *
5275  43001                     FLGSETUP MX0    1
                      56120               SA1     B2
                          22611           LX6     B1,X1
5276  06600000060                         JP      B6
                                *
                                *
5277  616000000074              FLGFIN  SB6     60
                      67111               SB1     B6-B1
                          22616           LX6     B1,X6
5300  54610                               SA6     A1
                      02700000000         JP      B7
```

```
                                *
                                *
                                *
                                *                       JPROC. LOAD RECOVER OR DUMP DISK
                                *
5301  6110005304                JPROC     MSGOUT    (JPROC HERE)
5306  7160005326                          SX6       JPROCX
                  5176000176              SA6       RUNB7
5307  7160000001                          SX6       1
                  5176000211              SA6       TEMP6
5310  0200004057                          JP        FEXIT
                                *
5311  6170007702                JPROCA    CALLR     ASKUSER
5313  6110005330                          CALLR     NAMEVEC,JPRCLIST
5315  0301005317                          ZR        X1,JPROCB           NOT RECOGNIZED
                  6311110
5316  0210000000                          SB1       X1
                                          JP        B1
                                *
5317  6110005322                JPROCB    MSGOUT    (SAY AGAIN)
5324  0200004057                          JP        FEXIT
                                *
                                *
5325  0000000000000000004054              ITEMS     FEXIT2              ERROR HANDLING IS PRINT
5326  0200005311                JPROCX    JP        JPROCA
                  0000000013    -         VFD       30/13B    (PLUS)
5327  1220221703000000000       -         DIS       ,,JPROC,
                                *
                                *
5330  2311152514012405000000    JPRCLIST  NMENTC    SIMULATE,JPROCSIM
5332  1305112410000000000000              NMENTC    KEITH,KEITH
5334  2205031726052200000000              NMENTC    RECOVER,RECOVER
5336  1417010400000000000000              NMENTC    LOAD,LOAD
5340  0425152000000000000000              NMENTC    DUMP,DUMP
5342  2424312317160000000000              NMENTC    TTYSON,TTYSON
5344  0405022507000000000000              NMENTC    DEBUG,COMMANDB
5346  0425152033000000000000              NMENTC    DUMP0,DUMP0
5350  1220222170334350000000              NMENTC    JPROC12,JPROC12
5352  0622050532050000000000              NMENTC    FREEZE,FREEZE
5354  0405012410000000000000              NMENTC    DEATH,DEATH
5356  1305112410572205030000              NMENTC    KEITH,REC,KEITH3
5360  1305112410570415200000              NMENTC    KEITH,DMP,KEITH2
5362  1305112410571404000000              NMENTC    KEITH,LD,KEITH1
5364  1305112410570411050000              NMENTC    KEITH,DIE,KEITH5
5366  2301260504060000000000              NMENTC    SAVEDF,SAVEDF
5370  0314162022170400000000              NMENTC    CLNPROF,CLNPROF
5372  0000000000000000000000              DATA      0
```

```
*
*
*
*                    TABLE OF CONTENTS OF CL.CMMDSTF
*
*
*          0         ROOT DIRECTORY
*          1         NULL ACCESS KEY
*          2         TDLIST DIRECTORY
*          3         PUBLIC ACCESS KEY
*          4         S DIRECTORY ( PUBLIC DIRECTORY )
*          5         CLASS DIRECTORY
*          6         OPERATE DIRECTORY
*          7         PASS KEY
*          10        PERM DIR ROOT
*          11        SCAN LIST FOR TDLIST
*          12        SCAN LIST FOR PDLIST
*          13        ACCT BLK FILE ( DURING SIMULATE ONLY )
*          14        CLIST OF CMMD2 ( HOLDS USER PROCESSES AND LCLABS )
*          15        DISK FILE CAP FOR PROFILE
*          16        DISK FILE CAP FOR DAYFILE
*          17        EVENT CHANNEL TO CONTROL THE DAYFILE
*          20        EVENT CHANNEL TO KEEP THE LOGON COUNT FOR THE SYSTEM
*
* SYMBOLIC REFERENCES TO CMMDSTF
*
*   LOOKS LIKE      CST.SYM    WHERE SYM IS DEFINED BELOW
*
0    CSTSUM     SET      0
     CSTDEF     MACRO    SYM
     CST.SYM    EQU      CSTSUM
     CSTSUM     SET      CSTSUM+1
                ENDM
*
                CSTDEF   ↑RT       . ROOT
                CSTDEF   NLK       . NULL KEY
                CSTDEF   ↑TD       . TDLIST
                CSTDEF   PBK       . PUB.KEY
                CSTDEF   ↑PB       . PUBLIC OR S DIRECTORY
                CSTDEF   ↑CL       . CLASS DIRECTORY
                CSTDEF   ↑OP       . OPERATE DIRECTORY
                CSTDEF   PSK       . PASS KEY
                CSTDEF   ↑PD       . PDLIST
                CSTDEF   TDSC      . TDLIST SCAN LIST
                CSTDEF   PDSC      . PDLIST SCAN LIST
                CSTDEF   SIMF      . ACCT BLK FILE FOR SIMULATE
                CSTDEF   TTY       . CLIST OF TTYWTCHER
                CSTDEF   PROF      . PROFILE DISK CAPABILITY
                CSTDEF   DAYF      . DAYFILE DISK CAPABILITY
                CSTDEF   EVDF      . EVCH FOR DAYFILE ACCESS
                CSTDEF   EVLC      . EVCH FOR SYSTEM LOGON COUNT
*
```

```
                                *
                                *
                                *                       RECOVER DISK
                                *
5373  6110000021    RECOVER     DOXJ    CX.KEITH,CX.NULL,3
5402  6110000021                DOXJ    CX.KEITH,CX.NULL,5
5411  6170006617                CALLR   JPROC1
5413  6170007057                CALLR   JPROC2
5415  6170007233                CALLR   JPROC3
5417  6110000021                DOXJ    CX.CLRE'1
5425  6110000021                DOXJ    EC!SEVI!CX.SPCHN,R0 (TURN ON ALL TTYS)
5434  6110005437                MSGOUT  (RECOVERY COMPLETE)
5441  6110000003                CALLR   CMMDS,3
5443  6170005444                CALL    CRASH
                                *
                                *
                                *                       DUMP DISK
                                *
5444  6110000021    DUMP        DOXJ    CX.KEITH,CX.NULL,3
5453  6170006617                CALLR   JPROC1
5455  6170007057                CALLR   JPROC2
5457  6110005462                MSGOUT  (RECOVERY COMPLETE)
                                *
5464  6110000021    DUMP0       DOXJ    CX.KEITH,CX.NULL,2
5473  6110000021                DOXJ    CX.KEITH,CX.NULL,5
5502  6170007233                CALLR   JPROC3
5504  6110000021                DOXJ    CX.CLRE'1
5512  6110000021                DOXJ    EC!SEVI!CX.SPCHN,R0 (TURN ON ALL TTYS)
5521  6110005524                MSGOUT  (DUMP COMPLETE)
5526  6110000003                CALLR   CMMDS,3
5530  6170005531                CALL    CRASH
                                *
                                *
                                *                       LOAD DISK
                                *
5531  6110005534    LOAD        MSGOUT  (DO YOU REALLY WANT TO LOAD DISK, $10 FINE IF WRONG$)
5540  6170007702                CALLR   ASKUSER
5542  0312005622                NZ      X2,LOADX
                        5120056031      SA2     YESLOAD
5543  136120                    BX6     X1-X2
                        0316005652      NZ      X6,LOADX
5544  0336005622                NG      X6,LOADX
                        6110005550      MSGOUT  (LOADING)
                                *
5551  6110000021                DOXJ    CX.KEITH,CX.NULL,1
5560  6110000021                DOXJ    CX.KEITH,CX.NULL,5
5567  6170006617                CALLR   JPROC1
5571  6170007057                CALLR   JPROC2
5573  6170007233                CALLR   JPROC3
5575  6110000021                DOXJ    CX.CLRE!IND+TEMP6
5603  6110000021                DOXJ    EC!SEVI!CX.SPCHN,R0 (TURN ON ALL TTYS)
5612  6110005615                MSGOUT  (LOAD COMPLETE)
5617  6110000003                CALLR   CMMDS,3
```

JPROC

```
 5621  6170005622                        CALL    CRASH
                                 *
                                 *
 5622  6110005625          LOADX   MSGOUT  (SORRY, NOT CONFIRMED)
 5630  0600004057                  JP      EXIT
                                 *
 5631  3105231417010;000000  YESLOAD DIS     ..YESLOAD.
```

```
                                *
                                *
                        JPFETCH MACRO   DIR,NAME,CAPX,CMMNSTFX
                                LOCAL   X,Y
                                CALLR   JPFETCH,X,DIR,CAPX,CMMDSTFX
                                JP      Y
                        X       DIS     0/8NAME8/
                        Y       BSS     0
                                ENDM
                                *
                                *
                        ECSOBJ  MACRO   NAME,INDEX1,INDEX2
                                LOCAL   X,Y
                                IFC     EQ,$$INDEX2$
                                CALLR   ECSOBJ,X,INDEX1,=1
                                ENDIF
                                IFC     NE,$$INDEX2$
                                CALLR   ECSOBJ,X,INDEX1,INDEX2
                                ENDIF
                                JP      Y
                        X       DIS     0/8NAME8/
                        Y       BSS     0
                                ENDM
                                *
                                *
5632  6110005635        JPROCSTM  MSGOUT  (DO YOU REALLY WANT TO SIMULATE)
5641  6110005644                MSGOUT  (THIS WILL CLOBBER USER DISK)
5647  6170007702                CALLR   ASKUSER
5651  0312005622                NZ      X2,LOADX
                                SA2     YESSIM
5652  13612                     BX6     X1-X2
      0316005622                NZ      X6,LOADX
5653  0336005622                NG      X6,LOADX
      6110005657                MSGOUT  (SIMULATING)
                                *
                                *
                                *
                                *
                                *  FIRST CREATE ACCOUNTING FILE
                                *
5661  6110000021                SETXJ   DFICFIL!,=1,DMYACFBD+IND
5665  0130000021000T000003      XJ      XJLOC,,,DMYDIRRT
5671  6110000021                DOXJ    DFICLO!,CX,TEMP
5677  6110000021                DOXJ    ECICCAP!,CX,TEMP,DMYACFIA+IND,TEMPI+IND
5706  6110000021                DOXJ    DFIDACF!,CX,TEMP
5714  6110000021                DOXJ    ECICOUT!,CX,CMSTF,13R,CX,TEMP
                                *
                                *
                                *
                                *  NOW CREATE ROOT DIRECTORY
                                *
5723  6110000021                SETXJ   DFICFIL!,=1,DMYDIRBD+IND
5727  0130000021000T000003      XJ      XJLOC,,,DMYDIRRT
```

JPROC

```
 5733  6110000021                DOXJ     DFIWRIT!,CX.TEMP,0,DMYDIRHD,1
 5745  6110000021                DOXJ     DFICLOI,CX.TEMP
 5753  6110000021                DOXJ     EC!CCAP!,CX.TEMP,DMYDIRIA+IND,TEMP1+IND
 5762  6110000021                DOXJ     EC!COUT!,CX.CMSTF,0,CX.TEMP
                          *
                          *
                          *                NOW CREATE SUB DIRCTORIES ETC
                          *
 5771  61100057 74                DIRNAME  TDLISI
 5775  6110000021                SETXJ    DR!CRDR!,CX.TEMP,TEMP1+IND,500,DACCT2
 6004  66100                     SETRET   B0,B0,1,CX.TEMP+1
 6007  0130000021000I000003      XJ       XJLOC,,,RETLOC
                          *
 6013  6110006016                DIRNAME  CLASS
 6017  6110000021                SETXJ    DR!CRDR!,CX.TEMP,TEMP1+IND,500,0
 6026  66100                     SETRET   B0,B0,1,CX.TEMP+2
 6031  0130000021000I000003      XJ       XJLOC,,,RETLOC
                          *
                          *
 6035  6110006040                DIRNAME  OPERATE
 6041  6110000021                SETXJ    DR!CRDR!,CX.TEMP,TEMP1+IND,500,0
 6050  0130000021000I000003      XJ       XJLOC,,,RETLOC
                          *
 6054  6110006057                DIRNAME  COUNTERS
 6060  6110000021                SETXJ    DR!CRFI!,CX.TEMP,TEMP1+IND,CNTRBD+IND
 6064  0130000021000I000003      XJ       XJLOC,,,RETLOC
                          *
 6070  6110006073                DIRNAME  PDLISI
 6074  6110000021                SETXJ    DR!CRDR!,CX.TEMP,TEMP1+IND,500,DACCT2
 6103  0130000021000I000003      XJ       XJLOC,,,RETLOC
                          *
 6107  6110000021                DOXJ     ECIMCAP!,CX.TEMP+2,CX.TEMP+3,SPCPASS+IND
 6116  6110006121                DIRNAME  PASSWORD
 6122  6110000021                DOXJ     DR!HDLK!,CX.TEMP+2,TEMP1+IND,CX.TEMP+3
                          *
                          *
                          *                NOW MOVE SOME SPACE INTO TDLIST
                          *
                                   IFEQ     I,DACCT2
                                   ENDIF
                          *
                          *                CAN NOT CREATE ANY ACCESS KEY NOW, SO
                          *                FOLLOWING IS FAKED WITH A DIRCTORY
                          *
 6131  6110006134                DIRNAME  OWN.KEY
 6135  6110000021                DOXJ     DR!HDLK!,CX.TEMP+2,TEMP1+IND,CX.TEMP+2
                          *
 6144  6110006147                DIRNAME  PERMDIR
 6150  6110000021                DOXJ     DR!HDLK!,CX.TEMP+2,TEMP1+IND,CX.TEMP+2
                          *
 6157  6110006162                DIRNAME  PDLIST
 6163  0110000021                DOXJ     DR!HDLK!,CX.TEMP+2,TEMP1+IND,CX.TEMP+2
```

```
                                *
6172  6110006175                        DIRNAME  PUBLIC
6176  6110000021                        SETXJ    DR:CRDR!,CX,TEMP,TEMP1,IND,500,0
6205  0130000210001000003               XJ       XJLOC,,,,RETLOC
                                *
                                *
                                *                 NOW SIGNAL CONSTRUCTION COMPLETE
                                *
6211  6110000021                        DOXJ     DF!DONE!
                                *
6217  6170006617                        CALLR    JPROC!
                                *
                                *
                                *                 NOW PLACE INITIAL ITEMS IN PUBLIC DIRECTORY
                                *
6221  6110006224                        DIRNAME  PUBLIC
6225  6110000021                        SETXJ    DR:UACC!,CX,TEMP,TEMP1,IND,CX,NLKY
6231  66100                             SETRET   B0,B0,1,CX,TEMP+1
6234  0130000210001000003               XJ       XJLOC,,,,RETLOC
                                *
6240  6110000021                        DOXJ     EC!CINI,CX,CMSTF,1,CX,NLKY
                                *
6247  6110006252                        DIRNAME  PUB.KEY
6253  6110000021                        SETXJ    AK!CRAK!
6256  66100                             SETRET   B0,B0,1,CX,TEMP+3
6261  0130000210001000003               XJ       XJLOC,,,,BETLOC
6265  6110000021                        DOXJ     EC!DSCP!,CX,TEMP+3
6273  5170000210                        SA7      TEMP5                ( SAVE BITS OF PURLIC KEY )
      6110000021                        DOXJ     DR!HDLK!,CX,TEMP+1,TEMP1+IND,CX,TEMP+3
6303  6110000021                        SETXJ    DR!ADPR!,CX,TEMP+1,TEMP1+IND,CX,NLKY
6307  7110100210                        YSETXJ   TEMP5+IND,MANYBITS+IND
6312  0130000210000000002               XJ       XJLOC
                                *
6315  6110006320                        DIRNAME  NULL.KEY
6321  6110000021                        DOXJ     DR!HDLK!,CX,TEMP+1,TEMP1+IND,CX,NLKY
6330  6110000021                        SETXJ    DR!ADPR!,CX,TEMP+1,TEMP1+IND,CX,NLKY
6334  7110100210                        YSETXJ   TEMP5+IND,MANYBITS+IND
6337  0130000210000000002               XJ       XJLOC
                                *
6342  6110006345                        DIRNAME  PASS.KEY
6346  6110000021                        SETXJ    AK!CRAK!
6351  66100                             SETRET   B0,B0,1,CX,TEMP+2
6354  0130000210001000003               XJ       XJLOC,,,,BETLOC
6360  6110000021                        DOXJ     DR!HDLK!,CX,TEMP+1,TEMP1+IND,CX,TEMP+2
6367  6110000021                        SETXJ    DR!ADPR!,CX,TEMP+1,TEMP1+IND,CX,NLKY
6373  7110100210                        YSETXJ   TEMP5+IND,MANYBITS+IND
6376  0130000210000000002               XJ       XJLOC
                                *
                                *                 NOW COMPLETE JPROC
                                *
6401  6170007067                        CALLR    JPROC2
6403  6110000021                        DOXJ     EC!SEV!,CX,SPCHN,B0 (TURN ON ALL TTYS)
```

```
                                *
                                *
                                *
6412  6110006415                        MSGOUT  (SIMULATED JPROC COMPLETE)
6420  6110000003                        CALLR   CMMDS,3
6422  6170006423                        CALL    CRASH
                                *
                                *
                                *
                                *
                                *
                                *
                                *
                                *                       FIXED DATA FOR JPROC SIMULATER
                                *
6423  0000000002000000006424   DMYACFRD VFD     30/2,30/DMYACFRBD+1
6424  0000000000000000000200             DATA    200B,200B
                                *
6426  4000000000 X             DMYACFTA VFD     1/1,29/CA.DSKF,30/CX.SCRT
                  0000000027
                                *
6427  0000000001000000006430   DMYDIRBD VFD     30/1,30/DMYDIRBD+1
6430  0000000000000000000764             DATA    500
                                *
6431  0000000001000000000204   DMYDIRDT VFD     30/1,30/TEMP1
6432  0000000001000000000000             VFD     30/1,30/CX.TEMP
                                *
6433  0177777600076400000001   DMYDIRWD VFD     6/1,18/-1,18/500,18/1
                                *
                                *       EXT     CA.DRCT
                                *
6434  4000000000 X             DMYDIRTA VFD     1/1,29/CA.DRCT,30/CX.SCRT
                  0000000027
                                *
6435  0000000001000000006436   CNTRBD   VFD     30/1,30/*+1             SHAPE FOR COUNTER FILE
6436  0000000000000000000024             DATA    20
                                *
6437  0000002211712240400000   SPCPASS  VFD     18/0,42/0LROOTD
                                *
                                *
                                *
6440  3105233211118000000000   YESSIM   DIS     ..YESSIM.
```

```
                                *
                                *
                                *                       DEBUG CALL ON KEITH
                                *
6441  6110000021                KEITH     DOXJ        CX.KEITH,CX.NULL,4
                                *
                                *
                                *
6450  6110006453                          MSGOUT      (KEITH DEBUG CALL COMPLETE)
6456  0200004057                          JP          FEXIT
                                *
                                *
                                *                       DO JPROC1 AND JPROC2
                                *
6457  6170006617                JPROC12   CALLR       JPROC1
6461  6170007057                          CALLR       JPROC2
6463  6110006466                          MSGOUT      (JPROC1 AND JPROC2 COMPLETE)
6471  0200004057                          JP          FEXIT
                                *
                                *
                                *
6472  6110000021                TTYSON    DOXJ        EC,SEVI,CX.SPCHN,0 (TURN ON ALL TTYS)
6501  6110006504                          MSGOUT      (TTYS TURNED ON)
6506  0200004057                          JP          FEXIT
                                *
                                *
                                *
6507  6110000003                JDEATH    CALLR       CMMDS,3
6511  6170006512                          CALL        CRASH
                                *
                                *
                                *
6512  6170007233                FREEZE    CALLR       JPROC3
6514  6110006517                          MSGOUT      (FREEZE DONE)
6521  0200004057                          JP          FEXIT
                                *
                                *
                                *
6522  6110000021                KEITH1    DOXJ        CX.KEITH,CX.NULL,1
6531  6110006534                          MSGOUT      (KEITH1 DONE)
6536  0200004057                          JP          FEXIT
                                *
                                *
                                *
6537  6110000021                KEITH2    DOXJ        CX.KEITH,CX.NULL,2
6546  6110006551                          MSGOUT      (KEITH2 DONE)
6553  0200004057                          JP          FEXIT
                                *
                                *
                                *
6554  6110000021                KEITH3    DOXJ        CX.KEITH,CX.NULL,3
6563  6110006566                          MSGOUT      (KEITH3 DONE)
6570  0200004057                          JP          FEXIT
```

```
                                *
                                *
                                *
6571  6110000021    KEITHS      DOXJ    CX.KEITH*CX.NULL*E
6600  6110006603                MSGOUT  (KEITHS DONE)
6605  0200004057                JP      FEXIT
                                *
                                *                ASK CLNPROF TO MAKE NEW DAYFILE
                                *
6606  7160777776    SAVEDF      SX6     -1
                    5160000211  SA6     TEMP6
6607  0200004057                JP      FEXIT
                                *
                                *                CALL CLNPROF
                                *
6610  6110000021    CLNPROF     DOXJ    CX.CLPF*IND*TEMP6
6616  0200004057                JP      FEXIT
```

```
                                *
                                *                READ FROM ROOT DIRECTORIES AND INITIALIZE PAUL
                                *
                                *                FIRST READ FROM ROOT DIRECTORIES
                                *
                                *
6617  6110000021        JPROC1    DOXJ      EC,CIN,CX.CMSTF,R0,CX.TEMP
6626  6110000021              DOXJ      EC,CIN,C1,CX.CMSTF,1,CX.NLKY
                                *
6635  6110006642              JPFETCH   CX.TEMP,(TDLIST),CX.TEMP+1,2
                                *                        (PRUNE TEMP DIR TREE)
6643  6110000021              DOXJ      CX.CMMDS,7,XCMMDS,2+IND,CX.TEMP+1
6652  6110006657              JPFETCH   CX.TEMP,(PUBLIC),CX.TEMP+2,4
6660  6110006665              JPFETCH   CX.TEMP,(CLASS),CX.TFMP+2,5
6666  6110006673              JPFETCH   CX.TEMP,(OPERATE),CX.TEMP+2,6
6674  6110006701              JPFETCH   CX.TEMP,(PDLIST),CX.TEMP+2,8
                                *
                                *
                                *                NOW FOR PAUL
                                *
                                EXT       OF.CTRS,EC.AKN,EC.DNTN
                                EXT       I.ACKYN,I.DNTN
                                *
6702  6110006705        DIRNAME   COUNTERS
6706  6110000021              SETXJ     DRIUACC1,CX.TEMP,TEMP1.IND,CX.NLKY
6712  66100                   SETRET    B0,B0,1,CX.TEMP+3
6715  0130000021000001000003  XJ        XJLOC,,,BETLOC
6721  6110000021              DOXJ      EC,COUT1,CX.SCRT,OF.CTRS,CX.TEMP+3
6730  6110000021              SETXJ     OF1OPRW1,CX.TEMP+3
6733  66100                   SETRET    B0,B0,1,CX.TEMP+1
6736  0130000021000001000003  XJ        XJLOC,,,RETLOC
                                *
                                *
6742  6110000021              DOXJ      OF1READ1,CX.TEMP+1,I.ACKYN,TEMP2,1
6754  6110000021              DOXJ      EC,CIN,CX.SCRT,EC.AKN,CX.TEMP+2
6763  5130002005              SA3       TEMP2
                    7140000100  SX4       100B
6764  36634                   IX6       X3+X4
            54630               SA6       A3
                    6110000021  DOXJ      EC,SEV,CX.TEMP+2,TEMP2+IND
6773  6110000021              DOXJ      OF1WRIT1,CX.TEMP+1,I.ACKYN,TEMP2,1
                                *
7005  6110000021              DOXJ      OF1READ1,CX.TEMP+1,I.DNTN,TEMP2,1
7017  6110000021              DOXJ      EC,CIN,CX.SCRT,EC.DNTN,CX.TEMP+2
7026  5130002005              SA3       TEMP2
                    7140000100  SX4       100B
7027  36634                   IX6       X3+X4
            54630               SA6       A3
                    6110000021  DOXJ      EC,SEV,CX.TEMP+2,TEMP2+IND
7036  6110000021              DOXJ      OF1WRIT1,CX.TEMP+1,I.DNTN,TEMP2,1
                                *
7050  6110000021        DOXJ      OF1PCLS1,CX.TEMP+3
                                *
```

```
                                *
 7056  02000007624                      RTNR
                                *
                                *
                                *
                                *
                                *                GET PUBLIC ACCESS KEY AND PASS KEY
                                *
 7057  6110007062                JPROC2  DIRNAME  PUBLIC
 7063  6110000021                        SETXJ    DR:UACC!,CX.TEMP,TEMPI.IND,CX.NLKY
 7067  66100                             SETRET   B0,B0,I'CX.TEMP+1
 7072  0130000021000010000003           XJ       XJLOC,,'RETLOC
                                *
 7076  6110007103                        JPFETCH  CX.TEMP+1,(PUB.KEY),CX.TEMP+2,3
 7104  6110000021                        DOXJ     EC!DSCP!,CX.TEMP+2
 7112  5170000210                        SA7      TEMP5     (SAVE BITS OF PUBLIC KEY)
                                *
                                        JPFETCH  CX.TEMP+1,(PASS.KEY),CX.TEMP+2,7
                                *
                                *
                                *                FINAL JPROC STUFF
                                *
                                *                SET LIVE FLAG
                                *
 7120  6110000021                        DOXJ     EC!DSCP!,CX.BEAD
 7126  5160000414                        SA6      LIVEFLAG
                                *
                                *                INITIALIZE ASSORTED FCS OBJECTS IN DIRECTORIES
                                *
                                *                NOW INITIALIZE OPERATE
                                *
                                        DIRNAME  OPERATE
 7133  6110000021                        SETXJ    DR:UACC!,CX.TEMP,TEMPI.IND,CX.NLKY
 7137  66100                             SETRET   B0,B0,I'CX.TEMP+1
 7142  0130000021000010000003           XJ       XJLOC,,'RETLOC
                                *
 7146  6110007152                        ECSOBJ   (OPERCL),CX.OPRS
 7153  6110007157                        ECSOBJ   (MASTER),CX.MAST
 7160  6110000000 +                      CALLR    GETLOCK!=0LPRNLOCK,=0LOPERATE,=0
 7163  6110007167                        ECSOBJ   (PRNLOCK),CX.TEMP+3
 7170  6110000003 +                      CALLR    GETLOCK!=0LSEQCHN,=0LOPERATE,=0RAA
 7173  6110007177                        ECSOBJ   (SEQCHN),CX.TEMP+3
 7200  6110000005 +                      CALLR    GETLOCK!=0LTPELOCK,=0LOPERATE,=0
                                *
                                *  PUT OPERCL INTO ROOT DIRECTORY
                                *       CX.TEMP+1<---ROOTD
                                *       CALLR    ECSOBJ,0LSUPERCL,CX.OPRS,-1
                                *                (-1 SIGNALS NO INDIRECT REF FOR CX.OPRS)
                                *
 7203  6110000021                        DOXJ     EC!CIN!'CX.CMSTF,CST.+RT,CX.TEMP+1
 7212  6110007216                        ECSOBJ   (SUPERCL),CX.OPRS
 7217  6110007223                        ECSOBJ   (TPELOCK),CX.TEMP+3
                                *
```

```
                                *                NOW CREATE SCAN LISTS FOR PDLIST AND TDLIST
                                *
 7224  6110000010                      CALLR     JPROC2R,8,10
 7227  6110000002                      CALLR     JPROC2R,2,9
                                *
                                *
                                *
 7232  0200007624                      RTNR
                                *
```

```
                                *
                                *
                                *                       FREEZE ALL FILES IN DIRECTORY NAMED FREEZE
                                *                             IN ROOT DIRECTORY
                                *
                                *                       PLACES ROOT DIRECTORY IN CX.TEMP
                                *                       PLACES LIST DIRECTORY IN CX.TEMP+2
                                *                       PLACES FILE TO BE FROZEN IN CX.TEMP+3
                                *
                                *                       USES TEMP1 FOR COUNTER
                                *
                                *                       ATTACHES ALL BLOCKS UP TO 1ST MISSING BLOCK
                                *
                                *                       ATTACHES IN UNITS OF 100B WORDS
                                *
                                *
7233  611000021                 JPROC3    DOXJ        EC:CIN:!CX.CMSTF*B0*CX.TEMP
7242  6110007245                          DIRNAME     FREEZE
7246  6110000021                          SETXJ       DR:UACC:!*CX.TEMP*TEMP1+IND*CX.NLKY
7252  66100                               SETRET      B0,B0,1!CX.TEMP+2
7255  0130000021000001000003              XJ          XJLOC,JPROC3X,,RETLOC
                                *
7261  7160000001                          SX6         1
            5160000204                    SA6         TEMP1       INDEX OF ENTRY TO FREEZE
                                *
7262  611000021                 JPROC3A   SETXJ       DR:DSPN:!*CX.TEMP+2,TEMP1+IND
7266  611000011                           SETRET      9,XJLOC+4,B0,B0
7271  0130000021000001000003              XJ          XJLOC,BTNR,,,RETLOC (GET NAME OF NTH ENTRY)
7275  7110000030                          SX1         XJLOC+4*3
7276  6170007277                          CALL        FORDIR
7277  5160000023                          SA6         XJLOC+2
            611000021                     SETXJ       DR:UACC:!*CX.TEMP+2,XJLOC+2+IND*CX.NLKY
7304  66100                               SETRET      B0,B0,1!CX.TEMP+3
7307  0130000021000001000003              XJ          XJLOC,,!*RETLOC     (GET NTH ENTRY)
                                *
7313  611000021                           SETXJ       DF:OPRO:!*CX.TEMP+3
7316  66100                               SETRET      B0,B0,1!CX.TEMP+3
7321  0130000021000001000003              XJ          XJLOC,,!*RETLOC     (OPEN THE FILE)
                                *
7325  76600                               SX6         B0
            5160000023                    SA6         XJLOC+2             (ADDRESS TO ATTACH)
7326  611000021                           SETXJ       DF:ATCH:!*CX.TEMP+3,XJLOC+2+IND*100B
                                *
7332  0130000021000000000002   JPROC3B   XJ          XJLOC,JPROC3C,JPROC3C
7335  5110000023                          SA1         XJLOC+2
            7120000100                    SX2         100B
7336  36612                               IX6         X1+X2
            5461O0                        SA6         A1                  (STEP ATTACH ADDRESS)
                  0000007332              JP          JPROC3B
                                *
7337  611000021                 JPROC3C   DOXJ        DF:FREZ:!*CX.TEMP+3
                                *
7345  5110000204                          SA1         TEMP1
```

```
                  7120000001            SX2     1
7346  3612                              IX6     X1+X2
                                        SA6     A1          (STEP TO NEXT ENTRY)
            5461O
                  0500007262            JP      JPROC3A
                                *
                                *
7347  6110007352        JPROC3X   MSGOUT  (NO FREEZE FILE)
7354  0200007624                  RTNR
```

```
                                *
                                *
                                *                       FETCH OBJECT FROM DIRECTORY AT B2
                                *                       USE NAME AT B1 IN DISPLAY
                                *                       USE NULL ACCESS KEY
                                *                       PUT RESULT AT B3
                                *                       ALSO PUT IN CMMDSTF AT B4
                                *
7355  76620                     JPFETCH   SX6     B2
            5160002207                    SA6     TEMP4
                        76630             SX6     B3
7356  5160002205                          SA6     TEMP2
                  76620                   SX6     B4
7357  5160002206                          SA6     TEMP3
                  6170004200              CALLR   DIRNAME
7361  6110000021                          SETXJ   DR:UACC!,TEMP4+IND,TEMP1+IND,CX,NLKY
7365  5110000205                          SAI     TEMP2
                  66100                   SETRET  B0,B0,I,XJ
7370  0130000021000001000003              XJ      XJLOC,,,RETLOC
7374  6110000021                          DOXJ    ECICOUT!,CX,CMSTF,TEMP3+IND,TEMP2+IND
7403  0200007624                          RTNR
                                *
                                *
                                *
                                *                       PLACE ECS OBJECT IN A DIRECTORY
                                *
                                *                       DIRECTORY IS AT CX,TEMP+1
                                *
                                *                       B1 POINTS TO NAME IN DISPLAY
                                *                       B2 IS INDEX OF CLIST HOLDING OBJECT OR OF THE OBJECT
                                *                       B3 IS INDEX WITH IN THE CLIST
                                *                              OR -1 IF B2 IS INDEX OF THE OBJECT ITSELF
                                *
7404  76600                     ECSOBJ    SX6     B0
            0730007407                    LT      B3,B0,ECSOBJ1
7405  7160000001                          SX6     1
                  2A635                   LX6     29
                        76730             SX7     B3
7406  12667                               BX6     X6+X7
            20636                         LX6     30
7407  76720                     ECSOBJT   SX7     B2
            12667                         BX6     X6+X7
                  5176A000205             SA6     TEMP2
                                *
7410  6170004200                          CALLR   DIRNAME
7412  6110000021                          SETXJ   DR:UACC!,CX,TEMP+1,TEMP1+IND,CX,NLKY
7416  66100                               SETRET  B0,B0,I,CX,TEMP+2
7421  0130000021000001000003              XJ      XJLOC,ECSOBJ3,,,RETLOC
                                *
7425  6110000021                ECSOBJ2   DOXJ    DNIODNII!,CX,TEMP+2,TEMP2+IND
7434  0200007624                          RTNR
                                *
                                *
                                *                       HAVE TO CREATE THE DYNAMIC NAME TAG
```

```
                                *
7435  6110000021                ECSOBJ3   SETXJ     ONICRON!
7440  0130000021000T000003               XJ        XJLOC,,,,BETLOC
7444  6110000021                         DOXJ      DRIHDLK!,CX,TEMP+1,TEMP1+IND,CX,TEMP+2
7453  6110000021                         SETXJ     DRIADPR!,CX,TEMP+1,TEMP1+IND,CX,NLKY,TEMP2+IND
7462  7110100653                         YSETXJ    MANYBITS+IND
7464  0130000021000000000002            XJ        XJLOC
7467  0200007425                         JP        ECSOBJ2
                                *
                                *
                                *                   OBTAIN LOCK EVENT CHANNEL FROM BEAD,
                                *                   OR CREATE IT, IF CREATE IT, PUT ON EVENT POINTED TO BY B3
                                *
                                *                   READ NAMES AT B1 AND B2
                                *
                                *                   PLACES RESULT AT CX.TEMP+3
                                *
7470  56130                     GETLOCK   SA1       B3
            10611                       BX6       X1
                  5716000204            SA6       TEMP1     SAVE POSSIBLE EVENT
                                *
7471  56110                               SA1       B1
            56220                         SA2       B2
                  5713000414              SA3       LIVEFLAG
7472  0303007505                          ZR        X3,GETLOCK1           LIVE CASE
                                *
                                *                   TEST CASE
                                *
                  6711000021            SB1       XJLOC
7473  66600                               SB6       B0
            6170000003                    SB7       CX.TEMP+3
7474  0130000620000000000002              XJ        BEAD
7477  6110000021                          SB1       XJLOC
                  6714000001              SB6       1
7500  6170000003                          SB7       CX.TEMP+3
7501  0130000620000000000002              XJ        BEAD
7504  0200007624                          RTNR
                                *
                                *                   LIVE CASE
                                *
7505  6110000021                GETLOCK1  DOXJ      ECICEVC!,CX.MSTAB,CX.TEMP+3,2
7514  6110000021                          DOXJ      ECISEVI,CX.TEMP+3,TEMP1+IND
7523  0200007624                          RTNR
                                *
                                *
                                *
                                *                   MAKE UP A SCAN LIST USING DIRECTORY AT
                                *                             CMMSTF+B1 AND PLACE AT CMMSTF+B2
                                *
7524  76620                     JPROC2R   SX6       B2
            5716000204                    SA6       TEMP1
                  76310                   SX3       B1
7525  6110000021                          DOXJ      ECICINI,CX.CMSTF,X3,CX.TEMP
7534  6110000021                          DOXJ      ECICCLI,CX.MSTAB,CX.TEMP+1,2
```

JPROC

```
  7543  6110000021          DOXJ    EC:COUT!,CX.CMSTF,TEMP1+IND,CX.TEMP+1
  7552  6110000021          DOXJ    EC:COUT!,CX.TEMP+1,B0,CX.TEMP
  7561  6110000021          DOXJ    EC:COUT!,CX.TEMP+1,1,CX.NLKY
  7570  0400007624          RTNR
```

```
                                *
                                *
                                *
                                *      THIS SUBROUTINE XFERS B2 ITEMS
                                *            ( 0 OR 5, WHICH EVER IS LESS )
                                *      FROM X1, X2, . . . XE TO B1, B1+1, . . B1+4
                                *
                                *      IF XN IS POSITIVE, CONTENTS OF XN IS XFERED
                                *      IF XN IS NEGATIVE, CONTENTS OF CELL ADDRESS -XN
                                *
                                *      X1 WILL BE DESTROYED
                                *
                                *      B1 IS ADVANCED AND B2 DECREMENTED BY 1 FOR EACH XFER
                                *
7571  43074                     SET     MX0     60
            66570                       SB5     B7
                  10611                 BX6     X1
7572  617000 7573                       CALL    SETA
7573  10622                             BX6     X2
7574  617000 7575                       CALL    SETA
7575  10266                             BX5     X6
            10633                       BX6     X3
7576  617000 7577                       CALL    SETA
7577  10366                             BX3     X6
            10644                       BX6     X4
7600  617000 7601                       CALL    SETA
7601  10466                             BX4     X6
            10655                       BX6     X5
7602  617000 7603                       CALL    SETA
7603  10566                             BX5     X6
                                *
7604  66750                     SETB    SB7     B5
            027000000                   JP      B7
                                *
                                *
7605  060200 7604               SETA    GE      B0,B2,SETB
                  7544677777            SX6     X6-IND
7606  033600 7610                       NG      X6,SETA1
                  57120                 SA1     X6
                        10611           BX6     X1
7607  022000 7611                       JP      SETA2
7610  7266100000                SETA1   SX6     X6+IND
7611  56610                     SETA2   SA6     B1
            611100000001                SB1     B1+1
7612  612277 7776                       SB2     B2-1
                  027000000             JP      B7
```

```
                                *
                                *
                                *                       INITIALIZE RETLOC
                                *
                                *                       B1      DATA COUNT
                                *                       B2      DATA ADDRESS
                                *                       B3      CAP COUNT
                                *                       B4      CAP INDEX
                                *
7613  76610                     SETRET    SX6     B1
            20636                       LX6     30
                  76720                 SX7     B2
                        12667           BX6     X6+X7
7614  5160000047                        SA6     RETLOC
                  76630                 SX6     B3
                        20636           LX6     30
7615  76740                             SX7     B4
            12667                       BX6     X6+X7
                  5160000050            SA6     RETLOC+1
7616  0270000000                        JP      B7
```

```
                                *
                                *
                                *                       HANDLE A CALL WITH STACK
                                *
7617  5150000075                CALLR     SA5           CSTKPNTR
                  0305007623              ZR            X5,CALLRERR
7620  63650                               SB6           X5
            6166777776                    SB6           B6-1
7621  5166000051                          SA6           CALLSTK+B6
                  76640                   SX6           B6
                        54650             SA6           A5
7622  0270000000                          JP            B7
                                *
                                *
7623  6170007624                CALLRERR  CALL          CRASH
                                *
                                *
                                *                       HANDLE A RETURN WITH CALL STACK
                                *
7624  5150000075                RTNR      SA5           CSTKPNTR
                        63650             SB6           X5
7625  7166000001                          SX6           B6+1
                        54650             SA6           A5
7626  5156000051                          SA5           CALLSTK+B6
                        63750             SB7           X5
7627  0270000000                          JP            B7
                                *
                                *                       POP CALL STACK
                                *
7630  5110000075                POPR      SA1           CSTKPNTR
                  7247000001              SX6           X1+1
7631  54610                               SA6           A1
            0270000000                    JP            B7
                                *
                                * CALL STACK ACTIONS WHICH DONT CLOBBER ASCII PKD REGISTERS
                                *
7632  5140000075                CALLR7    SA4           CSTKPNTR
                  0304007623              ZR            X4,CALLRERR
7633  76130                               SX1           B3          . SAVE B3 (HAS A PAREMETER)
                        63340             SB3           X4
                              6133777776  SB3           B3-1
7634  5173000051                          SA7           CALLSTK+B3
                        74740             SX7           B3
                              54740       SA7           A4
7635  63310                               SB3           X1          . RESTORE B3
            0270000000                    JP            B7
                                *
                                * RTNR7
                                *
7636  5140000075                RTNR7     SA4           CSTKPNTR
                        63340             SB3           X4
7637  7173000001                          SX7           B3+1
                              54740       SA7           A4
```

```
7640  514300005 1                       SA4     CALLSTK+B3
                  63740                 SB7     X4
7641  027000000 0                       JP      B7
                                *
                                * POPR7
                                *
                      POPR7     SA1     CSTKPNTR
7642  511000007 5                       SX7     X1+1
                  7277000001            SA7     A1
7643  54710                             JP      B7
            027000000 0
```

```
                                *
                                *
                                *                TYPE OUT A SELF CONTAINED MESSAGE
                                *
7644  614000011O        MSGOUT  SB4     OUTBUF
                   615n000012          SB5     OUTBFSZ
7645  66600                     SB6     B0
7646  6170007647                CALL    STASCII
7647  6120000120                SB2     80
7650  6170007651                CALL    DISLINE
7651  6170007652                CALL    CRASCII
7652  013000062100nn000002      XJ      TTYOUT
7655  0200007624                RTNR
                                *
                                *
                                *                SET UPA AND FINISH TTY PRINTING
                                *
7656  76670             SETPRNT SAVE7   SETPRNT7
7657  6140000110                SB4     OUTBUF
                   615n000012          SB5     OUTBFSZ
7660  66600                     SB6     B0
7661  6170007662                CALL    STASCII
7662  5110000134                GET7    SETPRNT7
7663  0270000000                JP      B7
                                *
7664  76770             FINPRNT SX7     B7
                   517000n134         SA7     SETPRNT7
7665  6170007666                CALL    CRASCII
7666  013000062100nn000002      XJ      TTYOUT
7671  5110000134                GET7    SETPRNT7
7672  0270000000                JP      B7
                                *
7673  76770             DOPRNT  SX7     B7
                   517000n134         SA7     SETPRNT7
7674  6170007675                CALL    FNASCII
7675  013000062100nn000002      XJ      TTYOUT
7700  5110000134                GET7    SETPRNT7
7701  0270000000                JP      B7
```

```
                                *
                                *                       GET A COMMAND LINE FROM USER
                                *                       SPLIT OFF 1ST PARAMETER
                                *                       CONVERT TO DISPLAY CODE
                                *
7702  5110000176                ASKUSER   SA1     RUNB7
            5371O                         SA1     X1
                  43065                   MX0     60-7
7703  15610                               BX6     -X0*X1
          2066L                           LX6     60-7-4
                  516000011L              SA6     OUTBUF+1
7704  7160000001                          SX6     1
                  5160000110              SA6     OUTBUF
7705  0130000621000000002                 XJ      TTYOUT
7710  0130000624000100003                 XJ      TTYIN,,,TTYINRP
7714  6110000122                          CALLR   SETGENA,INBUF+INLCL
7717  6110000106                          CALLR   NXTPRM,INLCL
7721  6110000101                          CALLR   DSPLYW,PARAMBF+10
7724  0200007624                          RTNR
```

```
                                *
                                *
                                *                       IF X2 .NE. 0    SETS X1 = 0 AND RETURNS
                                *
                                *                       ELSE SEARCHES GIVEN LIST FOR CONTENTS OF X1
                                *
                                *                       IF NOT FOUND, SETS X1 = 0 AND RETURNS
                                *
                                *                       ELSE SETS X1 TO VALUE
                                *
                                *                       CALLR  NAMEVEC,LIST
                                *
7725  0312007732                NAMEVEC   NZ       X2,NAMEVEC3
7726  56210                     NAMEVEC1  SA2      B1
            0302007732                    ZR       X2,NAMEVEC3
                  13212                   BX2      X1-X2
7727  0332007731                          NG       X2,NAMEVEC2
            0312007731                    NZ       X2,NAMEVEC2
7730  5111000001                          SA1      B1+1
            0200007624                    RTNR
                                *
7731  6111000002                NAMEVEC2  SB1      B1+2
            0200007720                    JP       NAMEVEC1
                                *
7732  76100                     NAMEVEC3  SX1      B0
            0200007624                    RTNR
                                *
                                *
                                *
                                *                       DO AN XFER VECTOR
                                *
                                *                       X1          INDEX
                                *                       B1          START OF VECTOR
                                *                       B2          SIZE OF VECTOR
                                *
                                *                       RETURNS IF X OUT OF RANGE
                                *
7733  63310                     TRAVEC    SB3      X1
            0730007736                    LT       B3,B0,TRAVEC1
7734  0632007736                          GE       B3,B2,TRAVEC1
                  64113                   SB1      B1+B3
7735  0210000000                          JP       B1
                                *
7736  0270000000                TRAVEC1   JP       B7
                                *
7737  76410                     SETRET    SX4      B1
            20436                         LX4      30
                  76750                   SX7      B2
                        12747             BX7      X4+X7
7740  5170000047                          SA7      RETLOC     . VFD 30/DATA.COUNT,30/DATA.ADDR
            0270000000                    JP       B7
7741  76410                     SETRETA   SX4      B1
            20436                         LX4      30
```

```
                  74720                 SX7     B2
                        12744           BX7     X4+X4
7742  5170000050                        SA7     RETLOC+1    . VFD 30/CAP.COUNT,30/CAP.INDEX
                  0270000000            JP      B7
                                *
                                * PUTR
                                *       MACRO FOR SETXJ7 CODE
                                *       COPE WITH INDIRECT REFERENCES
                                *
                                PUTR    MACRO   BREG
                                        SX7     BREG
                                        SB*BREG BREG-IND
                                +       LT      BREG,B0,*+1
                                        SA4     BREG
                                        BX7     X4
                                        ENDM
                                *
                                * SETXJ7
                                *       SAVE I/O REGISTERS WHILE DOING XJ
                                *
7743  0300007757                SETXJ7  ZR      X0,SETXJ7T
                        74710           PUTR    R1
7746  53710                             SA7     X1
                  7200777776            SX0     X0-1
7747  0300007757                        ZR      X0,SETXJ7T
                        74730           PUTR    R2
7752  5271000001                        SA7     X1+1
                  7200777776            SX0     X0-1
7753  0300007757                        ZR      X0,SETXJ7T
                        74730           PUTR    R3
7756  5271000002                        SA7     X1+2
7757  0270000000                SETXJ7T JP      B7
                                *
                                *
                                *
                                * ROUTINE TO SEND TIME TO USER
                                *
7760  6110000021                DOTIME  DOXJ    ECITIME!
7766  5160000111                        SA6     OUTBUF+1    .TIME
                  7164000000            SX6     ASCIIBLN    . BLANK
7767  20661                             LX6     60-4-1      . LEFT JUSTIFY THE BLANK
                        5160000112      SA6     OUTBUF+2
7770  7160000011                        SX4     8           . CHAR COUNT
                        5164000011O     SA6     OUTBUF
7771  0130000621000000002              XJ      TTYOUT
7774  5170000111                        SA7     OUTBUF+1    . DATE
                  7170000155            SX7     ASCIICR     . CARRIAGE RETURN
7775  20761                             LX7     60-4-1      . LEFT JUSTIFY THE CARRIAGE RETURN
                        5170000112      SA7     OUTBUF+2
7776  0130000621000000002              XJ      TTYOUT
10001 0200007624                        RTNR
                                *
                                *CRGPRNT
```

```
                                *       PRINT CURRENT CHARGES
                                *
                                *       CALLR     CRGPRNT,DATALOC
                                *
10002  716000000200             CRGPRNT SX6       2
       516000020400                     SA6       TEMP1     . INDEX BEGINS AFTER TIME AND DATE
10003  76610                            SX6       B1        . SAVE ADDRESS OF DATA
       516000020500                     SA6       TEMP2
                                *
10004  716000000020                     SX6       ASCIIBLN
       206401                           LX6       60-4-7    . LEFT JUSTIFY
10005  516000011200                     SA6       OUTBUF+2
       716000001100                     SX6       9
10006  516000011000                     SA4       OUTBUF    . CHARCOUNT
       561100                           SA1       B1
              106111                    BX6       X1
10007  516000011100                     SA4       OUTBUF+1  . TIME
10010  013000062100000000002            XJ        TTYOUT    . DO IT
10013  716000001550                     SX6       ASCIICR
       206401                           LX6       60-4-7    . LEFT JUSTIFY
10014  516000011200                     SA6       OUTBUF+2
       511100000100                     SA1       B1+1
10015  106111                           BX6       X1
       516000011100                     SA6       OUTBUF+1  . DATE
10016  013000062100000000002            XJ        TTYOUT    . DO IT
                                *
10021  617001002200             CRGPRNT1 CALL      SETPRNT
10022  512000020400                     SA2       TEMP1     . INDEX
       523500263000                     SA3       LOGMGVEC+X2
10023  631300                           CALL      DISLINE,X3,20
10025  512000020400                     SA2       TEMP1     . INDEX
       511600020500                     SA1       TEMP2     . DATA LOCATION
10026  361120                           IX1       X1+X2
       531100                           SA1       X1        . REAL POOP
              611000002400              CALL      DECNPK,20,0
10031  617001003200                     CALL      FINPRNT
10032  511000020400                     SA1       TEMP1     . INDEX
       726100000100                     SX6       X1+1
10033  546100                           SA6       A1
       721677774700                     SX7       X6-LOGOUTRT+2       . DONT DO DOLLARS IN LOOP
10034  033101002100                     NG        X1,CRGPRNT1
10035  617001003600                     CALL      SETPRNT
10036  511000020400                     SA1       TEMP1     . INDEX
       523100263000                     SA3       LOGMGVEC+X1         . CHARGE DESCRIPTOR
10037  631300                           CALL      DISLINE,X3,20
10041  511000020400                     SA1       TEMP1     . INDEX
       512600020500                     SA2       TEMP2     . DATA BASE
10042  361120                           IX1       X1+X2
       531100                           SA1       X1
              611000002400              CALL      DECNPK,20,-3        . PRINT DOLLARS, NOT MILLS
10045  617001004600                     CALL      FINPRNT
10046  020000076240                     RTNR
```

```
      6                                    END

                  41063   STORAGE USED          2678 STATEMENTS      1046 SYMBOLS      000218 INVENTED SYMBOLS
                          6600 ASSEMBLY        70.673 SECONDS        5506 REFERENCES
```

3 TYPE ERROR DUPLICATE MACRO DEFINITION. NEW ONE OVERRIDES.
OCCURRED ON PAGES 3

SYMBOLIC REFERENCE TABLE.

ADDCHAR	0	EXTERNAL*								
AKICRAK	0	EXTERNAL*	23/46							
AKICRAK	100560		23/46	D	116/26	116/43				
AL.RECS	0		3/52	D	106/25					
AL.RMOT	4		3/53	D	106/30					
ASCIIBLN	0		3/50	D	135/40	136/10				
ASCIICR	155		3/49	D	135/47	136/19				
ASCPMDE	0	EXTERNAL*								
ASKBDG	3607		5/08	E	57/25	57/34	65/13 L			
ASKUSER	7702		38/27		39/15	47/06	59/20	112/37	133/04 L	
			38/40		44/09	53/04	110/13	114/29		
ATCHBLK	4124		4/39	E	78/39 L					
ATCHBLK1	4127		78/41		78/45 L					
ATCHDRL	202		4/41	E	19/28 D					
ATCHDBLK	202		19/27	L	19/28	78/47 S	79/11			
BADOUT	2625		49/39		49/52	50/02	50/05	50/10 L		
BADSYNTX	3454		58/43		59/02	52/04 L				
BEAD	620		25/32	E	25/34 L	57/13	58/07	58/11	126/32	126/36
BEADG	3616		65/20		65/23 L					
BEADGB	3425		60/19		60/39 L					
BEADP	0	EXTERNAL*	47/53		48/03	57/51	58/01	60/10	60/13	
BEADSDBG	3604		54/17		64/40 L					
BIGTOY	3310		54/38		59/19 L					
BILL	3353		54/41		60/09 L					
BITS1	4		53/13		55/17 D					
BITS2	3		53/19		55/18 D					
BITS3	4		34/39		35/27	55/19				
BRKCD	0		4/23 D							
BRUCE	3435		54/42		60/50 L					
BUG	3145		54/09		57/10 L					
BUG1	3155		57/11		57/16 L					
CALLF	2276		45/05		46/12 L					
CALLFRET	2300		46/11		46/17 L					

CALLR 7617

| | | |

CLRSPC	4547	76/10	84/20	94/17	95/13 L					
CLRSPCA	4562	95/25	95/32 L							
CLRSPCX	4571	84/15	84/31	84/38	95/40 L					
CLRSPC1	4567	95/20	95/38 L							
CLRSPC2	4575	95/45 L	95/52							
CLRSPC3	4603	95/46	95/48	96/03 D						
CLSTSZ	107	13/49	15/06 L							
CMMDBIT	1	54/05	54/18	54/23	54/24	54/25	55/10 D	55/18	56/05	
CMMDS	3474	4/37 E	63/11 L	112/14	113/01	118/29				
		42/31	64/41	112/31	117/06					
CMMDSBR	212	4/50 E	20/06 D							
CMMDSBLK	212	20/05 L	20/06	20/10	64/18	64/19	64/20	64/21	64/27	
CMMDSEM	3602	54/16	64/34 L							
CMMDSEM1	3554	64/15 L	64/36							
CMMDSER	3502	47/50	63/14	63/18 D						
CMMDSERT	3577	64/18	64/27 L							
CMMDSERX	3601	64/19	64/20	64/21	64/25	64/30 L				
CMMDSER1	3517	63/23	63/38 L							
CMMDSER2	3527	63/45 L								
CMMDSER3	3531	63/21	63/22	63/24	63/27	63/50 L				
CMMDSER4	3533	63/29	64/01 L							
CMMDSFIN	3575	64/09	64/22 L							
CMMDSJP	3506	63/19	63/21 L	63/32						
CMMDSMG	3535	63/47	63/52	64/03	64/06 L					
CMMDSRTN	645	28/05 L	47/50	63/14						
CMMDSSIZ	11	63/20	63/32 D							
CMMDX	2331	31/27	40/37	41/19	47/14 L	52/07				
CMMDY	2440	47/44	48/30 L							
CNTRBD	6435	115/26	117/34 L							
COMMANDB	2676	31/36	40/38	41/20	52/06 L	54/05	110/36			
COMMAND1	2322	47/06 L	47/14							
COMMAND2	2353	47/08	47/37 L							
COMMAND3	2413	47/40	48/10 L							
COMMAND4	2420	47/50	48/15 L							
COMMAND5	2443	48/30	48/39 L							
COMMLIST	2334	47/07	47/25 L							
CPYBF	0	4/22 D								
CPICMRG	0	EXTERNAL* 23/10								
CPICMRGI	100514	23/10 D	51/05							
CRASCII	0	EXTERNAL* 132/12	132/29							
CRASH	4030	4/36 E	34/03	57/07	63/20	65/22	79/07	117/07		
		29/17	34/06	57/27	63/25	74/08 L	79/22	118/30		
		33/26	46/08	57/36	63/26	77/04	112/15	130/16		
		33/29	46/12	59/05	63/28	78/14	112/32			
		33/53	46/38	61/07	64/25	78/43	113/02			
		49/23	51/08	136/05 D						
CRGPRNT	10002	136/27 L	136/41							
CRGPRNT1	10021	59/52 L								
CRUNCH	3343	54/15	57/41 L							
CRUNCHS	3175	4/32 E	26/08 L							
CRUNXJ	635	18/27 L	31/09 S	34/32	34/46 S	35/20	35/34 S	76/06		
CSTKBASE	76	18/25 L	31/08 S	35/34	130/05	130/30	130/50			
CSTKPNTR	75	31/07	34/34 S	76/08 S	130/20	130/37	131/07			

CSTSUM 21

111/29 D 111/37 111/39 D 111/41 111/44 111/46 D 111/48 111/51
111/35 111/37 D 111/39 111/42 111/44 D 111/46 111/49 111/51 D
111/35 D 111/37 111/40 111/42 D 111/44 111/47 111/49 D 111/51
111/35 111/38 111/40 D 111/42 111/45 111/47 D 111/49
111/36 111/38 D 111/40 111/43 111/45 D 111/47 111/50
111/36 D 111/38 111/41 111/43 D 111/45 111/48 111/50 D
111/36 111/39 111/41 D 111/43 111/46 111/48 D 111/50

CST.DAYF 16 111/49 D
CST.EVDF 17 111/50 D
CST.EVLC 20 111/51 D
CST.NLK 1 111/36 D
CST.PBK 3 111/38 D
CST.PRSC 12 111/45 D
CST.PROF 15 111/48 D
CST.PSK 7 111/42 D
CST.SIMF 13 111/46 D
CST.TDSC 11 111/44 D
CST.TTY 14 111/47 D
CST.↑CL 5 111/40 D
CST.↑OP 6 111/41 D
CST.↑PB 4 111/39 D
CST.↑PD 10 111/43 D
CST.↑RT 0 111/35 D 121/51
CST.↑TD 2 111/37 D

CX.BDF 63 14/50 L 58/05 58/10 60/17
CX.BDGB 25 14/26 L 60/39
CX.BDGS 26 14/27 L 31/31 31/44 32/09
CX.BEAD 12 14/13 L 25/34 121/26
CX.BEADS 16 14/18 L 57/06
CX.CLPF 15 14/17 L 112/11 112/28 112/51 119/17
CX.CLSCD 13 14/14 L 22/16 25/20 36/43
CX.CMMDS 14 14/15 L 14/16 20/08 120/13
CX.CMSTF 37 14/37 L 38/09 38/12 114/48 120/08 123/18 127/02
31/18 38/10 40/06 115/05 120/09 125/21
38/08 38/11 40/08 116/23 121/51 126/53
14/10 L 25/16 106/30 106/34
14/25 L 26/08 57/42 59/53 61/04
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DA:MVSP 0 EXTERNAL*
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DECNFK           0          EXTERNAL*
DF:CTRS          0          EXTERNAL*
DF:CATCH         0          EXTERNAL*
DF:CATCH:  100542
DF:CAOF          0          EXTERNAL*
DF:CAOF:   100546
DF:CFIL          0          EXTERNAL*
DF:CFIL:   100552
DF:CLO           0          EXTERNAL*
DF:CLO:    100544
DF:DACF          0          EXTERNAL*
DF:DACF:   100573
DF:DBUG          0          EXTERNAL*
DF:DBUG:   100574
DF:DONE          0          EXTERNAL*
DF:DONE:   100572
DF:DSUB          0          EXTERNAL*
DF:DSUB:   100553
DF:DTCM          0          EXTERNAL*
DF:DTCM:   100547
DF:EOCC          0          EXTERNAL*
DF:FREZ          0          EXTERNAL*
DF:FREZ:   100577
DF:FUND          0          EXTERNAL*
DF:FUND:   100576

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DF:OPRO          0      EXTERNAL*      23/38
DF:OPRO:    100550                     23/38  D  123/37
DF:OPRW          0      EXTERNAL*      23/44
DF:OPRW:    100556                     23/44  D  120/30
DF:PCLS          0      EXTERNAL*      23/35
DF:PCLS:    100545                     23/35  D  120/53
DF:READ          0      EXTERNAL*      23/33
DF:READ:    100543                     23/33  D  120/35   120/44
DF:WRIT          0      EXTERNAL*      23/39
DF:WRIT:    100551                     23/39  D  106/30   106/34   115/02   120/42   120/51
DF:XSEC          0      EXTERNAL*      24/06
DF:XSEC:    100575                     24/06  D   31/49   107/11   107/36
DIRNAME       4200                      4/40  E  115/15   115/29   115/50   116/18   116/42   121/33   125/45
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DKBDATA        222                      5/03  E   20/20  L
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DKBINIT          0      EXTERNAL*      30/14
DMYACFBD      6423                     114/43       117/15  L  117/15
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DN:CLAO          0      EXTERNAL*      23/49
DN:CLAO:    100563                     23/49  D   49/31
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DR:ADPR          0      EXTERNAL*      23/51
DR:ADPR:    100565                     23/51  D  116/32   116/38   116/47   126/06
DR:CRDR          0      EXTERNAL*      23/42
DR:CRDR:    100554                     23/42  D   39/33   115/11   115/16   115/22   115/30   116/04
DR:CRFI          0      EXTERNAL*      23/45
DR:CRFI:    100557                     23/45  D  115/26
DR:DBUG          0      EXTERNAL*      24/02
DR:DBUG:    100571                     24/02  D   60/45
DR:DSPN          0      EXTERNAL*      23/43
DR:DSPN:    100555                     23/43  D  123/27
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DR:HDLK:    100560                     23/52  D  115/48   116/01   116/37   126/05
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DR:OPDR          0      EXTERNAL*      23/50
DR:OPDR:    100564                     23/50  D   31/34    40/13
DR:RMOE          0      EXTERNAL*      24/01
DR:RMOE:    100570                     24/01  D   42/32
DR:UACC          0      EXTERNAL*      23/53
```

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DRIUACC  100567                 23/53 D  116/19     121/11     123/20     125/17
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DSKFTYP      376                 5/07 E   20/34 L    30/10 S
DSPLYW         0      EXTERNAL*  36/52    133/19
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DTCHBLK     4141                 4/39 E   76/25      79/03 L
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DUMP        5444               110/34    112/19 L
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ECN.HSP        0      EXTERNAL*  84/32
ECN.PNC        0      EXTERNAL*  70/03
ECN.TBS        0      EXTERNAL*  84/39
ECN.TMP        0      EXTERNAL*  43/13
ECN.UXE        0      EXTERNAL*  74/14
ECN.UXF        0      EXTERNAL*  74/22
ECSOBJ      7404               121/38    121/39     121/41     121/43     121/52     121/53     125/34 L
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ECSOBJ2     7425               125/50 L  126/08
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ECSPGP      5143               105/24    105/25     105/29     105/42     105/43     105/53 L
ECSPGP1     5152               106/07    106/07     106/10 L
ECSPGT      5102               102/26    102/36     105/19 L
ECSPGT1     5115               105/24    105/28 L
ECSPGT2     5121               105/29    105/33 L
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ECSPV       5070               102/23    102/33     105/06 L
ECSSPC      5066               104/07    104/15 L
EC.AKN         0      EXTERNAL*  120/36
EC.BEADS      17                 4/04 D   41/40
EC.ONTN        0      EXTERNAL*  120/45
EC;CCAP        0      EXTERNAL*  23/22
EC;CCAP;    100530                23/22 D  114/46     115/04
EC;CCL         0      EXTERNAL*  23/29
EC;CCL;     100537                23/29 D   39/44     127/01
EC;CEVC        0      EXTERNAL*  23/21
EC;CEVC;    100527                23/21 D  126/42
EC;CIN         0      EXTERNAL*  23/26
EC;CIN;     100534                23/26 D   38/09     38/12      40/08     120/09     121/51
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EC;COUT        0      EXTERNAL*  23/27
EC;COUT;    100535                23/27 D   39/50      40/02      40/09     115/05     125/21     127/03
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EC;DSAB        0      EXTERNAL*  23/16
EC;DSAB;    100522                23/16 D  105/07     106/25
EC;DSCP        0      EXTERNAL*  23/28     25/19      25/25      25/30
EC;DSCP;    100536                23/28 D   31/22     58/46     116/29     121/26
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EC;DSSE        0      EXTERNAL*  23/31     27/14
```

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```
EC:DSSE  100541                  23/31 D   36/29
EC:ESML       0   EXTERNAL*      25/10
EC:FRET       0   EXTERNAL*      23/15
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EC:GEVF       0   EXTERNAL*      23/24
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EC:GEVH       0   EXTERNAL*      23/25
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EC:GVMH       0   EXTERNAL*      23/19
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EC:JUMP       0   EXTERNAL*      23/11
EC:JUMP  100515                  23/11 D   36/43    57/06
EC:MCAP       0   EXTERNAL*      23/20     65/28
EC:MCAP  100526                  23/20 D   58/52   115/33
EC:MVMT       0   EXTERNAL*      23/17
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EC:MVSP       0   EXTERNAL*      23/18
EC:MVSP  100524                  23/18 D  104/05
EC:READ       0   EXTERNAL*      25/15
EC:RERR       0   EXTERNAL*      23/13
EC:RERR  100517                  23/13 D   46/26
EC:RPAR       0   EXTERNAL*      23/12     65/23
EC:RPAR  100516                  23/12 D   44/14    45/13
EC:RSTR       0   EXTERNAL*      26/03     27/09
EC:RTRN       0   EXTERNAL*      23/14     25/07
EC:RTRN  100520                  23/14 D   43/11
EC:SAVE       0   EXTERNAL*      25/52     27/05
EC:SETP       0   EXTERNAL*      22/15
EC:SEV        0   EXTERNAL*      23/23
EC:SEV:  100531                  23/23 D   97/19   112/12   112/52   118/23   120/50
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EC:TIME       0   EXTERNAL*      23/30
EC:TIME: 100540                  23/30 D  135/39
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EEXITSV    507                    4/36 E   42/09    42/20    42/40    49/51    50/04    75/16 S
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ENTVEC     675                   29/15     29/18 L  29/26
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ENUM         7                   66/07 D   66/15
EN.LOG1     12                    4/05 D   41/46
EOCC       5264                107/22     108/01 L
EOCCRET    5265                107/23     108/04 L
EPFLAG      510                 22/40 L   66/38 S  67/37 S  69/08    72/14 S
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EPRINT          0       EXTERNAL*       34/19       64/08
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EREGS         455                        22/12 L    27/06     27/11     69/29
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ERRCALL2     3664                        67/17      67/23 L
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ERRCN         505                        22/28 L    66/25 S   68/16
ERRNEXT       501                        22/24 L    67/01 S
ERRNUMB       504                        22/27 L    41/43     66/19 S
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ERRSAFE      3645                        66/39 L    69/15
ERRTAG        502                        22/25 L    67/09 S
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ERSTR         640                         4/32 E    27/10 D
ESAVE         636                         4/32 E    27/05 L   66/12     74/08     74/21
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ESTPC         475                        22/15 L    36/36 S   36/39 S   67/04     67/19     69/37     69/52
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ETELL           0       EXTERNAL*       36/09      42/10     42/21     42/41     50/02     50/11
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EV.ALLON        4                        4/14 D
EV.FRCLG        1                        4/11 D
EV.KIK          0                        4/10 D
EV.SHTDN        2                        4/12 D
EV.TTYON        3                        4/13 D
E.CMMD         20                       46/23 D   46/26
E.PANIC        14                       66/09 D   66/35
FCLRA         434                       21/35 L   33/19 S
FEXIT        4057                        4/31 E    42/04     42/44     53/29     58/20     60/51     110/11    118/47
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FEXITA       4077                       76/34      76/41 L
FEXITSWT     4065                       76/17      76/19 L
FEXITX       4103                       76/14      76/16     77/01 L
FEXITO       4074                       76/19      76/33 L
FEXIT1       4072                       76/20      76/30 L
FEXIT2       4070                       76/21      76/26 L   79/27
FINPRNT      7664                        5/09 E    85/01     87/50     92/16     92/26     132/24 L  136/37    136/52
FL              0       EXTERNAL*      13/47      14/01
FLGFIN       5277                      109/12     109/19    109/37 L
```

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FMEMRA	433		21/34 L	33/12 S					
FNASCII	0	EXTERNAL*	81/15	132/36					
FORDIR	0	EXTERNAL*	39/28	81/17	123/31				
FREEZE	6512		110/39	118/33 L					
FRIENDP	3237		54/38	58/39 L					
FRIENDPF	3277		58/50	59/07 L					
FRIENDPL	3241		58/40 L	59/13					
FRIENDT	3305		54/29	59/12 L					
FSHAPE	400		20/36	20/37 L					
FWOPMDE	0	EXTERNAL*	60/34	60/35					
FXDBAS	4757		102/34 L	106/30					
FXDSP	4750		101/14	102/29 L					
FXDSPC	5063		102/33	104/05 L					
FXDSPE	14		101/44 L	102/32					
FXDSPF	15		101/32 L	102/33					
FXTFLAG	177		4/42 E	30/12 S	77/02 S	78/28 S	78/50 S	79/18	
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F.BLIST	0	EXTERNAL*	55/03						
F.CHAIN	0	EXTERNAL*	54/44						
F.CHPSW	0	EXTERNAL*	54/53						
F.CMMD	0	EXTERNAL*							
F.CPUTL	0	EXTERNAL*	59/03						
F.DCTBL	0	EXTERNAL*	55/01						
F.DECML	0	EXTERNAL*	54/52						
F.DISP	0	EXTERNAL*	54/26						
F.FTTST	0	EXTERNAL*	54/34						
F.FLOUT	0	EXTERNAL*	54/50						
F.KICK	0	EXTERNAL*	54/49						
F.KILLU	0	EXTERNAL*	54/55						
F.LKTTY	0	EXTERNAL*	55/02						
F.MDOLS	0	EXTERNAL*	54/32						
F.MUSRS	0	EXTERNAL*	54/33						
F.MVSPC	0	EXTERNAL*	54/31						
F.NEWUS	0	EXTERNAL*	54/24						
F.OBJ	0	EXTERNAL*	38/25	44/11	45/09	47/47	58/44		
F.OBJS	0	EXTERNAL*	48/16						
F.PWRD	0	EXTERNAL*	54/22						
F.RENM	0	EXTERNAL*	54/48						
F.SHAZ	0	EXTERNAL*	54/46						
F.SLIST	0	EXTERNAL*	54/27	55/04					
F.SOFTL	0	EXTERNAL*	54/47						
F.SPC	0	EXTERNAL*	54/30						
F.SYSDN	0	EXTERNAL*	54/51						
F.TBL	0	EXTERNAL*	54/53						
F.TEMPD	0	EXTERNAL*	39/19						
F.UNCHN	0	EXTERNAL*	54/45						
GENSPC	4335		87/05 L	102/12	102/43	104/17			
GENSPCBG	4411		88/16 L	103/22	103/49	105/08	105/42	107/37	
			103/22	103/49	105/08	105/25	105/43		
GENSPC1	4347		87/10	87/25 L					
GENSPC2	4356		87/16	87/32	87/33	87/38 L			
GENSPC3	4357		87/30	87/42 L					

GENSPC3A	4403	87/52	87/53	88/05						
GENSPC3M	4404	87/45	88/08	L						
GENSPC3N	4406	87/48	88/09	L						
GETBDF	3205	54/18	57/50	L						
GETLOCK	7470	121/40	121/42	121/44	126/18	L				
GETLOCK1	7505	126/25	126/41	L						
GETSPC	4211	5/17	E	83/03	L					
GETSPCEX	4264	84/33	84/40	84/44						
GETSPCEY	4267	84/07	84/49	L	95/27					
GETSPCE1	4256	83/16	84/31	L						
GETSPCE2	4261	83/20	84/38	L						
GETSPC1	4224	83/24	83/34	L						
GETSPC1A	4226	83/30	83/40	L						
GETSPC2	4232	83/45	L	84/10						
GETSPC3	4242	83/46	83/48	84/03						
GETSPC4	4250	83/38	84/05	84/15	L					
GETSPC5	4253	83/11	84/20	L						
GONE	3332	54/37	59/38	L						
HDDNPAR	6	16/07	L	29/14						
INBFSZ	12	18/49	D	18/51	25/45	25/47				
INBUF	122	18/51	L	25/47	38/34	38/43	44/10	53/39		
		25/45	36/51	38/41	39/18	47/37	133/16			
IND	100000	3/44	D	23/26	23/43	24/07	66/26	115/26	116/39	125/21
		23/10	23/27	23/44	24/08	97/19	115/26	116/46	125/21	
		23/11	23/28	23/45	24/09	103/10	115/30	116/47	125/47	
		23/12	23/29	23/46	24/10	103/35	115/33	116/47	125/51	
		23/13	23/30	23/47	39/02	103/48	115/35	116/48	126/05	
		23/14	23/31	23/48	39/33	107/11	115/48	119/17	126/04	
		23/15	23/32	23/49	40/27	107/36	115/51	120/13	126/06	
		23/16	23/33	23/50	42/29	112/51	116/01	120/26	126/06	
		23/17	23/34	23/51	42/32	114/43	116/04	120/41	126/43	
		23/18	23/35	23/52	44/14	114/46	116/19	120/50	127/02	
		23/19	23/36	23/53	45/13	114/46	116/31	121/11	128/37	
		23/20	23/37	24/01	46/26	114/53	116/32	121/34	128/42	
		23/21	23/38	24/02	48/24	115/04	116/32	123/20	135/23	
		23/22	23/39	24/03	57/06	115/04	116/33	123/27	135/27	
		23/23	23/40	24/04	78/49	115/11	116/37	123/33	135/31	
		23/24	23/41	24/05	79/11	115/16	116/38	123/43		
		23/25	23/42	24/06	79/26	115/22	116/38	125/17		
		16/09	D	17/06	17/21	17/32	17/40			
INFOPARS	7	29/16	30/04	L						
INIT	703	31/45	38/18	106/24						
INITFXD	5161	31/46	38/19	107/05						
INITSWP	5217	107/12	107/15	L						
INITSWPX	5236	103/05	L							
INITTDS	5003	103/11	103/11	103/13						
INITTDS1	5015	30/17	L							
INITX	723	4/50	E	38/35	44/11	47/38	133/17			
INLCL	106	18/42	L	39/19	45/09	53/34	133/17			
INMDDEC	0	EXTERNAL*	54/14							
INMDOCT	0	EXTERNAL*	54/13							
INSPMDE	0	EXTERNAL*								
INSLOGI	11		3/45	D	39/02					

SYMBOLIC REFERENCE TABLE.

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IN.LOG2          12
I.ACKYN           0      EXTERNAL*      3/46 D   40/27
I.DNTN            0      EXTERNAL*    120/35     120/42
                                       120/44     120/51
JBITS            45                    31/41 D    31/50 S
JDEATH         6507                    110/40     118/28 L
JPFETCH        7355                    120/11     120/14     120/15     120/16     120/17     121/15     121/19     125/09 L
JPRCLIST       5330                    110/14     110/29 L
JPROC          5301                     32/02      54/40     110/06 L
JPROCA         5311                    110/13 L   110/24
JPROCB         5317                    110/15     110/19 L
JPROCSIM       5632                    110/30     114/27 L
JPROCX         5326                     31/53     110/07     110/24 L
JPROC1         6617                    112/07     112/20     112/47     116/11     118/15     120/07 L
JPROC12        6457                    110/38     118/15 L
JPROC2         7057                    112/08     112/21     112/48     116/52     118/16     121/09 L
JPROC2R        7524                    122/04     122/05     126/49 L
JPROC3         7233                    112/09     112/26     112/49     118/33     123/17 L
JPROC3A        7262                    123/26 L   124/04
JPROC3B        7332                    123/44 L   123/49
JPROC3C        7337                    123/45     123/45     123/51 L
JPROC3X        7347                    123/22     124/07 L
KEITH          6441                    110/31     118/05 L
KEITH1         6522                    110/43     118/39 L
KEITH2         6537                    110/42     118/45 L
KEITH3         6554                    110/41     118/51 L
KEITH5         6571                    110/44     119/04 L
KILLCP         3621                     65/28 L
LGOUTF0        2551                     49/44      49/50 L
LGOUTF1        2566                     49/43      49/53 L
LGOUTF2        2602                     49/45      50/03 L
LGOUTF3        2620                     49/46      50/09 L
LGOUTX0        2531                     49/35      49/44 L
LGOUTX1        2535                     49/36      49/45 L
LGOUTX2        2541                     49/37      49/46 L
LGOUTX3        2546                     49/35      49/47 L
LGOUT20        2616                     38/30      38/33      41/34      42/38      50/07 L
LGOUT3         2511                     49/35 L
LINEPK            0      EXTERNAL*
LIVEFLAG          414                   21/11 L   121/26 S   126/24
LOAD           5531                    110/33     112/36 L
LOADX          5622                    112/36     112/41     112/42     113/04 L   114/30     114/33     114/34
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LOCALPXJ 1

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31/18 D  40/01
31/18 D  40/02 D
31/18    40/02 D
31/19 D  40/02
31/19 D  40/02
31/19    40/06 D
31/22 D  40/06 D
31/22 D  40/06 D
31/22    40/06
31/31 D  40/07 D
31/31 D  40/07 D
31/31    40/07 D
31/34 D  40/07
31/34 D  40/08 D
31/34    40/08 D
31/44 D  40/08 D
31/44 D  40/08
31/44    40/09 D
31/49 D  40/09 D
31/49 D  40/09 D
31/49    40/09
32/09 D  40/13 D
32/09 D  40/13
32/09    40/13
36/29 D  40/27 D
36/29 D  40/27 D
36/29 D  40/27 D
36/29    40/27
36/43 D  42/29 D
36/43 D  42/29 D
36/43    42/29
38/08 D  42/32 D
38/08 D  42/32 D
38/08 D  42/32
38/09 D  43/11
38/09 D  44/14 D
38/09    44/14 D
38/10 D  44/14
38/10 D  45/13 D
38/10    45/13 D
38/11 D  45/13 D
38/11 D  45/13
38/11    46/18 D
38/12 D  46/18 D
38/12 D  46/18
38/12    46/26 D
38/13 D  46/26 D
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58/46    105/41 D  114/47    116/19 D  120/08    123/20 D
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58/52 D  106/25 D  114/48 D  116/19    120/09 D  123/20
58/52    106/25 D  114/48    116/23 D  120/09 D  123/27 D
59/47 D  106/25 D  114/53 D  116/23 D  120/13 D  123/27 D
59/47 D  106/30 D  114/53 D  116/23    120/13 D  123/27
59/47 D  106/30 D  114/53 D  116/26 D  120/13 D  123/33 D
59/53 D  106/30 D  114/53    116/26 D  120/13    123/33 D
59/53 D  106/30 D  115/02 D  116/26    120/26 D  123/33 D
59/53    106/30    115/02 D  116/29 D  120/26 D  123/33
60/31 D  106/34 D  115/02 D  116/29 D  120/26 D  123/37 D
60/31 D  106/34 D  115/02 D  116/29    120/26    123/37 D
60/31 D  106/34 D  115/02    116/31 D  120/29 D  123/37
60/45 D  106/34 D  115/02    116/31 D  120/29 D  123/43 D
60/45 D  106/34    115/03 D  116/31 D  120/29 D  123/43 D
60/45    107/06 D  115/03 D  116/31    120/29    123/43 D
60/51 D  107/06 D  115/03    116/32 D  120/30 D  123/43
60/51 D  107/06    115/04 D  116/32 D  120/30 D  123/52 D
60/51    107/11 D  115/04 D  116/32 D  120/30    123/52 D
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78/26 D  107/36 D  115/05 D  116/33 D  120/35 D  125/17 D
78/26 D  107/36    115/05 D  116/33    120/35 D  125/17
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78/49 D  112/06 D  115/11 D  116/37 D  120/36 D  125/21 D
78/49 D  112/06 D  115/11 D  116/37 D  120/36 D  125/21 D
78/49    112/06    115/11 D  116/37    120/36    125/21
79/11 D  112/07 D  115/11 D  116/38 D  120/36 D  125/47 D
79/11 D  112/07 D  115/11 D  116/38 D  120/36 D  125/47 D
79/11 D  112/07 D  115/11    116/38 D  120/36 D  125/47 D
79/16 D  112/11 D  115/16 D  116/38 D  120/41 D  125/47 D
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86/26 D  112/20 D  115/22 D  116/43    120/44 D  126/03
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86/26    112/20    115/22 D  116/44 D  120/44 D  126/05 D
86/26    112/25 D  115/22    116/46 D  120/44 D  126/05 D
91/49 D  112/25 D  115/26 D  116/47 D  120/44    126/05
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92/37 D  112/26 D  115/26 D  116/47 D  120/45 D  126/06 D
92/37 D  112/26 D  115/30 D  116/47 D  120/45    126/06 D
92/37    112/26    115/30 D  116/48 D  120/50 D  126/06
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97/19 D  112/28 D  115/30 D  116/48    120/50    126/07 D
97/19    112/28    115/30    117/01 D  120/51 D  126/07
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LOGDTA1	1734
LOGDTA2	1735
LOGFIN	1670
LOGMSGVEC	2630
LOGON	1311
LOGONF1	2161
LOGONF2	2170
LOGONX	1744
LOGONX0	1750
LOGONX01	1754
LOGONX1	1760
LOGONX11	1764
LOGONX3	1771
LOGONX4	1775
LOGONX5	2001
LOGON0	1410
LOGON1	1472
LOGON2	1511
LOGON3	1534
LOGON4	1647
LOGON5	1736
LOGOUT	2445

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39/02 D 49/12 D 98/28 D 112/46 D 115/35 D 118/23 D 120/53 D 126/43 D
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39/02 49/30 D 98/40 D 112/47 D 115/48 D 118/40 D 121/11 D 126/53 D
39/33 D 49/30 D 103/10 D 112/47 D 115/48 D 118/40 D 121/11 D 126/53 D
39/33 D 49/30 103/10 D 112/47 115/48 D 118/40 D 121/11 126/53
39/33 D 49/31 D 103/10 D 112/51 D 115/48 118/40 121/16 D 127/01 D
39/33 D 49/31 D 103/10 D 112/51 D 115/51 D 118/46 D 121/16 D 127/01 D
39/33 D 49/31 103/20 D 112/51 D 115/51 D 118/46 D 121/16 127/01 D
39/33 49/37 D 103/20 D 112/52 D 115/51 D 118/46 D 121/26 D 127/01 D
39/44 D 49/37 D 103/20 112/52 D 115/51 118/46 121/26 D 127/02 D
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39/44 D 49/37 103/35 D 114/43 D 116/01 D 118/52 D 121/34 D 127/02 D
39/44 51/05 D 103/35 D 114/43 D 116/01 D 118/52 D 121/34 D 127/02
39/49 D 51/05 D 103/35 114/43 D 116/01 118/52 121/34 D 127/03 D
39/49 D 51/05 103/48 D 114/43 116/04 D 119/05 D 121/34 127/03 D
39/49 D 57/06 D 103/48 D 114/45 D 116/04 D 119/05 D 121/51 D 127/03 D
39/49 57/06 D 103/48 D 114/45 D 116/04 D 119/05 D 121/51 D 127/03
39/50 D 57/06 D 103/48 114/45 116/04 D 119/05 121/51 D 127/04 D
39/50 D 57/06 105/07 D 114/46 D 116/04 D 119/17 D 121/51 127/04 D
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39/50 57/42 D 105/07 D 114/46 D 116/10 D 119/17 123/18 D 127/04
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40/01 D 58/46 D 105/23 D 114/47 D 116/10 120/08 D 123/18 135/39 D
40/01 D 58/46 D 105/23 114/47 D 116/19 D 120/08 D 123/20 D 135/39
39/02 40/27 41/07 L
41/08 L
40/37 L 41/01
30/15 L 136/29 136/44
32/10 38/05 L 41/20
42/10 42/43 L
42/45 L
32/07 41/28 L
38/23 41/29 L
39/05 41/30 L
39/12 41/31 L
41/32 L 42/25
39/37 41/33 L
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41/12 41/35 L
38/23 L 41/29 41/30
39/14 L 41/31
4/33 E 39/25 L
39/39 L
40/16 L
41/12 L
47/30 47/31 49/05 L

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NXTPRM          0       EXTERNAL*       133/18
NZBASE        134                       15/15  D
OBJCALL      2217                       29/22          44/06  L
OBJCALLX     2243                       44/06          44/18  L
OBJCALLI     2222                       44/09  L       44/18
OB.ACC          2                       28/18  D       58/52
OCTBPK          0       EXTERNAL*       92/24
OCTNPK          0       EXTERNAL*
OCTPK           0       EXTERNAL*
OPENDF       4105                        4/39  E       78/11  L
OPENDF1      4107                       78/12          78/15  L
OPNFILE       201                        4/41  E       19/26  L   78/18  S    78/49         79/11         79/24
OUTBFSZ        12                        4/50  E       18/45  D   18/47         25/41         81/09        132/04        132/20
OUTBUF        110                        4/50  E       81/08      132/19        135/39  S     135/46  S    136/14  S     136/24  S
                                        18/47  L       81/15      133/11  S     135/42  S     135/49  S    136/17  S
                                        25/41          132/05      133/13  S     135/44  S     136/12  S    136/21  S

OUTMG1       2641                       50/16          50/17  L
OUTMG2       2643                       50/16          50/18  L
OUTMG3       2645                       50/16          50/19  L
OUTMG4       2647                       50/16          50/20  L
OUTMG5       2651                       50/16          50/21  L
OUTMG6       2653                       50/16          50/22  L
OUTMG7       2655                       50/16          50/23  L
OUTWD1       1741                       38/28          41/23  L
OUTWD2       1742                       38/31          41/24  L
OUT.LOG1       13                        3/47  D       49/12
OUT.LOG2       14                        3/48  D       49/37
OWNCLSCD      454                       22/09  L       30/06  S   36/29         66/29
PANIC        3720                       66/36          69/08  L
PANICGO      3742                       69/50  L
PANICGO1     3754                       69/50          70/03  L   72/17
PANICX       3756                       69/30          69/36      69/42         69/45         71/05  L
PANICY       3770                       69/09          69/12      69/16         69/20         71/15  L
PANIC1       3727                       69/14          69/18      69/26  L
PANIC2       3737                       69/27          69/41  L
PARAMBF       101                        4/52  E       18/39  L   133/10
PARAMBSZ       40                       18/36  D       18/37
PARAMBX         5                       18/35  D       18/36      18/39
PARLIMIT       21                       15/14  D       16/12  D   17/15  D   18/05
PARSEP          0       EXTERNAL*       47/39          58/41      58/53
PARSEU          0       EXTERNAL*       53/35
PAUL         3426                       54/43          60/44  L
PFLAG         511                       22/42  L       71/06  S   72/15         73/15         73/20  S
PHFLAG        513                       22/44  L       69/28      69/32         73/14  S      73/19  S     92/42  S
PIFLAG        512                       22/43  L       69/41      72/06  S      72/13  S
PKASCII         0       EXTERNAL*
PMDA            0       EXTERNAL*       54/10
PMDF            0       EXTERNAL*       54/11
PMDI            0       EXTERNAL*       54/12
PMODE         372                        5/05  E       20/26  L   60/21         60/23         60/25         60/27
POPDEBUG     1141                       34/32  L       46/35      57/23         57/32
POPR         7630                        4/31  E       63/40      68/36         68/17        106/13        106/17        130/30  L
POPR7        7642                        4/38  E      131/07  L
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PRGSPC      4540
PRMBFSZ       40
PROGGN      3470
PROGHR      3462
PURGE       3135
PUSHDBUG    1153
RDRDCALL     617
RDCLSCD      613
RDDFTYPE     615
READSELF     606
RECOVER     5373
RESTORE      633
RETLOC        47

RETRY       3164
RETURN       602
RETLCAP      647
RTNBASE      107
RTNR        7624

RTNR7       7636
RUN          726
RUNB7        176

RUNFNC          0      EXTERNAL
RUNX         1040
RUN0          760
RUN1         1000
RUN2         1020
SAVE          631
SAVEDF       6606
SAVEORG      4715
SCRSZ         514
SERVA       3112
SERVB       3123
SERVBITS     135

SERVLIST    2741
SERVX       2737
SERV1       2706
SERVIA      2710
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 31/32      31/47      38/20      49/31      94/07 L    94/18
  4/52 E    18/37 D
 59/39      62/28 L
 36/23      37/05      59/29      62/10 L
 48/40      54/08      57/05      71/18
 33/22      35/08 L    43/06      44/07      45/06
 25/40 L    57/10
 25/19 L    30/05
 25/23 L    30/07
 25/15 L    30/04
110/32     112/05 L
 26/03 L    46/35
  5/01 E    42/30      78/22 $    115/18     116/21     121/19     123/39     129/19 $
 18/15 L    44/14      78/24 $    115/23     116/28     121/36     125/20     134/50 $
 39/08      45/13      78/27      115/27     116/45     123/22     125/49     135/03 S
 39/35      49/14      103/22     115/31     120/28     123/29     126/04
 40/33      51/07      115/13     116/05     120/32     123/35     129/14 S
 54/06      57/22 L
 25/07 L    30/14      67/40      70/01      71/09
 28/08 L
 15/03 L
  4/31 E    79/26      87/39      97/23      103/40     106/34     123/29     130/20 L
 34/03      80/16      88/06      98/17      103/50     107/12     124/05     132/13
 63/14      81/18      88/18      98/28      105/14     107/28     125/21     133/19
 68/33      84/16      92/03      98/35      105/26     107/38     125/51     134/20
 78/29      84/21      94/09      103/11     105/30     107/41     126/37     134/26
 78/51      86/28      95/14      103/27     105/44     121/02     126/43     135/51
 79/11      87/21      96/05      103/37     106/07     122/08     127/04     136/52
  4/98 E   130/50 L
 29/20      31/04 L
  5/02 E    32/08 S    39/13 $    42/10      47/45 S    50/02      58/17
  5/13 E    34/49 S    39/30 $    42/17      49/06 S    50/05      63/40
 19/19 L    35/16      40/31 $    42/21      49/17 S    50/10      75/31
 31/15 S    35/32 S    40/38 $    42/26 S    49/27 S    50/12 S    76/48
 31/26 S    38/24 S    41/13 $    42/35      49/36 S    52/08 S   110/08 S
 32/01 S    39/06 S    41/20 $    42/41      49/52      56/12 S   133/06
 47/42      58/45      59/04
 31/14      32/14 L
 31/27 L
 31/19      31/43 L
 31/22      32/07 L
 25/52 L    29/10
110/45     119/10 L
 82/11 D    82/37      89/39 D    89/53      101/25 D   101/47
 13/50      13/53      14/01      14/01      23/05 L    25/17
 47/27      47/28      56/04 L
 36/05      36/09      36/12      36/32      36/33      36/47      37/05      56/14 L
 19/06 L    31/12 S    34/43 $    35/29 S    53/12      56/08 S    56/20 S    62/13 S
 19/11      34/38      35/24      36/44      56/06      56/18      62/10      62/28
 53/05      54/03 L
 50/11      53/38 L    56/11
  5/10 E    30/17      33/31      53/04 L    53/38
 53/05 L    59/21      59/24      59/25
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SERV2A 2721
SERV3 2722
SERV4 2730
SET 7571

SETA 7605
SETA1 7610
SETA2 7611
SETB 7604
SETEMSK 603
SETFLAG 5271
SETGENA 0 EXTERNAL*
SETPARS 0 EXTERNAL*
SETPH 4023
SETPH1 4026
SETPI 4015

SETPRNT 7656
SETPRNT7 134
SETRET 7613

SETRET7 7737
SETRET8 7741
SETSL 4171
SETTKN 0 EXTERNAL*
SETXJ7 7743
SETXJ71 77567
SHPBLKD 377

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128/32 L 128/36
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103/10 112/47 115/48 118/52 121/34 128/15 L
103/20 112/51 115/51 119/05 121/51 135/39
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105/41 114/47 116/19 120/24 123/37
128/24 128/27 128/30 128/34 L

67/39 69/53 71/08
92/09 95/36 100/15 L
44/11 45/09 47/35 53/34 133/17

49/08 72/05 L 91/20 97/09
80/12 91/37
87/45 92/11 92/21 132/18 L 136/25 136/43
132/23 132/27 S 132/30 132/34 S 132/37
51/06 116/20 120/31 123/28 125/48
103/21 116/27 121/12 123/34 129/10 L
115/12 116/44 121/35 123/38
115/17 120/27 123/21 125/19

58/40 59/13 80/05 L

SPACEFLG	404		20/45 L	83/09 S	94/15 S	95/13	96/04 S				
SPCALLOC	4304		83/45	86/11 L	95/24						
SPCCALL	2176		29/21	43/05 L							
SPCCALLT	2212		43/08	43/15 L							
SPCCALLX	2210		43/09	43/13 L							
SPCCMD	0	EXTERNAL*	43/09								
SPCFLGS	411		20/52 L	91/19	91/39	92/05	92/09	95/34	97/11	97/15	
SPCHNGA	4432		91/28	91/40	91/45 L						
SPCHNGB	4443		91/53 L	92/43							
SPCHNGC	4450		91/50	92/08 L							
SPCHNGCN	413		21/02 L	91/26 S	92/21						
SPCHNGD	4475		91/39	92/19	92/28	92/33 L					
SPCHNGM	4473		92/24	92/28 L							
SPCHNGP	4512		92/37	92/48 L							
SPCHNGX	412		21/01 L	91/34 S	92/17	97/07 S	100/11				
			91/16 S	92/11	95/33 S	99/05					
SPCHNG1	4413		83/30	83/41	83/43	91/15 L					
SPCHNG2	4425		84/10	91/33 L							
SPCLIST	4711		5/17 E	94/11	101/11 L	101/19					
SPCLVL	405		20/46 L	83/14	83/53 S	94/07	95/18	95/45	95/49		
SPCLVLS	406		20/47 L	84/02	95/31	95/48					
SPCMSGF	0		91/18	91/38	92/08	101/29 L					
SPCPASS	6437		115/33	117/37 L							
SPCPRNT	0	EXTERNAL*	60/23	60/27	60/34	64/19	64/21				
			60/25	60/29	60/35	64/20	64/22				
SPCSIZE	410		20/50 L	83/04 S	83/47	87/09	95/23 S				
SPCX	407		20/49 L	84/44	87/05	87/25	88/01	95/14	100/15		
			83/06 S	84/51	87/12	87/34	92/13	95/28	100/36		
			83/50	86/16	87/18	87/46	94/13 S	99/07	100/45		
SPC.BS	7		82/31 L	83/35	87/13	87/24	103/06	107/07			
SPC.CNT	7		17/23 L	43/07							
SPC.CRF	4705		100/46 L								
SPC.CRFX	4707		86/13	86/23	100/45 L						
SPC.DTA	10		17/24 L	43/15	43/16	43/16	43/16	43/17	43/17		
SPC.EC	3		82/17 L	100/16	100/46						
SPC.FLG	5		82/28 L	99/08							
SPC.GET	11		82/33 L	87/19							
SPC.GS	4		82/19 L	86/17							
SPC.L	0		86/12	86/22	89/43 L						
SPC.MXM	2		82/16 L	83/22							
SPC.MXS	1		82/15 L	83/18							
SPC.NME	13		82/35 L	84/52	87/47	92/14					
SPC.NOM	10		82/32 L	83/34	87/27	103/05	107/06				
SPC.Q	4525		83/40	93/05 L	95/41						
SPC.QC	3		89/49 L	93/06							
SPC.QEV	2		89/48 L	93/05							
SPC.QFLG	4673		92/01	95/35	97/10	97/14	99/05 L				
SPC.QRF	4676		91/22	91/46	92/34	92/49	97/16	97/26	100/11 L		
SPC.QRF1	4701		100/19 L	100/38	100/48						
SPC.QRF2	4704		100/14	100/26 L							
SPC.RLS	12		82/34 L	87/35	88/02						
SPC.RV	6		82/29 L	87/06							
SPC.S	0		82/14 L	83/13	83/51	95/17	95/29				

SYMBOLIC REFERENCE TABLE.

SPC.V	4532		
SPC.VC	5		
SPC.VEV	4		
SPC.W	4517		
SPC.WC	7777776		
SPC.WEV	1		
SPSCNFLG	200		
SRVBITS	135		
STAND	3233		
STANDP	0	EXTERNAL*	
STANDPX	0	EXTERNAL*	
STASCII	0	EXTERNAL*	
STNDPFK	373		
STOP	3444		
SWPECE	22		
SWPECF	23		
SWPECG	5252		
SWPECGI	5262		
SWPECR	5263		
SWPECSP	4765		
SWPECV	5244		
SYSCHKWD	3331		
SYSTMBIT	4		
S.LINE	0	EXTERNAL*	
TEMP1	204		
TEMP2	205		
TEMP3	206		
TEMP4	207		
TEMP5	210		
TEMP6	211		
TIME	2673		
TMPDSKE	0		
TMPDSKF	1		
TMPDSKG	5040		
TMPDSKGI	5051		
TMPDSKR	5052		
TMPDSKSP	4715		
TMPDSKV	5024		

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89/50 L 93/08
83/42 84/09 93/02 L 95/35 95/40
89/47 D 93/03
89/45 L 93/02
19/24 L 76/33 80/06 S 80/15 S
5/11 E 19/11 D
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54/23 54/27 54/33 54/46 54/50 55/01 58/25 L
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48/05 63/51 S 87/43 S 115/22 116/31 121/34 126/20 S 136/46
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102/12 103/19 L

TRAVEC	7733		
TRAVEC1	7736		
TSTFLAG	5273		
TTYIN	624		
TTYINRP	627		
TTYOUT	621		
TTYSON	6472		
T.CLASS	0	EXTERNAL*	
T.CMMD	0	EXTERNAL*	
UCLRA	370		
UMEMRA	367		
UNEXERR	4035		
UNEXPRT	4037		

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30/06 40/01 59/47 74/22 112/29 116/21 120/41 126/42
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UPCNTR 4636
UPCNTR1 4640
UPCNTR2 4650
USERBUG 3334
VAL.CAP 104
VIEWX 371
V.CAP 61
V.DVAL 433
V.NAME 415
V.ROOTDN 420
WHO 3227
XCMMDS 216

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YESLOAD	5631	112/39	113/07 L
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