

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
STORAGE ALLOCATION.

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ADDRESS LENGTH BINARY CONTROL CARDS.

0 4703 IDENT BEADS  
4703 END

BLOCKS	TYPE	ADDRESS	LENGTH
ABSOLUTE*	ABSOLUTE	0	54
PROGRAM*	LOCAL	0	4676
LITERALS*	LOCAL	4676	5

ENTRY POINTS.

USRBLK	-	11	CS.S	-	4	FTHRRUIF	-	440	RUNFLAG	-	171
USRCNT	-	10	CS.TDLS	-	2	HEADRUF	-	300	RETPOBJ	-	3536
USRTYPE	-	7	CX.ACC	-	37	IS.LCEC	-	630	RTNR	-	4664
BCDASCI	-	3276	CX.CSTF	-	17	IS.DAYF	-	632	R.CNTIM	-	224
CALLR	-	4657	CX.CLCD	-	5	IS.DFEC	-	631	SAVES	-	220
CHCKERR	-	4510	CX.DAYF	-	41	IS.NULK	-	627	SHTOTMV	-	146
CLEANAR	-	4236	CX.FDIR	-	34	IS.PROF	-	633	S.CNTIM	-	221
CMMDBLK	-	11	CX.LCAB	-	6	IS.PUBK	-	625	S.FXECS	-	222
CMMDERR	-	2454	CX.NULL	-	43	IS.S	-	634	S.MOTS	-	223
CLOSDF	-	4574	CX.OPRS	-	3	IS.TDLS	-	626	SPCLERR	-	4460
CRASH	-	4514	CX.PRMD	-	36	KILLODIR	-	4024	TEMP1	-	71
CTYPINI	-	2635	CX.PROF	-	42	KILLOBA	-	3540	TEMP2	-	72
CTYPDF	-	245	CX.SBDR	-	26	KILLOBJ	-	3612	TRAVEC	-	4672
CTYPDIF	-	246	CX.TEMP	-	0	MAPCNT	-	217	UNEXERR	-	4523
CTYPSNT	-	250	CX.TMFD	-	35	NREGS	-	106	USRABCT	-	260
CTYPSPD	-	247	CX.TOBJ	-	1	OPENDE	-	4524	UNEXFRT	-	4465
CTYPACK	-	252	DSPBUF	-	73	PASSXIT	-	4442	USRNAME	-	233
CS.NULK	-	1	DAYFBUF	-	500	PROFBUF	-	400	XJLOC	-	35
CS.LCEC	-	20	DAYFPT	-	215	PROFPFT	-	216			
CS.PROF	-	15	FRRTAG	-	160	PBAKNUM	-	234			
CS.PUBK	-	3	ERRXIT	-	4416	RESTORE	-	701			

EXTERNAL SYMBOLS.

EC:CFIL	EC:GEVF	EC:ACAP	EC:IRPAR	EC:DAB	DF:DTCH	DF:CAOF	DR:CRDR
EC:DFIL	EC:GVFMH	EC:UCAP	EC:RERR	EC:DSAB	DF:CBLK	DF:XSEC	DR:ADPR
EC:CBLK	EC:GVMF	EC:FCAP	EC:IMMR0	EC:CHUN	DF:DBLK	DF:CLUP	EC:CLOA
EC:DBLK	EC:COL	EC:BCAP	EC:IMMRW	EC:SAVE	DF:DSF	DR:OPDR	DR:DSTR
EC:MBLK	EC:DCL	EC:UDAT	EC:CMRO	EC:RSTR	DF:READ	DR:CLDR	DR:DSPN
EC:READ	EC:ICIN	EC:FDAT	EC:CMRW	EC:TIME	DF:WRIT	DR:HDLK	DR:RMOE
EC:WRTT	EC:COU	EC:BDAT	EC:ZRM	DELPROF	DF:CLO	DN:CLAO	DR:RMLK
EC:PROB	EC:MCAP	EC:CPRC	EC:DSAM	FL	DR:UACC	DN:ODN1	DR:CRFI
EC:RSHP	EC:DSCP	EC:DPRC	EC:DSFM	USERSRV	SD:CONV	DN:CLAW	DN:CRDN
EC:TBLK	EC:MCCA	EC:INTP	EC:ESMA	LOGON1	DF:CLOS	DN:CFLG	
EC:CCLS	EC:CCAP	EC:CLK	EC:ESML	LOGON2	DF:MMRO	EC:DOPR	
EC:STMP	EC:COPI	EC:CSUB	EC:DSST	LOGOUT1	DF:MMRW	EC:MVSP	
EC:CEVC	EC:MOPR	EC:DSSB	EC:DSSE	CLRMAP	DF:OPRO	EC:CRAB	

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EC:DEVC	EC:DSOP	EC:JUMP	EC:SETP	CHCKPSW	DF:OPRW	EC:MVMT
EC:SEV	EC:ADOR	EC:RTRN	EC:SIIB	CP:SPAC	DF:PROB	DN:CLDN
EC:GEVH	EC:ADOP	EC:FRET	EC:CIIR	DF:ATCH	DF:DSUB	DN:ODN2

IDENT BEADS

\*  
\*  
\* THIS MACRO CONVERTS ERR TO A CRASH AT RUN TIME  
\*

3  
ERR MACRO  
CALL  
ENDM  
CRASH

100000 IND EQU 100000B USED AS INDIRECT FLAG IN DOXJ ETC

\* CATALOG OF ERROR NUMBERS BY SECTION

- \*  
\* 1 BUILD SUBPROCESS, READ DESCRIPTOR  
\* 2 SIMULATED STANDARD SCAN  
\* 3 READ CALL, BUILD SUBPROCESS  
\* 4 READ CALL, SET DIRECTORY ENTRY  
\* 5 READ CALL, READ DIRECTORY ENTRY  
\* 6 CLOSE MAP FILES FOR SUBPROCESS  
\* 7 CMMDKIL CODE, KILL AN OBJECT  
\* 10 CLEANDR CODE, CLEAN A DIRECTORY OUT  
\* 11 CRASH  
\* 12 LOGON  
\* 13 BAD PASSWORD  
\* 14 REMOVE OLD USER  
\* 15 CHANGE PASSWORD  
\* 16 CREATE NEW USER

\* SOME ASSEMBLY PARAMETERS

- 40 PROFSZ EQU 32  
5 PFSHFT EQU 5  
20 DAYFSZ EQU 16  
13 DSPBUFSZ EQU 11

\* THIS IS A MACRO TO HELP CHECK ON THE SIZE OF DSPBUF

DBSZ MACRO VAL  
IFGT VAL+DSPBUFSZ+1  
ERR INCREASE THE SIZE OF DSPBUF  
ENDM

## ERROR NUMBERS DEFINED BY ERRNUMS.TEXT

2

```

ERRNUMS LIST X
* NAME XTEXT
* ERCLASS VALUE

THIS MACRO DEFINES THE VALUE OF AN E.ERRORCODE SYMBOL.

MACRO ERCLASS,NAME,VALUE
ORG VALUE
BSS 1
SET NAME
USE *
ENDM .. END ERCLASS MACRO

* NAME ERRNUM VALUE
* THIS MACRO DEFINES THE VALUE OF E.ERRNUM

THE +PEELED+ SYMBOL AND THE E.ERRNUMBER SYMBOL ARE CREATED
AND GIVEN THE ERROR NUMBER AND ERROR CLASS VALUES, RESPECTIVELY

MACRO ERRNUM,NAME,VALUE
ORG VALUE
NAME BSS 1
DEX MICRO 3,,/NAME/
C.##DEX# EQU CLASS
USE *
ENDM

ERROR MODIFIER,WHERE

B4:= MODIFIER
SETS R4 AND JUMPS TO +WHERE+ *PRESUMABLY DEFINED IN
THE ERRCODE ROUTINE

* GODDAMMIT.. DEFINE THIS SOMEPLACE ELSE. -DAVE

ERROR MACRO MODIFIER,WHERE
SB4 MODIFIER
EQ =X?WHERE
ENDM

```

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XTEXT FOR ERROR NUMBERS

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0	*****	E.CHIP ERCLASS	0	SCOPE CALL ERROR CLASS	ERRNUMS
	*				ERRNUMS
	*				ERRNUMS
1	*****	E.ARITH ERCLASS	1	ARITH ERROR CLASS	ERRNUMS
	*				ERRNUMS
	*				ERRNUMS
2	*****	E.PARMS ERCLASS	2		ERRNUMS
	*				ERRNUMS
0	E.NEGPAR ERRNUM	0	PARAMETER TOO SMALL	ERRNUMS	
1	E.BIGPAR ERRNUM	1	PARAMETER TOO LARGE	ERRNUMS	
	*		PARAM NUMBER IS MASKED INTO ERRNUM	ERRNUMS	
2	E.NEGPT ERRNUM	2	POINTER IS NEGATIVE	ERRNUMS	
3	E.BIGPT ERRNUM	3	POINTER IS TOO LARGE	ERRNUMS	
	*		POINTER IS MASKED INTO ERRNUM	ERRNUMS	
4	E.NEGIX ERRNUM	4	C-LIST INDEX IS NEGATIVE	ERRNUMS	
5	E.BIGIX ERRNUM	5	C-LIST INDEX IS TOO LARGE	ERRNUMS	
6	E.NOTCL ERRNUM	6	INDIRECT C-LIST REFERENCE DOES	ERRNUMS	
	*		NOT GO THRU A C-LIST	ERRNUMS	
	*		PARAM NUM IS MASKED INTO ERRNUM	ERRNUMS	
7	E.BDTBLK ERRNUM	7	DATA BLOCK EXTENDS PAST FL	ERRNUMS	
10	E.BCPBLK ERRNUM	8	CAPABILITY BLK GOES PAST LEN	ERRNUMS	
11	E.NEGPCT ERRNUM	9	P COUNTER IS NEGATIVE	ERRNUMS	
12	E.BIGPCT ERRNUM	10	P COUNTER > OR = FL OF FULL C-LIST	ERRNUMS	
	*			ERRNUMS	
	*			ERRNUMS	
	*			ERRNUMS	
3	*****	E.FILES ERCLASS	3	FILE-PROCESSING ERROR CLASS	ERRNUMS
	*			ERRNUMS	
0	E.NOFIL ERRNUM	0	FILE DOESNT EXIST	ERRNUMS	
1	E.ISBLK ERRNUM	1	BLOCK TO BE CREATED EXISTS	ERRNUMS	
2	E.INMAPS ERRNUM	2	BLOCK IS IN MAP	ERRNUMS	
3	E.NOBLK ERRNUM	3	BLOCK TO BE MOVED DOESNT EXIST	ERRNUMS	
4	E.MISMCH ERRNUM	4	BLOCK SIZES NOT EQUAL FOR MOVE	ERRNUMS	
5	E.NOBKD ERRNUM	5	BLOCK TO BE DESTROYED DOESNT EXIST	ERRNUMS	
	*			ERRNUMS	
6	E.NOTEMP ERRNUM	6	FILE TO BE DESTROYED IS NONEMPTY	ERRNUMS	
7	E.NEGSIZ ERRNUM	7	NEGATIVE SHAPE NUMBER (OR TOO SMALL)	ERRNUMS	
	*			ERRNUMS	
10	E.BIGSIZ ERRNUM	8	SHAPE NUMBER IS TOO LARGE	ERRNUMS	
11	E.NOTPOW ERRNUM	9	SHAPE NUMBER IS NOT POWER OF TWO	ERRNUMS	
12	E.BIGFIL ERRNUM	10	FILE SIZE IS TOO GREAT	ERRNUMS	
13	E.IOERR ERRNUM	11	EOS I/O ERROR	ERRNUMS	
	*			ERRNUMS	
24	E.LLEV ERRNUM	20	TOO MANY LEVELS	ERRNUMS	
25	E.NODFIL ERRNUM	21	NO SUCH OPEN DISK FILE	ERRNUMS	
26	E.NABR ERRNUM	22	NO ATTACHED BLOCK RECORD	ERRNUMS	
27	E.DIOERR ERRNUM	23	DISK I/O ERROR	ERRNUMS	
30	E.TMA ERRNUM	24	TOO MANY ATTACHES	ERRNUMS	
31	E.TMD ERRNUM	25	TOO MANY DETACHES	ERRNUMS	

32	E.NATH	ERRNUM	26	BLOCK NOT ATTACHED	ERRNUMS	1
33	E.ZLEV	ERRNUM	27		ERRNUMS	1
34	E.TMOPN	ERRNUM	28	TOO MANY OPENS(LOCAL OR GLOBAERRNUMS	ERRNUMS	1
*					ERRNUMS	1
35	E.EXCLAM	ERRNUM	29	ALREADY EXCLUSIVE CLAIM	ERRNUMS	1
36	E.SHCLAM	ERRNUM	30	ALREADY LOCAL SHARED CLAIM	ERRNUMS	1
37	E.CLOCK	ERRNUM	31	CLAIM QUEUE LOCK UP(TIME OUT)	ERRNUMS	1
*					ERRNUMS	1
40	E.NOCLAM	ERRNUM	32	NO LOCAL CLAIM ON RELEASE	ERRNUMS	1
41	E.NOLFH	ERRNUM	33	NO LOCAL FILE HEADER SPACE	ERRNUMS	1
42	E.TMGA	ERRNUM	34	TOO MANY GLOBAL ATTACHES	ERRNUMS	1
43	E.FULL	ERRNUM	35	DISK SYSTEM TABLES FULL	ERRNUMS	1
44	E.SAME	ERRNUM	36	ATTEMPT TO SHAZAMFILE WITH I	ERRNUMS	1
*					ERRNUMS	1
45	E.FROZ	ERRNUM	37	FILE IS FROZEN	ERRNUMS	1
46	E.IFROZ	ERRNUM	38	LOCAL <del>AI</del> -FROZ-IT <del>I</del> FLAG WRONG	ERRNUMS	1
47	E.UNCLE	ERRNUM	39	SHUTDOWN TRIED IN BAD STATE	ERRNUMS	1
50	E.SHUT	ERRNUM	40	DISK SYS CALLED AFTER SHUTDOWN	ERRNUMS	1
*					ERRNUMS	1
51	E.BGLFT	ERRNUM	41	LFT ALREADY BIG	ERRNUMS	1
52	E.NOSML	ERRNUM	42	TOO MANY LFHS OR ABRS IN USE	ERRNUMS	1
53	E.NROOM	ERRNUM	43	NO ROOM TO EXPAND LFT	ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
4	E.SUBP	ERCLASS	4	***** ERROR CLASS FOR SUBPROCESS CREATION, CALL, AND RETURN	ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
0	E.SAMNA	ERRNUM	0	DUPLICATE SUBP NAME	ERRNUMS	1
1	E.NOFATH	ERRNUM	1	NAMED FATHER DOESNT EXIST	ERRNUMS	1
2	E.NOBLOC	ERRNUM	2	LOCK IN SWAPPING DIRECTIVE MISSING	ERRNUMS	1
*					ERRNUMS	1
3	E.COMP	ERRNUM	3	NOT ENOUGH ROOM FOR MAP	ERRNUMS	1
4	E.MACSZ	ERRNUM	4	PROCESS BECOMES TOO BIG	ERRNUMS	1
5	E.NOFIND	ERRNUM	5	NAMED SUBP DOESNT EXIST	ERRNUMS	1
6	E.FULSTK	ERRNUM	6	NO ROOM FOR SUBP IN STACK	ERRNUMS	1
7	E.ROOM	ERRNUM	7	NO ROOM FOR PARAMETERS	ERRNUMS	1
8	E.NCAP	ERRNUM	8	TOO MANY CAPABILITY PARAMS	ERRNUMS	1
9	E.ESTK	ERRNUM	9	EMPTY STACK(ON RETURN)	ERRNUMS	1
10	E.STK	ERRNUM	10	EMPTY STACK(ON RETURN)	ERRNUMS	1
11	E.NLEAF	ERRNUM	11	ATTEMPT TO DELETE SUBP AT ROOT OR	ERRNUMS	1
12	E.IFRET	ERRNUM	12	ILLEGAL FRETURN	ERRNUMS	1
13	E.NOXJ	ERRNUM	13	NO C.E.J WHERE EXPECTED	ERRNUMS	1
14	E.BIGER	ERRNUM	14	• ERROR CLASS LARGER THAN POSSIBLE	ERRNUMS	1
*				LEAF OF SUBP TREE	ERRNUMS	1
14	E.INSTK	ERRNUM	12	ATTEMPT TO DELETE SUBP IN STACK	ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
5	E.PROC	ERCLASS	5	***** ERROR CLASS FOR PROCESS	ERRNUMS	1
*					ERRNUMS	1
0	E.BLMISS	ERRNUM	0	LOCK MISSING IN SWAPPING DIRECTIVE	ERRNUMS	1
*					ERRNUMS	1

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1	E.NOROOM	ERRNUM	1	NOT ENOUGH ROOM FOR MAP	ERRNUMS	1
3	E.PGONE	ERRNUM	3	PROCESS GONE FROM MOT	ERRNUMS	1
4	E.CGONE	ERRNUM	4	• LOCAL C-LIST GONE AT SWAPIN	ERRNUMS	1
5	E.MAPER	ERRNUM	5	• MAP ERROR AT SWAPIN	ERRNUMS	1
6	E.BOTH	ERRNUM	6	• BOTH OF THE ABOVE	ERRNUMS	1
*			*		ERRNUMS	1
*			*		ERRNUMS	1
6	E.ABLOCK	ERCLASS	6	ALLOCATION BLOCK ERROR CLASS	ERRNUMS	1
*			*		ERRNUMS	1
0	E.NOABLK	ERRNUM	0	NO ALLOCATION BLOCK	ERRNUMS	1
1	E.NOECS	ERRNUM	1	NOT ENOUGH RESERVED SPACE FOR OBJECT	ERRNUMS	1
2	E.NOSLOT	ERRNUM	2	NO MOT SLOT FOR OBJECT	ERRNUMS	1
3	E.NOSWP	ERRNUM	3	NO SWAPPED ECS SPACE	ERRNUMS	1
4	E.NODSK	ERRNUM	4	NO DISK SPACE	ERRNUMS	1
5	E.NORES	ERRNUM	5	INSUFFICIENT RESERVED SPACE FOR DONATION	ERRNUMS	1
*			*		ERRNUMS	1
6	E.NOCP	ERRNUM	6	INSUFFICIENT CP TIME FOR DONATION	ERRNUMS	1
7	E.NOMOT	ERRNUM	7	INSUFFICIENT MOT SLOTS FOR DONATION	ERRNUMS	1
10	E.NORLC	ERRNUM	8	NOT ENOUGH RESERVED SPACE TO COVER DOUBLY	ERRNUMS	1
*			*		ERRNUMS	1
11	E.FATSON	ERRNUM	9	CHARGED SPACE DURING REALLOCATION	ERRNUMS	1
12	E.CRGER	ERRNUM	10	DONATE NOT BETWEEN FATHER/SON PAIR	ERRNUMS	1
*			*	INCREMENT WOULD LEAVE CHARGE RATE ILLEG	ERRNUMS	1
24	E.BADSN	ERRNUM	20	BAD SERVICE NUMBER	ERRNUMS	1
25	E.NODDS	ERRNUM	21	GOOD WORD..OUT OF DDS RECORDS	ERRNUMS	1
26	E.BUSY	ERRNUM	22	CANNOT DESTROY ACCOUNTING BLOCK	ERRNUMS	1
27	E.RESV	ERRNUM	23	ACCOUNTING BLOCK HOLDING RESERVED SPACE	ERRNUMS	1
*			*		ERRNUMS	1
30	E.ACTIV	ERRNUM	24	ACCOUNTING BLOCK ALREADY ACTIVE	ERRNUMS	1
31	E.NOFUND	ERRNUM	25	NO FIXED ECS ALLOCBLK SUPPLIED TO DISK	ERRNUMS	1
*			*		ERRNUMS	1
*			*		ERRNUMS	1
7	E.OPER	ERCLASS	7	ERROR IN INTERPRETING OPERATION	ERRNUMS	1
*			*		ERRNUMS	1
0	E.IPO	ERRNUM	0	IPO NOT CAPABILITY FOR OPERATION	ERRNUMS	1
1	E.NOOP	ERRNUM	1	OPERATION NOT IN MOT	ERRNUMS	1
2	E.CAPTY	ERRNUM	2	CAPABILITY TYPE OR OPTIONS BAD	ERRNUMS	1
3	E.PSANY	ERRNUM	3	PARAM SPEC (ANY) ENCOUNTERED	ERRNUMS	1
4	E.NOTANY	ERRNUM	4	PARAM SPEC (ANY) NOT ENCOUNTERED	ERRNUMS	1
5	E.USER	ERRNUM	5	SHOULD BE USER-SUPPLIED PARAMETER	ERRNUMS	1
6	E.BIGORD	ERRNUM	6	ORDER TOO BIG FOR SCRATCH AREA	ERRNUMS	1
7	E.MANPAR	ERRNUM	7	TOO MANY PARAMETERS	ERRNUMS	1
10	E.BIGCNT	ERRNUM	8	BLK PARAM EXCEEDS COUNT IN PARAMETER SPECIFICATION IN OPER	ERRNUMS	1
*			*		ERRNUMS	1
*			*		ERRNUMS	1
*			*		ERRNUMS	1
10	E.MISCE	ERCLASS	8	MISCELLANEOUS ERROR CLASS	ERRNUMS	1

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0	*	E.CLMOT	ERRNUM	0	CAPABILITY LIST NOT IN MOT	ERRNUMS	1
1	*	E.MISSOB	ERRNUM	1	MISC OBJECT NOT IN MOT	ERRNUMS	1
2	*	E.NOAUTH	ERRNUM	2	NO MORE CAPABILITY AUCREATING AUTORIZATIONS ARE AVAILABLE	ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
	*****					ERRNUMS	1
11		E.EVENT	ERCLASS	9	EVENT CHANNEL ERROR CLASS	ERRNUMS	1
	*					ERRNUMS	1
0	*	E.NEGO	ERRNUM	0	EVENT QUEUE TOO SHORT	ERRNUMS	1
1	*	E.BIGQ	ERRNUM	1	EVENT QUEUE TOO LONG	ERRNUMS	1
2	*	E.NOCHAN	ERRNUM	2	EVENT CHANNEL NOT IN MOT	ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
12	*****					ERRNUMS	1
	*	E.NOERR	ERCLASS	10	NO SUBP TO TAKE ERROR CLASS	ERRNUMS	1
	*					ERRNUMS	1
	*	E.NOERR1	EQU		THE ERROR WHICH CAUSED THIS ERROR	ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
13	*****					ERRNUMS	1
	*	E.MAPS	ERCLASS	11	. ERROR CLASS FOR MAPS	ERRNUMS	1
	*					ERRNUMS	1
0	*	E.ISDAE	ERRNUM	0	ATTEMPT TO CHANGE OR ZERO DAE	ERRNUMS	1
1	*	E.NT1BLK	ERRNUM	1	DAE ATTEMPTS TO BRIDGE BLOCKS	ERRNUMS	1
2	*	E.NOTDAE	ERRNUM	2	DAE ACTION APPLIED TO SWAPPING	ERRNUMS	1
	*					ERRNUMS	1
3	*	E.BADNWS	ERRNUM	3	REFER ARETURN - BAD WORD COUNT	ERRNUMS	1
	*					ERRNUMS	1
4	*	E.PRENT	ERRNUM	4	* PREVIOUS ENTRY DURING MAKE MAP	ERRNUMS	1
5	*	E.WRGFL	ERRNUM	5	* WRONG CAP FOR PREVIOUS FILE	ERRNUMS	1
6	*	E.MAPOF	ERRNUM	6	* MAP IS TURNED OFF	ERRNUMS	1
	*					ERRNUMS	1
	*				* UN CHANGE OR ZERO MAP ENTRY	ERRNUMS	1
	*				* MISSING FILE	ERRNUMS	1
4	*	E.WRFIL	ERRNUM	4	WRONG FILE ON DELETE MAP ENTR	ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
14	*****					ERRNUMS	1
	*	E.PANIC	ERCLASS	12	. ERROR CLASS FOR PANICS ( INTERRUPTS )	ERRNUMS	1
	*					ERRNUMS	1
0	*	E.MLDP	ERRNUM	0	* MILD PANIC ( ZR TEST USED BY SOME CODE )	ERRNUMS	1
1	*	E.MJRP	ERRNUM	1	* MAJOR PANIC ( NZ TEST USED BY SOME CODE )	ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
	*					ERRNUMS	1
15	*****					ERRNUMS	1
	*	E.C.DIRCT	EQU	13	. ERROR CLASS FOR DIRECTORY ERRORS	ERRNUMS	1
	*					ERRNUMS	1
0	*	E.N.BADNM	EQU	0	* BAD NAME GIVEN	ERRNUMS	1

1	EN.IMPOT	EQU	1	• ACCESS-KEY NOT IN ACCESS-LIST	ERRNUMS	1
2	EN.NTOWN	EQU	2	• WRONG ACTIONS USED TO DELETE LINK ENTRY	ERRNUMS	1
3	EN.DUPNM	EQU	3	• CAN NOT HAVE DUPLICATE NAMES	ERRNUMS	1
4	EN.NOSPC	EQU	4	• DIRECTORY IS FULL	ERRNUMS	1
5	EN.LOOP1	EQU	5	• SOFTLINK PHAIN TOO LONG	ERRNUMS	1
6	EN.LOOP2	EQU	6	• SUCCESSOR LINK CHAIN TOO LONG	ERRNUMS	1
7	EN.NTDSK	EQU	7	• ONLY DISK SYSTEM OBJECTS CAN BE HARDLINKED	ERRNUMS	1
10	EN.ISOWN	EQU	8	• WRONG ACTION TO DELETE OWNERSHIP ENTRY	ERRNUMS	1
11	EN.BGOPT	EQU	9	• MORE THAN 42 OPTIONS GIVEN TO -ADD PAIR-	ERRNUMS	1
12	EN.ISLCK	EQU	10	• DUPLICATE LOCK FOR NEW ACCESS PAIR	ERRNUMS	1
13	EN.NTLCK	EQU	11	• NO SUCH LOCK FOR ACCESS PAIR TO BE DELETED	ERRNUMS	1
14	EN.NTDIR	EQU	12	• EVEN SCANLIST ENTRIES MUST BE DIRECTORIES	ERRNUMS	1
15	EN.NTKEY	EQU	13	• ODD SCANLIST ENTRIES MUST BE ACCESS-KEYS	ERRNUMS	1
16	EN.OWNS	EQU	14	• DIRECTORY TO BE DELETED OWNS SOMETHING	ERRNUMS	1
17	EN.RSRV	EQU	15	• DIRECTORY IS CURRENTLY RESERVED (EX. OPEN)	ERRNUMS	1
20	EN.NTFO	EQU	16	• ACCOUNTING ACTION W/O FUNDING DIRECTORY	ERRNUMS	1
21	EN.NTIM	EQU	17	• AN AS YET UNIMPLEMENTED ACTION WAS CALLED	ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
*****					ERRNUMS	1
16	FC.DYNTG	EQU	14	• ERROR CLASS FOR DYNAMIC NAME TAG ERRORS	ERRNUMS	1
*					ERRNUMS	1
0	EN.FLOL	EQU	0	• FULL LOCAL OPEN LIST	ERRNUMS	1
1	EN.BLOC	EQU	1	• TOO MANY LOCAL OPNS	ERRNUMS	1
2	EN.FDNT	EQU	2	• FULL GLOBAL TABLE	ERRNUMS	1
3	EN.BGOC	EQU	3	• TOO MANY GLOBAL OPENS	ERRNUMS	1
4	EN.NTOP	EQU	4	• NO SUCH LOCALLY OPEN TAG	ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
*					ERRNUMS	1
*****					ERRNUMS	1
17	EC.BEADS	EQU	15	• ERROR CLASS FOR READS ERRORS	ERRNUMS	1
*					ERRNUMS	1

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\*  
\*  
\*  
\* OPTION BIT DEFINITIONS  
\*  
2 OB.ACC EQU 2  
4 OB.SDINT EQU 4  
1 OB.DSTRY EQU 1

\*  
\*  
\* MACRO OPER,NEW,OLD  
C.OLD EXT EC:PNEW  
EQU EC:PNEW  
ENDM

\* \* ECS SYSTEM CALL OPERATIONS

\* LIST USED BY: OPER1 IN IPROC  
OPERCL

\* \* ECS FILE OPERATIONS

CFIL	OPER	CFILE	CREATE FILE
DFIL	OPER	DELFILE	DESTROY FILE
CBLK	OPER	CBLK	CREATE BLOCK
DBLK	OPER	DELBLK	DESTROY BLOCK
MBLK	OPER	MOVBLK	MOVE BLOCK
READ	OPER	READ	READ FILE
WRIT	OPER	WRITE	WRITE FILE
PROB	OPER	PROBE	PROBE FOR FILE/BLOCK
RSHP	OPER	REDSHP	READ SHAPE
TBLK	OPER	TRDB	TEST BLOCK (CLEAN/DIRTY)

\* \* CLASS CODE OPERATIONS

CCLS	OPER	CCC	CREATE CLASS CODE
STMP	OPER	NWTMP	SET TEMPORARY PART

\* \* EVENT CHANNEL OPERATIONS

CEVC	OPER	CEVCH	DESTROY EVENT CHANNEL
DEV C	OPER	DESECH	SEND EVENT
SEV	OPER	SENDE	SET EVENT OR HANG
GEVH	OPER	HANG	GET EVENT OR FRETURN
GEVF	OPER	GETEVEF	GET EVENT OR HANG (MULTIPLE)
GVMH	OPER	MGETH	GET EVENT OR FRETURN (MULTIPLE)
GVMF	OPER	MGETF	

\* \* CAPABILITY OPERATIONS

CCL	OPER	CCLIST	CREATE CLIST
DCL	OPER	DELCL	DESTROY CLIST
CIN	OPER	CAPIN	MOVE CAP INTO FULL CLIST
COUT	OPER	CAPOUT	MOVE CAP OUT OF FULL CLIST
MCAP	OPER	MVECAP	COPY CAP WITHIN FULL CLIST
DSCP	OPER	DSPCAP	DISPLAY CAPABILITY
MCCA	OPER	CAGEN	MAKE CAP CREATING AUTHORIZATION
CCAP	OPER	CGEN	CREATE CAP OF SPECIFIED TYPE

\* OPERATION OPERATIONS

COPR	OPER	MKOPR	CREATE OPERATION
*DOPR	OPER	DSOPR	DESTROY OPERATION
MOPR	OPER	COPYOP	COPY OPERATION
DSOP	OPER	DISPOP	DISPLAY OPERATION
ADOR	OPER	ADDORD	ADD ORDER TO OPERATION
ADOP	OPER	ADDOPT	ADD OPTION BITS TO OPERATION
ACAP	OPER	ACAP	MAKE PARAMETER ANY CAP
UCAP	OPER	UCAP	MAKE PARAMETER USER CAP
FCAP	OPER	FIXC	MAKE PARAMETER FIXED CAP
BCAP	OPER	BLKCAP	MAKE PARAMETER BLOCK CAP
UDAT	OPER	UDAT	MAKE PARAMETER USER DATUM
FDAT	OPER	FIXD	MAKE PARAMETER FIXED DATUM
BDAT	OPER	BDAI	MAKE PARAMETER BLOCK DATUM

\* PROCESS OPERATIONS

CPRC	OPER	CPROC	CREATE PROCESS
DPRC	OPER	DLPROC	DESTROY PROCESS
INTP	OPER	PINT	INTERRUPT PROCESS
CLK	OPER	DSPCLX	DISPLAY PROCESS CLOCKS

\* SUBPROCESS OPERATIONS

CSUB	OPER	CSPROC	CREATE SUBPROCESS
DSSB	OPER	DSPSP	DISPLAY SUBPROCESS
JUMP	OPER	JUMP	SUBPROCESS JUMP CALL
RTRN	OPER	RETURN	SUBPROCESS RETURN
FRET	OPER	FRETUR	SUBPROCESS FRETURN
RPAR	OPER	RETPAR	SUBPROCESS RETURN W/ PARAMETERS
RRER	OPER	USRER	SUBPROCESS RETURN W/ ERROR
MMRO	OPER	MKMPRO	MAKE READ-ONLY MAP ENTRY
MMRW	OPER	MKMPRW	MAKE READ/WRITE MAP ENTRY
CMRO	OPER	CHMPRO	CHANGE READ-ONLY MAP ENTRY
CMRW	OPER	CHMPRW	CHANGE READ/WRITE MAP ENTRY
ZRM	OPER	MAPZRO	ZERO MAP ENTRY
DSAM	OPER	DISMAP	DISPLAY ARBITRARY MAP
DSFM	OPER	DSFMAP	DISPLAY FULL MAP
ESMA	OPER	ESMGEN	SET ARBITRARY ESM
ESML	OPER	ESMLOC	SET LOCAL ESM
DSST	OPER	DISPST	DISPLAY STACK
DSSE	OPER	DISSEN	DISPLAY STACK ENTRY
SETP	OPER	MODPC	SET P-COUNTER
SIIB	OPER	SETIIB	SET INTERRUPT INHIBIT BIT
CIIB	OPER	CLRIB	CLEAR INTERRUPT INHIBIT BIT

\* ALLOCATION BLOCK OPERATIONS

*CRAB	OPER	CRALBK	CREATE ALLOCATION BLOCK
DAB	OPER	DELAB	DESTROY ALLOCATION BLOCK
DSAB	OPER	DSPAB	DISPLAY ALLOCATION BLOCK
CHUN	OPER	NEWUN	CHANGE UNIQUE NAME

\*  
\* MISCELLANEOUS ECS SYSTEM CALL OPERATIONS

\*  
SAVE OPER SAVE SAVE REGISTERS  
RSTR OPER RESTOR RESTORE REGISTERS  
TIME OPER TIMDT DISPLAY TIME AND DATE

\*

\*

\*

0 X C.CHKBLK EQU C.PROBE  
0 X C.GETE EQU C.HANG  
0 X C.MPCHRO EQU C.MKMPRO  
0 X C.MPCHRW EQU C.MKMPRW

**READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
ECOPS,OPERS STUFF**

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```
*  
*  
* GET EXTERNALS IN PROF  
*  
* MACRO TO DEFINE A SYMBOL FROM PROF  


| PROF | MACRO | NM,XT    |
|------|-------|----------|
|      | IFC   | EQ,/XT// |
|      | EXT   | NM       |
|      | ELSE  |          |
|      | EXT   | XT       |
| NM   | EQU   | XT       |
|      | ENDIF |          |
|      | ENDM  |          |


```

0

PEXTS	XTEXT	
	PROF	DELPROF
	PROF	FL
	PROF	USERSRV
	PROF	LOGON1
	PROF	LOGON2
	PROF	LOGOUT1
	PROF	CLRRMAP
	PROF	CHCKPSW

PEXTS PEXTS PEXTS PEXTS PEXTS PEXTS PEXTS PEXTS PEXTS

\*  
\*  
\*  
\*  
\*  
MASTER XJ MACRO  
\*  
XJ MACRO LOC,FRTN,ERR,ERRTAG,RTN  
\*  
IFC EQ,SRTNSS  
VFD 12/0130#,18/LOC,12-0,18/2  
ENDIF  
\*  
IFC NE,SRTNSS  
VFD 12/0130#,18/LOC,12-1,18/3  
JP #+1  
VFD 30/RTN  
ENDIF  
\*  
SB7 #+1  
\*  
IFC EQ,SFRTNSS  
JP UNEXFRTN  
ENDIF  
\*  
IFC NE,SFRTNSS  
JP FRTN  
ENDIF  
\*  
IFC EQ,SERRSS  
JP UNFERR  
ENDIF  
\*  
IFC NE,SERRSS  
JP ERR  
ENDIF  
\*  
IFC EQ,SERRTAG\$  
VFD 30/0  
ENDIF  
\*  
IFC NE,SERRTAG\$  
VFD 30/ERRTAG  
ENDIF  
\*  
ENDM  
\*  
CALL MACRO LOC,A,B,C,D,E  
SETBS A,B,C,D,E  
\* SB7 #+1  
JP LOC  
ENDIF  
\*  
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,\$\$AS
	SB1	A
	IFC	NE,\$\$BS
	SB2	B
	IFC	NE,\$\$CS
	SB3	C
	IFC	NE,\$\$DS
	SB4	D
	IFC	NE,\$\$ES
	SB5	E
	ENDIF	
	ENDM	
*		
*		
RTNR	MACRO	RTNR
	JP	
	ENDM	
*		
*		
POPR	MACRO	
*	SB7	*+1
	JP	POPR
	ENDM	
*		
*		
OLDCAP	MACRO	NAME
	BSS	0
M,NAME	EQU	*+1ND
	VFD	1/1,29/C,NAME,30/CV,OPRS
	ENDM	
*		
*		
MCAP	MACRO	NAME

**READS MACROS**      **HANDLES READ AND COMMAND PROCESSOR SERVICES**

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```

NAME#1      EXT      NAME
          BSS      ?
          EQU      ??IND
          VFD      1/1,29/NAME,30/CX..PRS
          ENDM

*
*
MXCAP      MACRO    NAME
          EXT      NAME
          VFD      1/1,29/NAME,30/CX..PRS
          ENDM

*
ITEMS      MACRO    A,B,C,D,E,F,G,H
          VFD      60/A
          IFC      NE,$$BS
          VFD      60/B
          IFC      NE,$$CS
          VFD      60/C
          IFC      NE,$$DS
          VFD      60/D
          IFC      NE,$$ES
          VFD      60/E
          IFC      NE,$$FS
          VFD      60/F
          IFC      NE,$$GS
          VFD      60/G
          IFC      NE,$$HS
          VFD      60/H
          ENDIF
          ENDM

*
*
MAP        MACRO    NAME,X,FLAD,CMAD,LHSTP1,RD
          VFD      60/0L>NAME
          VFD      30/X,30/FLAD
          VFD      1/R0,29/CMAD,30/LA-TP1
          ENDM

*
*
*
PARCAP     MACRO    NAME
          DATA    0L>NAME
          ENDM

*
*
L          MACRO    MICROX,L,NAME
          MICRO   1.,/PNAME/P/
          ENDM

```

\*  
\*  
\* EVECN MACRO CLASS,NUM,LOC  
\* VFD 6/0•18/CLASS,18/NUM,18/LOC  
\* ENDM  
\*  
\* EVECT MACRO XFER  
\* VFD 60/-XFER  
\* ENDM  
\*  
\* NAMEZ MACRO NAME  
\* IFC NE,\$\$NAMES  
\* VFD 60/0LNAME  
\* ENDIF  
\* IFC EQ,\$\$NAMES  
\* VFD 60/0  
\* ENDIF  
\* ENDM  
\*  
\*  
\* SDMAP MACRO FNAME,UNAME,FLAD,CVAD,LASTP1,RO  
\* NAMEZ FNAME  
\* NAMEZ UNAME  
\* VFD 60/FLAD,60/CVAD,1/T,59/LASTP1  
\* VFD 60/RO  
\* ENDM  
\*  
\*  
\* L MACRO CAP,L,FNAME,UNAME  
CXPNTR EQU CXPNTR  
SET CXPNTR+1  
NAMEZ FNAME  
NAMEZ UNAME  
ENDM  
\*  
\*  
\* L MACRO CAPZ,L  
CXPNTR EQU CXPNTR  
SET CXPNTR+1  
ENDM  
\*  
\*  
\* OKTEST MACRO OP,REG,ERR,ERRTAG  
\* OP REG,\*+3  
\* SX6 ERRTAG  
\* SB7 \*+1  
\* JP SPCLERR

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
MACROS

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	JP	ERR
	BSS	0
	ENDM	
*		
*		
OKTESTX	MACRO	OP,REG,ERR,TAG
	LOCAL	L1,L2
	OP	REG,L2
	SX6	TAG
	ZR	X2,L1
	SA6	ERRTAG
	JP	ERR
L1	SB7	*+1
	JP	SPCLERR
	JP	ERR
L2	BSS	0
	ENDM	

\*  
\*  
\*  
\*  
**BASIC MACRO**  
\*  
XSETXJ MACRO A,B,C,D,E  
LOCALPXJ SET 0  
IFC NE,\$\$AS  
SX1 A  
LOCALPXJ SET 1  
IFC NE,\$\$BS  
SX2 B  
LOCALPXJ SET 2  
IFC NE,\$\$CS  
SX3 C  
LOCALPXJ SET 3  
IFC NE,\$\$DS  
SX4 D  
LOCALPXJ SET 4  
IFC NE,\$\$ES  
SX5 E  
LOCALPXJ SET 5  
ENDM

\*  
\*  
\*  
\*  
**FULL 10 PARAM VERSION**  
\*  
YSETXJ MACRO A,B,C,D,E,F,G,H,I,J  
XSETXJ A,B,C,D,E  
SB2 S  
CALL XSETXJ SET  
ENDIF F,G,H,I,J  
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 VERSION**  
\*  
\*  
\*  
\*  
**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

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
MACROS FOR XJ CALLS

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ENDM

\*  
\*  
\*

FINAL CALL ( USE YSETXJ IN BETWEEN)

XDOXJ MACRO A,B,C,D,E,F,G,H,I,  
YSETXJ A,B,C,D,E,F,G,H,I,  
XJ XJLOC  
ENDM

\*  
\*  
\*  
\*  
\*  
\* MACRO TO GENERATE RETURN PARAMETER AUTHORIZATION  
\*  
\*  
\* RETAUTH MACRO CAP,CCNT,DATA,DCNT  
\* VFD 30/DCNT+0,30/DATA+  
\* VFD 30/CCNT+0,30/CAP+0  
\* ENDM  
\*  
\*  
\*  
\*  
\*  
\* MACRO TO GENERATE <LOCK DATA POINTER>  
\*  
\*  
\*  
\* BLOCKD MACRO PNTR,CNT  
\* VFD 30/CNT,30/PNTR  
\* ENDM  
\*  
\*  
\*  
\*  
\* MACRO TO INDIRECTLY REFERENCE CX,OPRS  
\*  
\*  
\* OPCAP MACRO NAME  
\* VFD 1/1,29/=X,NAME,30/AX,OPRS  
\* ENDM  
\*  
\*  
\*  
\* MACRO TO GENERATE < INDIRECT CLIST REF >  
\*  
\*  
\* INDCAP MACRO CLIST,CAP  
\* VFD 1/1,29/CAP,30/CLIST+  
\* ENDM  
\*  
\*  
\*  
\* MACRO TO INDIRECTLY REFERENCE CX,CSTF  
\*  
\*  
\* CSTFCAP MACRO NAME  
\* INDCAP CX,CSTF,CS,NAME  
\* ENDM  
\*  
\*  
\*  
\*  
\* MACRO TO COMPARE WITH CTYPVEC  
\*  
\*

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
MACROS FOR XJ CALLS

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CMPCTYP	MACRO	TYPE,LAB
SA2		CTYP@TYPE
IX3		X6-X2
ZR		X3,LAB@TYPE
ENDM		

```
*
*
*
*
*
```

## MICROS FOR SUBPROCESS DESCRIPTOR

0	CLASS	MICROX	CC.BEADS
0	FATHER	MICROX	CC.FRETRW
0	ICALL	MICROX	CO.BEADSI
0	CLIST	MICROX	CL.BEADS
0	SCRFILE	MICROX	EF.BEADSSF
0	CODEFILE	MICROX	EF.BEADSCD

```

*
*
*
*
```

## SUBPROCESS DESCRIPTOR

0 + RELOC0 EQU \*0 RELOCATABLE 0 - SHOULD BE REAL 0 WHEN LOADED

0	00000000000000000000000000000000	DATA	1
1	00000000000000000000000000000000	DATA	0
2	03035702050104230000	DATA	#L#CLASS#
3	03035706220524222700	DATA	#L#FATHER#
4	03175702050104231100	DATA	#L#ICALL#
5	03145702050104230000	DATA	#L#CLIST#
6	05065702050104232306	DATA	#L#SCRFILE#
7	00000000000000000000000000000006	DATA	6
10	000000000000000000000000000031	DATA	25
11	00000000000000000000000000000000 X	ITEMS	FL
12	0000000000000000000000740 +	ITEMS	ENTRY
13	000000000000000000000004	ITEMS	CLSTSZ
14	0000000000000000300 +	ITEMS	SCRSZ
15	05065702050104232306	MAP	#SCRFILE#,0,0,0,SCSZ,0
20	05065702050104230304	MAP	#CODEFILE#,1,CODEBAIN,CODEBEGIN,FL,1
23	05065702050104230304	MAP	#CODEFILE#,2,HEADBUF,HEADBUFE,HDBFEND,0
26	77777777777777777777	DATA	-0

```
*
```

LOC

0

THIS MUST FOLLOW CX.TEMP

L	0	CX.TEMP	DATA	0	
L	1	00000000000000000000000000000000	CX.TPOBJ	DATA	0
L	2	05065702050104230304	CX.CODEF	PARCAP	#CODEFILE#
L	3	03145717200522230000	CX.OPRS	PARCAP	CL.OPERS
L	4	03175706011305070200	CX.BEAD	PARCAP	CO.FAKEGB
L	5	03035702050104230000	CX.CLSOD	PARCAP	#CLASS#
L	6	14031401141417030000	CX.LCLAB	PARCAP	LCLALLOC
L	7	03175702050104070200	CX.BDCAL	PARCAP	CO.BEADGB
L	10	03035702050104070000	CX.BDGST	PARCAP	CC.BEADG

L	11	03175703151504220000	CX.CMMDR	PARCAP	CO.CMMDR
L	12	03035702050104230000	CX.BEADS	PARCAP	CC.BEADS
L	13	11570623171600000000	M.FSON	PARCAP	I.FSON
L	14	02571311141402140400	CX.KLBD	PARCAP	B.KILLBLD
L	15	00000000000000000000	CX.SHTEV	DATA	0
L	16	03175702050104232200	CX.RUN	PARCAP	CO.BEADSR
L	17	03145703151504232406	CX.CSTP	PARCAP	CL.CMMDSTF
			*	INDEXES INTO THIS CLIST	
L	0	CS.ROOTD	EQU	0	
L	1	CS.NULAK	EQU	1	
L	2	CS.TDLST	EQU	2	
L	3	CS.PUBAK	EQU	3	
L	4	CS.S	EQU	4	
L	5	CS.CLASS	EQU	5	
L	6	CS.OPER	EQU	6	
L	15	CS.PROF	EQU	158	
L	16	CS.DAYF	EQU	168	
L	17	CS.DFEC	EQU	178	
L	20	CS.LCEC	EQU	208	
L	20	24243106111405000000	CX.TTYF	PARCAP	TTYFILE
L	21	24243122052100000000	CX.TTYRQ	PARCAP	TTYREQ
L	22	24243122052320000000	CX.TTYRS	PARCAP	TTYRESP
L	23	24101123202217030000	CX.TPRC	PARCAP	THISPROC
L	24	03145704220324233123	CX.SBCOD	BSS	0
L	25	00000000000000000000	CX.DCTYP	PARCAP	CL.DRCTSYS CLIST WITH CAP TYPES OF DISK OBJECTS.
L	26	00000000000000000000	CX.SUBPD	DATA	0
L	27	00000000000000000000	CX.SUBDR	DATA	0
L	30	00000000000000000000	CX.SBOP	DATA	0
L	31	00000000000000000000	CX.SBCLS	DATA	0
L	32	00000000000000000000	CX.SBSCR	DATA	0
L	33	00000000000000000000	CX.SBCL	DATA	0
L	33	00000000000000000000	CX.RALS	BSS	0
L	34	00000000000000000000	CX.RDIR	DATA	0
L	34	00000000000000000000	CX.FALR	BSS	0
L	34	00000000000000000000	*		ROOT ALLOCATING BLOCK WHEN KILLING ALBLOCK
L	35	00000000000000000000	CX.FDIR	DATA	0
L	36	00000000000000000000	CX.TEMPD	DATA	0
L	36	00000000000000000000	CX.PERMD	DATA	0
L	37	00000000000000000000	CX.ACC	DATA	0
L	40	00000000000000000000	CX.OUDIR	DATA	0
L	41	00000000000000000000	CX.DAYF	DATA	0
L	42	00000000000000000000	CX.PROF	DATA	0
L	43	00000000000000000000	CX.NULL	DATA	0
L	44		RTNBASE	BSS	0
L	44	77777777777777777777	*		
L	44	77777777777777777777	*		
L	74		*	DATA	-0
L	74		*	LOC	#0
L	74		*		

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
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0 PARLIMIT SET 0  
74 + OLDORG SET \*0

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
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\*  
\*  
\*  
\*

GENERAL PARAMS

6

ORG RELOC0+6

6

HDDNPAR BSS 1

\*  
\*  
\*

7 + INFOPARS EQU \$0

7 + PARLIMIT IFGT \$0,PARLIMIT  
SET \$0  
ENDIF

**READS**    **HANDLES READ AND COMMAND PROCESSOR SERVICES**  
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## PARAMETERS FOR BEAR SERVICES

7		ORG	INFOPARS
7	*		
10	BDB6	BSS	1
11	BDX1	BSS	1
12	BDX2	BSS	1
13	BDENTCNT	BSS	1
14	BDENT	BSS	4
15	*		
17	+ PARLIMIT	IFGT SET ENDIF	\$0,PARLIMIT \$0

## PARAMETERS FOR CMMA SERVICES

	ORG	INFOPARS
*		
CMMDTYPE	BSS	1
CMMDBKON	BSS	1
CMMDBLK	BSS	4
*		
IFGT		#O,PARLIMIT
ENDIF		

## PARAMETERS FOR RUN CALL

7  
8                    ORG            INFOPARS  
9                    \*  
10                  SHTDTM        BSS        1  
11                         BSS        1            INDEX OF CAPABILITY (FOR SHTEV, WILL BE 0)  
12                  \*  
13                  IFGT        EO,PARLIMIT  
14                  ENDIF

## PARAMETERS FOR USER CALL

7  
7  
10  
11

		ORG	INFOPARS
	USRTYPE	BSS	1
	USRCNT	BSS	1
	USRBLK	BSS	20
		IFGT	*0,PARLIMIT
35 +	PARLIMIT	SET	*0
		ENDIF	
	*		
	*		
	*		

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\*

ORG PARLIMIT

\*

\*

\*  
\*  
\* MOST XJ'S DONE HERE  
\*  
\* 35 XJLOC BSS 15  
\*  
\* SOME RETURN AUTHORIZATIONS PUT HERE  
\*  
\* 54 RETLOC BSS 2  
\*  
\*  
\* CALL STACK DATA  
\*  
\* 56 CALLSTK BSS 10 CALL STACK  
\*  
\* 70 CSTKPNTR BSS 1  
\*  
\*  
\* GENERAL GLOBAL DATA  
\*  
\* 71 TEMP1 BSS 1  
\* 72 TEMP2 BSS 1  
\* 73 DSPBUF BSS DSPBUFSZ  
\*  
\*  
\* 106 NREGS BSS 208  
\*  
\* 126 EREGS BSS 208  
\*  
\*  
\* 146 SHTDTMSV BSSZ 1 HOLDS SHUT DOWN DATUM

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
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\*  
\*  
\* BEGINNING OF AREA TO INITIALIZE ON FIRST CALL  
\*  
\*

IFGT OLDORG,\*0,1

147 \* INITORG EQU \*0

\*\*\*\*\*

## DATA USED MAINLY BY ERROR PROCESSING

147

ESTKBF BSSZ 3

152

OWNCLSCD BSSZ 1

153 4000000000 X  
154 00000000000000000005  
155 00000000000000000001  
156ESTPC MXCAP EC:SETP  
ITEMS CX,CLSCO  
DATA I  
BSSZ I

\*\*\*\*\*

## ERROR CAL DATA

\*\*\*\*\*

157  
160  
161ERRNEXT BSSZ I STACK PC+TR  
ERRTAG BSSZ I ERROR TAG ON THE XJ  
ERRCN BSSZ I CLASS AND NUMBER PACKED162  
163ERRCLASS BSSZ I CLASS  
ERRNUMB BSSZ I NUMBER164  
165ERRINFO1 BSSZ I LOCATION ERRINFO WD 1  
ERRINFO2 BSSZ I LOCATION ERRINFO WD 2

\*\*\*\*\*

166 4000000000 X  
167 000000000000000017  
170ERRETURN MXCAP EC:RERR  
DATA I BEADS ERROR CLASS  
BSSZ I WILL CONTAIN NUMBER AND MODIFIER

\*\*\*\*\*

171

RUNFLAG BSSZ I CAUSES SYSTEM ..STOP IF ERRXIT AND = 0

\*

\*

\*

## DATA USED BY BEAD SERVICES INTERFACE

\*

12 BDSBHDSZ EQU 10

\*

172 BDSUBHD BSSZ BDSBHDSZ

\*

172 + BDSUBMP EQU BDSUBHD

172 + BDSUBCLD EQU BDSUBHD

\*

204 BDSUBPF BSSZ 1  
205 BDSUBX BSSZ 1  
206 BDRREADPB BSSZ 1  
207 BDSUBACN BSSZ 1

\*

\*

\*

## SOME MORE GENERAL DATA

\*

\*

## DATA TO CONTROL A SINGLE DISK FILE

\*

210 DFFLAG BSSZ 1 STATE OF FILE  
211 OPNFILE BSSZ 1 INDEX OF FILE  
212 ATCHDBLK BSSZ 1 ADDRESS OF SINGLE ATTACHED BLK

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
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\*  
\*  
\*  
\*

DATA USED BY CMMD SERVICES INTERFACE

213	00000000000000000000	CMDRTPAR	VFD	30/0,30/0
214			BSSZ	1

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\*

\*

\*

DATA USED FOR PROFILES AND ACCOUNTING

\*

215	DAYFPT	BSSZ	1
216	PROFPPT	BSSZ	1
217	MAPCOUNT	BSSZ	1
220	SAVES	BSSZ	1
221	S.CNTIM	BSSZ	1
222	S.FXECS	BSSZ	1
223	S.MOTS	BSSZ	1
224	R.CNTIM	BSSZ	1

\*

\*

\*

\*

## DATA USED BY DIRECTORY INTERFACE

\*

12	BDBCNT	EQU	10	
5	L.DIRNM	EQU	5	LIMIT ON THE SIZE OF A DIRECTORY NAME
11	KLDRBSZ	EQU	L.DIRNM+4	SIZE OF BUFFER FOR DISPLAYING DIRECTORY ENTRIES

\*

\*

\*

\*

\*

225

FINDOBT BSSZ

1

\*

226 00000000000000000003

FSHAPe DATA

3

SHAPE CONTROL

227 00000000000000000020

DATA

20B

228 00000000000000000040

DATA

40B

229 000000000000000000400

DATA

400B

230 0000000000000000000000

BSSZ

1

231 0000000000000000000000

\*

232 0000000000000000000000

USERNAME BSSZ

1

233 0000000000000000000000

PUBAKNUM DATA

0

234 0000000000000000000000

ACKCAP BSS

1

235 0000000000000000000000

DIRCAP BSS

1

236 0000000000000000000000

BLOCKSHP BSS

1

237 0000000000000000000000

FORLPCNT BSS

1

238 0000000000000000000000

LKUPFJMP BSS

1

239 0000000000000000000000

LKUPEJMP BSS

1

240 0000000000000000000000

ASCIIUNM BSS

1

241 0000000000000000000000

ASCIIONM BSS

1

242 0000000000000000000000

CTYPVEC BSS

0

243 0000000000000000000000

CTYPDF BSS

1

244 0000000000000000000000

CTYPDIF BSS

1

245 0000000000000000000000

CTYPSPD BSS

1

246 0000000000000000000000

CTYPSNT BSS

1

247 0000000000000000000000

CTYPDNT BSS

1

248 0000000000000000000000

CTYPACK BSS

1

\*

\*

\*

\*

## DATA USED BY KILL OBJECT

\*

\*

\*

253 0000000000000000000000

SHPBUFSZ EQU

S

254 0000000000000000000000

SHPBUF BSSZ

SHPBUFSZ

255 0000000000000000000000

DSPBUF DBSZ

DSPBUF

256 0000000000000000000000

KLDRBUF BSS

KLDRBUF

257 0000000000000000000000

USRABCT BSS

USRABCT

258 0000000000000000000000

KLDRDNM BSS

KLDRDNM

259 0000000000000000000000

KLABN BSS

KLABN

260 0000000000000000000000

KLDRN BSS

KLDRN

261 0000000000000000000000

KLAB1ST BSS

KLAB1ST

262 0000000000000000000000

KLDR1ST BSS

KLDR1ST

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
LOW CORE

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271	CLNFLG	BSS	1
	*		
272	4000000000 X	MXCAP	EC:PROB
273	00000000000000000000	ITEMS	CX TEMP
274		BSSZ	1
	*		
275	4000000000 X	KILLBLK	EC:DBLK
276	00000000000000000000	ITEMS	CX TEMP
277		BSSZ	1

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
BUFFERS FOR STRANGE MAP ENTRIES

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\*  
\*  
\* END OF SCRATCH AREA  
\*  
\* SCRSZ BSS 0  
\*  
\*  
\* BUFFER TO READ IN THE PROFILE HEAD  
\* SCRATCH FILE USED BY ALL USER PROCESSES  
\* AND THEREFORE ONLY BE TOUCHED WHILE PROFILE  
\* IS EXCLUSIVELY CLAIMED.  
\*  
\* 300 HEADBUF BSS 2\*PROFSZ  
\* 400 HDBFEND BSS 0  
\*  
\*  
\* PROFBUF BSS PROFSZ  
\* FTHRBUF BSS PROFSZ  
\*  
\*  
\* BUFFER FOR MAPPING IN A DAYFILE ENTRY  
\*  
\* 500 DAYFBUF BSS DAYFSZ

520

CODEBGIN BSS 0

MISC REFERANCES TO MASTER CLIST

520

OLDCAP READ  
OLDCAP WRITE  
OLDCAP CAPIN  
OLDCAP CAPOUT  
OLDCAP MVECAP  
OLDCAP CFILE  
OLDCAP CCC  
OLDCAP DSPCAP  
OLDCAP REDSHP  
OLDCAP NEWUN  
OLDCAP DELFIL  
OLDCAP DESECH  
OLDCAP DELCL  
OLDCAP CCLIST  
OLDCAP CHKBLL  
OLDCAP CSPROC  
OLDCAP CBLK  
OLDCAP MPCHRW  
OLDCAP MPCHRO  
OLDCAP MKOPR  
OLDCAP BLKCAP  
OLDCAP RETPAR  
OLDCAP SENDE  
OLDCAP GETE  
OLDCAP MODPC  
OLDCAP JUMP

552

MCAP CP:SPAC

553

MCAP DF:ATCH  
MCAP DF:DTCH  
MCAP DF:CBLK  
MCAP DF:DBLK  
MCAP DF:DSF  
MCAP DF:READ  
MCAP DF:WRIT  
MCAP DF:CLO  
MCAP EC:CCLS  
MCAP DR:UACC  
MCAP SD:CONV  
MCAP EC:DSCP  
MCAP DF:CLOS  
MCAP DF:MMRO  
MCAP DF:MMRW  
MCAP DF:OPRO

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ ONLY DATA

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573	MCAP	DF:OPRW
574	MCAP	DF:PROB
575	MCAP	DF:DSUB
576	MCAP	DF:CAOF
577	MCAP	DF:XSEC
600	MCAP	DF:CLUP
*		
601	MCAP	DR:OPDR
602	MCAP	DR:CLDR
603	MCAP	DR:HDLK
*		
604	MCAP	DN:CLAO
605	MCAP	DN:ODN1
606	MCAP	DN:CLAW
607	MCAP	DN:CFLG
*		
610	MCAP	EC:MMRO
611	MCAP	EC:MMRW
612	MCAP	EC:DOPR
613	MCAP	EC:DSAB
614	MCAP	EC:MVSP
615	MCAP	EC:CRAB
616	MCAP	EC:MVMT
617	MCAP	EC:MCAP
620	MCAP	EC:COUT
621	MCAP	EC:CCL
622	MCAP	EC:SEV
623	MCAP	EC:GEVH

\*

\*

\* REFERENCES TO CX,CSTF

\*

624	40000000000000000017	IS.ROOTD	CSTFCAP	ROOTD
625	40000000030000000017	IS.PUBAK	CSTFCAP	PUBAK
626	40000000020000000017	IS.TDLST	CSTFCAP	TDLST
627	40000000010000000017	IS.NULAK	CSTFCAP	NULAK
630	4000000002000000000017	IS.LCEC	CSTFCAP	LCEC
631	40000000170000000017	IS.DFEC	CSTFCAP	DFEC
632	40000000160000000017	IS.DAYF	CSTFCAP	DAYF
633	40000000150000000017	IS.PROF	CSTFCAP	PROF
634	40000000040000000017	IS.S	CSTFCAP	S
635	40000000050000000017	IS.CLASS	CSTFCAP	CLASS
636	40000000060000000017	IS.OPER	CSTFCAP	OPER

\* THE FOLLOWING PUBLIC USER NAMES MUST BE IN THIS ORDER

IS.S	CSTFCAP	S
IS.CLASS	CSTFCAP	CLASS
IS.OPER	CSTFCAP	OPER

\*

\*

\* REFERENCES TO CX,OPRS

\*

637	400000000 X	CRTHDLK	BSS	0
637	400000000 X	CRTHLKOP	OPCAP	DR:HDLK
640	400000000 X	CRTDNTOP	OPCAP	DN:CRDN
641	400000000 X	CRTDFOP	OPCAP	DR:CRFI
642	400000000 X	DELINKOP	OPCAP	DR:RMLK
643	400000000 X	DELOWNOP	OPCAP	DR:RMOE
644	400000000 X	DSPDIPOP	OPCAP	DR:DSPN
645	400000000 X	ACCESSOP	OPCAP	DR:UACC
646	400000000 X	DESTRYOP	OPCAP	DR:DSTR
647	400000000 X	GETCAPOP	OPCAP	EC:CLOA
650	400000000 X	KILLAROP	OPCAP	EC:DAB
651	400000000 X	ADDKEYOP	OPCAP	DR:ADPR

\*

\*

MISC FIXED DATA

\*

652	77777777777777777777	MINUS0	DATA	=0
653	00000077777777777777	LOWONES	VFD	18/0,42/-0
654	777777777777677777	MINUSLRG	DATA	-1000000B
655	7777777777777000000	HIGHONES	VFD	42/-0,18/0
656	23032201240310000000	DISCRATCH	DATA	0LSCRATCH
657	00000000000000000000	ZERO	DATA	0
660	7777777777777777776	MINUS1	DATA	-1
661	000000002000000042 +	BLK2XJL5	VFD	30/2,30/XJLOC+5

\*  
\*  
\*  
\*  
\*

FIXED IP LISTS

662 4000000000 X

RETURN MXCAP EC:RTRN

663 4000000000 X

SETEMSK MXCAP EC:ESML

664 0000000000000000665 +

ITEMS \*+1

665 77777777777777777777

DATA =0

666 4000000000 X

READSLFI MXCAP EC:READ

667 00000000000000000002

ITEMS CX.CODEF,INITORG,INITORG,SCRsz-INITORG

673 4000000000 X

RDCLSCD MXCAP EC:DSCP

674 00000000000000000005

ITEMS CX,CLS\_CD

675 4000000000 X

RDRDCALL MXCAP EC:DSCP

676 BEAD ITEMS CX,BEAD

677 4000000000 X

SAVE MXCAP EC:SAVE

700 0000000000000000106 +

ITEMS NREGS

701 4000000000 X

RESTORE MXCAP EC:RSTR

702 0000000000000000106 +

ITEMS NREGS

703 0000000000000000014

KILLBLD ITEMS CX,KLB LD

704 0000000000000000016

ITEMS CX,RUN

\*  
\*  
\*  
\*  
\*

RETURN AUTH LISTS

705 00000000000000000000

RET1CTMP VFD 30/0,30/0

RETURN 1 CAP TO CX TEMP

706 00000000100000000000

VFD 30/1,30/CX TEMP

707 00000000170000000035 +

RET15WDS VFD 30/15,30/XJLOC

710 00000000000000000000

VFD 30/0,30/0

711 4000000000 X  
712 00000000000000000001

713 4000000000 X  
714 000000000000000000043

717 4000000000 X  
720 00000000000000000001

\*  
\*  
\*  
\*  
\*

FIXED IP LISTS USER BY DIRECTORY INTERFACE MAINLY

\* DISPLAY OBJECT IN CX.TPOBJ  
DSPTPOIP OPCAP EC:DSCP  
ITEMS CX.TPOBJ  
\*  
\* NULL CX TEMP  
NULTMPIP OPCAP EC:MCAP  
ITEMS CX.NULL,CX TEMP,-0  
\*  
\* MOVE CAP FROM CX.TPOBJ TO CX TEMP  
MTOBJTMP OPCAP EC:MCAP  
ITEMS CX.TPOBJ,CX TEMP,-

\*

\*

\*

FIXED IP LISTS USED BY ERROR PROCESSOR MAINLY

\*

\*

723 4000000000 X ESAVE MXCAP EC:SAVE  
724 0000000000000000126 + ITEMS EREGS

\*

\*

725 4000000000 X ERESTORE MXCAP EC:RSTR  
726 0000000000000000126 + ITEMS EREGS

\*

\*

727 4000000000 X EDSPSTK MXCAP EC:DSSE  
728 0000000000000000147 + ITEMS ESTKBF  
729 00000000000000000001 DATA 1

#  
\*  
\*  
\*  
\*

## MAIN CODE

732		BSSZ	S	ALTERNATE ENTRY POINTS
737	0200004343 +	JP	ERRCALL	ERROR ENTRY
740	0130000663 +	*	ENTRY	XJ
743	0130000677 +			XJ
746	7160000012			SX6
	5160000070 +			S46
747	5110000006 +			SA1
	6110000753 +			CALL
752	6170000753 +			ERR
753	0200000760 +	*	ENTVEC	JP
754	0200001101 +			JP
755	0200002201 +			JP
756	0200000764 +			JP
757	0200000000 X			JP
760		*		
		5	ENTVECSZ	BSS EQU

S - ALTERNATE ENTRY POINTS  
ERRCALL - ERROR ENTRY  
ENTRY - SET UP ERROR MASK  
SAVE - SAVE REGISTERS  
CSTKPNTR-CALLSTK - RESET CALL STACK  
CSTKPNTR - TRAVEC, ENTVEC, ENTVECSZ  
HDDNPAR -  
INIT - 0  
BDSRV - 1  
CMMDSRV - 2  
RUN - 3  
USERSRV - 4  
0  
\*-ENTVEC

```

    *          INITIALIZE CALL
    *
    *          INIT      XJ      KILLBLD   KILL BUILDER RIGHT AWAY
    *          JP
    *
    *          CONTINUE INITIALIZATION
    *
    *          RUN       SAI      SHUTDOWN   PICK UP +HUT DOWN DATUM
    *          XJ        XJ       READSLF1  SET UP LAWCORE
    *          BX6
    *          SA6
    *          DOXJ     DOXJ     SHDTMSV   SAVE SHUT DOWN DATUM
    *          XJ        XJ       M,MCAP,CX,IEMP,CV,SHTEV,-MINUS0 (SAVE EV)
    *          SA7
    *          RDCLSCD  OWNCLSCO  GET OWN CLASS CODE
    *          XJ        XJ       SAVE IT FOR ERRORS
    *
    *          DECREASE OPTION BITS ON SPECIAL OBJECTS
    *          DOXJ     EC:MCAP:,CX:TPRC,CV:TPRC,OB:SDINT
    *
    *          INIT1    SX6      I
    *          SA6
    *          SETXJ   CX,CMMDR,CX,NULL, SHTDTM+IND
    *          XJ
    *          JP      XJLOC,,INIT2
    *          PURGE
    *
    *          INIT2    SX6      BO
    *          SA6
    *          JP      RUNFLAG
    *          UNEXERR
    *
    *          REMOVE ALL USER SU-PROCESSES
    *          AND OTHER CLEAN UP
    *
    *          PURGE
    *          SX6      RA
    *          SA6
    *          SETXJ   RUNFLAG
    *          XJ      M,FSON,CX,BGST,B,-X,TEMP
    *          XJLOC,PURGE3
    *
    *          PURGE1   SETXJ   DF:DSUB:,CX,TEMP
    *          XJ
    *          JP      XJLOC,,PURGE2
    *          PURGE
    *
    *          PURGE2   DOXJ    M,FSON,CX,TEMP,1,CV,TEMP
    *          JP
    *          PURGE1
    *
    *          CLOSE EVERYTHING AND REOPEN TEMPDIR
    *          PURGE3   DOXJ    DF:CAOF:
    *          DOXJ    DN:CLAO:

```

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
MATN CODE

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1070 6110000035 +	*	DOXJ	DR;OPDR1,CX,ITEMPD
1076 6170004236 +	*	CALLR	CLEANAB
1100 0400001073 +	*	EQ	INIT1

\*  
\*  
\*  
\*  
\*

## READ SERVICES CALL

1161	5110000007 +	BDSRV	SA1	RDB6	
	6110001105 +		CALL	TRAVEC,BDVEC,BDVEC-Z	
1164	6170001165 +		ERR		
		*			
1165	0200001153 +	BDVEC	JP	BDREAD	0
1166	0200001123 +		JP	BDNOOP	1
1167	0200001313 +		JP	BDDEL	2
1168	0200001123 +		JP	BDNOOP	3
1169	0200001123 +		JP	BDNOOP	4
1170	0200001123 +		JP	BDNOOP	5
1171	0200001123 +		JP	BDNOOP	6
1172	0200001123 +		JP	BDNOOP	7
1173	0200001123 +		JP	BDNOOP	8
1174	0200001123 +		JP	BDNOOP	9
1175	0200001123 +		JP	BDNOOP	10
1176	0200001123 +		JP	BDNOOP	11
1177	0200001153 +		JP	BDREAD	12
1178	0200001123 +		JP	BDNOOP	13
1179	0200001123 +		JP	BDNOOP	14
1180	0200001317 +		JP	BDSET	15
		*			
1181		BDVECSZ	BSS	0	
		16	EQU	*=BDVEC	

\*  
\*  
\* BEAD NO OP  
\*  
\* 1123 0200001124 \* BDN0OP JP BDXITO  
\*  
\*  
\* BEAD EXITS  
\*  
\* 1124 0130000701 \* BDXITO XJ RESTORE  
1127 01300006A2 \* XJ RETURN  
\*  
\* 1132 7130776643 = BDXITI SX3 -BDNORMRT  
0200001137 + JP BDXITX  
\*  
\* 1133 7130776642 = BDXIT2 SX3 -BDSUBRT  
0200001137 + JP BDXITX  
\*  
\*  
\* 1134 00000000010000000000 BDNORMRT VFD 30/1,30/CX,TEMP  
1135 00000000040000000027 BDSUBRT VFD 30/4,30/CX,SBOP  
\*  
\* 1136 00000000040000000013 \* BDRTDTA VFD 30/4,30/BDENT  
\*  
\*  
\* 1137 6110600035 \* BDXITX SETXJ M,RETPAR,-BDRTDTA,+3  
1143 0130000701 \* XJ RESTORE  
1146 0130000035 \* XJ XJLOC  
1151 6170601152 \* CALL CRASH  
1152 6170601153 \* CALL CRASH

\*  
 \*  
 \*  
 \*  
 \*  
 \* THIS ROUTINE SIMULATES KARLS GET ROUTINE  
 \*  
 NO BUSY BIT  
 \*  
 \*  
 \* TYPE = 0 FOR FILE, 1 OTHERWISE  
 \*  
 \* SYSTEXT BIT SET IF FILE, 1ST WORD EXISTS AND IS NEG  
 \*  
 \* 3RD WORD IS ALWAYS ZERO  
 \*  
 \* 4TH WORD SET USING FILE PROBES, IF A FILE AND NOT  
 \* TOO MANY LEVELS  
 \*

7 SYSTXTBT EQU 7 SHIFT TO DEFINE SYSTEXT BIT

1153 5110000010 +	BDREAD	SA1	BX1	
5120000011 +		SA2	BX2	
1154 7130000001		SX3	1 MAKE FILE FOR DEFAULT	
6170002047 +		CALLR	BOGET	
1156 0701001163 +		OKTESTX	GT,(B1,B0),ERRXIT,F0000B	
* SEE IF ECS FILE, DISK FILE, OR OTHER				
1163 6110000035 +	DOXJ	M,DSPCAP,CX,TEMP		
1171 43052	MX0	6n-18		
15660	BX6	=X0*X6 GEI TYPE FIELD		
1172 0311001263 +	SX1	X6-FILETYPE COMPARE WITH ECS FILE TYPE		
7216776200	NZ	X1,BDREAD1A NOT ECS FILE		
1202 5110000536 +	DOXJ	M,MVECAP,CX,TEMP,CX,TEMP+1,-MINUS0		
0200001211 +	SA1	M,CHKBLK-IND		
	JP	BDREAD1B		
1203 5120000245 +	BDREAD1A	SA2	CTYPDF	
15220		BX2	=X0*X2	
13162		BX1	X6-X2 COMPARE WITH DISK FILE TYPE	
1204 0311001364 +		NZ	X1,BDREAD5 NOT A FILE	
6110100572 +	CALLR	OPENDF,DF:OPR01,CX,TEMP,CX,TEMP+1		
1210 5110000574 +		SA1	DF:PROB1-IND	
1211 10611	BDREAD1B	BX6	X1	
5160000206 +		SA6	BDREADPB SAVE PROBE OPERATION TO USE	
* NOW SEE IF SYSTEXT				
1212 6110000035 +	SETXJ	DF:READ1,CX,TEMP+1,0,XJLOC+S,1		
1221 0130000035 +	XJ	XJLOC,BDREAD1,BDREAD5		
1224 5110000042 +	SA1	XJLOC+S		
0321001227 +	PL	X1,BDREAD1		

			SET SYSTEXT BIT		
1225	5110000013 + 7120000001	SA1 SX2 LX2 BX6 SA6	BDENT 1 SYSTXTBT X1+X2 A1		
1226	20207 12612 54610				
1227	6110000035 +	BDREADY	DOXJ	EC:DSCP1,CX,TEMP+1	
1235	5170000036 + 6110000035 +		SA7	XJLOC+1	
1240	0130000035 +		SETXJ	DF:DSF:	
1244	5110000041 + 20103 43072		XJ	XJLOC,,BDREAD5,,RE=15WDS	
1245	15117 5221001251 + 10622		SA1	XJLOC+4 PICK UP FLAGS	
1246	6211000006 54110 21144		LX1 MX0 BX1 SA2	3 60-2 =X0*X1 NOW HAVE DATA BLOCK SIZE	
1247	73115 22111 20636 12616		BX6 SB1 SA1 AX1 SX1 LX1 LX6 BX6 SA6	SIZES+X1 X1+6 A1 36 X1 B1,X1 30 X1+X6 BDENT+3	BLOCK SIZE NOW HAVE SHIFT COUNT NOW GET NO. OF BLOCKS NOW HAVE NO. OF BLOCKS NOW HAVE NO. BLKS * BLK SIZE POSITION BLOCK SIZE FORM 4TH WORD STORE IT
1250	5160000016 + 0200001307 +		JP	BDREAD6	
1251	0000000000000000100	SIZES	DATA	64,128,256,512 NOW PROBE FILE	
				THIS CODE NOT ENTERED NOW	
1255	0130000035 +	BDREADY	SETXJ	M,REDSHP,CX,TEMP+1,SHPBUF,SHPSUFSZ	
1260	5150000253 + 7235777772		XJ	XJLOC,,BDREAD5	
1261	0323001306 + 63150 54551		SA5 SX3 PL SB1 SA5 SX3	SHPBUF X5-SHPBUFSZ X3,BDREAD5A X5 A5+B1 B0	TOO MANY LEVELS GET BLOCK SIZE INITIAL ADDRESS
1262	76300				
1263	6110000035 +	BDREAD2	SETXJ	BDREADPB+IND,CX,TEMP+1,X3	
1267	0130000035 +		XJ	XJLOC,,BDREAD4	
1272	031601274 + 36335		NZ	X6,BDREAD3	
1273	0200001263 +		IX3 JP	X3+X5 BDREAD2	
				NOW SET UP WD 4 OF BLOCK FOR FILE	

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ SERVICES

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1274	20536	*	BDREAD3	LX5	30	
	12653			BX6	X5+X3	
	5160000016 +			SA6	BDENT+3	
1275	0200001307 +			JP	BDREAD6	
		*				
		*				
		*				
					ERROR OBTAINED WHILE READING FILE	
1276	20536		BDREAD4	LX5	30	
	12653			BX6	X5+X3	TENTATIVE 4TH WORD
	5160000016 +			SA6	BDENT+3	
1277	6110001302 +			CALLR	ERRVEC+BDREAD4A	
1301	0200001304 +			JP	BDREAD5	
1302	00000002000001001307 +	*	BDREAD4A	EVECN	2.1+BDREAD6	( BEYOND FILE SIZE )
1303	000000000000000000000000			DATA	0	
		*				
		*				
		*				
		*				NOT A FILE, SET TYPE TO 1, SYSTEXT TO 0
		*				4TH WORD TO ZERO
1304	5110000013 +		BDREAD5	SA1	BDENT	
	7120000001			SX2	1	
1305	43052			MX0	6+7	
	11661			BX6	X0+X1	
	12662			BX6	X6+X2	
	54610			SA6	A1	
1306	76600	*	BDREAD5A	SX6	B0	
	5160000016 +			SA6	BDENT+3	
		*				
		*				
		*				SET 3RD WORD TO 0, EXIT
1307	76600		BDREAD6	SX6	B0	
	5160000015 +			SA6	BDENT+2	
1310	6170004617 +			CALLR	CLEANDF	
1312	0200001132 +			JP	BDXIT1	

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ SERVICES

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\*

\*

DELETE A DIRECTORY ENTRY

\*

1313 5110000013 +	BODEL	SA1	BDENT
5021000001		SA2	A1+1
1314 6170003540 +		CALLR	KILLOBA
1316 0200001124 +		JP	BDXITO

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ SERVICES

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\*  
\*  
\*  
\*  
\*

CONSTRUCT NON FILE DIRECTORY ENTRY  
IF OLD ENTRY EMPTY

1317 5110000010 +	RDSET	SA1	B0X1
5120000011 +		SA2	B0X2
1320 7130000003		SX3	3 INSTALL AX TEMP FOR DEFAULT
6170002047 +		CALLR	RDGET
1322 0701001327 +		OKTESTX	GT, (B1,B0), ENRXIT, 0000B
1327 0200001132 +		JP	B0XIT1

\*  
\*  
\* BODY OF CODE FOR READ SUBPROCESS BUILDER  
\* USED BY CMMU SERVICES  
\*

1330 6170002107 \* \* GET A ECS FILE TO USE FOR SUBPROCESS DESCRIPTOR  
BDSUB0 CALLR GETSPD  
\* SAVE THE CODEFILE CAP  
1332 6110000035 \* DOXJ EC:MCAP1,CX,TEMP,C+,SBOD,-MTNUS0  
\*  
1341 6110000035 \* BDSUB0A SETXJ DF:READ1,CX,SUBPD,50,BDSUBHD,BDSRHDSZ  
1350 0130000035 \* XJ XJLOC,,BDSUBE1,100:0B  
\*  
\* PREPARE ARGUMENT COUNT  
\*  
1353 5110000172 \* SA1 BDSUBHD  
20136 LX1 30  
73610 SX6 X1  
1354 516000207 \* SA6 BDSUBACN ARGUMENT COUNT  
\*  
\* GET SPACE FROM COMMAND PROCESSOR  
\*  
1355 0301001366 \* SA1 BDSUBHD+1  
73610 ZR X1,BDSUB0B  
1356 5160000042 \* SX6 X1 SWAPPED ECA  
21136 SA6 XJLOC+5  
73610 AX1 30  
1357 5160000043 \* SX6 X1 FIXED ECA  
6110000035 \* SA6 XJLOC+6  
1363 0130000035 \* SETXJ CP:SPAC:,BLK2XJL5  
XJ XJLOC,,BDSUBE1,100:5B  
\*  
\* SET CLASS CODE  
\*  
1366 6110000035 \* BDSUB0B DOXJ EC:CCLS:,CX,SBCLS  
\*  
\* CREATE CLIST  
\*  
1374 6110000035 \* SETXJ M,CCLIST,CX,LCLAB,FX,SBCL,-BDSUBHD-8  
1400 0130000035 \* XJ XJLOC,,BDSUBE1,100:0B  
\*  
\* CREATE SUBPROCESS  
\*  
1403 6110000035 \* SETXJ M,CSPROC,CX,SBCLS,FX,BDGST,-BDSUBHD-4  
1407 7110777600 = YSETXJ -BDSUBHD-5,-BDSUBHD-6,-BDSUBHD-7,CX,SBCL  
1413 0130000035 \* XJ XJLOC,,BDSUBE2,100:0B  
\*  
\* CREATE SCRATCH FILE  
\*  
1416 5110000656 \* SA1 DSCRATCH  
5120000233 \* SA2 USERNAME  
1417 7130000001 SX3 1

1421	0701001426 +	6170003317 +	CALLR	FINDOBA	
1426	6110000035 +		OKTESTX	GT,(B1,B0),BDSUBE3,10040B	
		*	DOXJ	M,MVECAP,CX,TEMP,CV,SBSCR,-MTNU\$0	
		*		MIGHT BE DISK FILE	
1435	7120000031		SX2	CX,SBSCR	
		6170004607 +	CALLR	TESTDF	
1437	0311001447 +		NZ	X1,BDSUB2A	
		*			
1443	0130000035 +	6110000035 +	SETXJ	DF:OPRW:,CX,SBSCR	
			XJ	XJLOC,,BDSUBE3,10040B,RET1CTMP	
		*		NOW MAKE SURE ENOUGH BLOCKS	
1447	6110000035 +	BDSUB2A	SETXJ	M,REDSHP,CX,TEMP,SUPBUF,SHPBUFSZ	
1453	0130000035 +		XJ	XJLOC,,BDSUBE3,10040B	
1456	5110000253 +		SA1	SHPBUF	
		7221777772	SX2	X1-SHPBUFSZ	
1457	0332001462 +		OKTEST	NG,X2,BDSUBE3,10060B TOO MANY LEVELS	
1462	5241000253 +		SA4	SHPBUF+X1 GET BLOCK SIZE	
		76600	SX6	B0	
1463	5160000204 +	5150000203 +	SA6	BDSUBPT	
		*	SAS	BDSUBHD+9 GET SCRATCH SIZE	
1464	5130000204 +	BDSUB2	SA3	BDSUBPT	
	37635		IX6	X3-X5	
1465	0326001515 +		PL	X6,BDSUB4 ENOUGH BLOCKS	
		6110000035 +	SETXJ	DF:PROB:,CX,TEMP,B-SUBPT+IND	
1471	0130000035 +		XJ	XJLOC,,BDSUBE3,10040B	
1474	0306001513 +		ZR	X6,BDSUB3	
		6110000035 +	SETXJ	DF:CBLK:,CX,TEMP,B-SUBPT+IND	
1500	7110000001		YSETXJ	I ( DONT CLOBBER X4 )	
1502	0130000035 +		XJ	XJLOC,,BDSUBE3,10140B	
		*		(DONT CLOBBER X3 OR X4)	
1505	6110000035 +		DOXJ	DF:DTCI: (CA,TEMP(BDSUBPT+IND+1 IMPLICIT)	
1513	5130000204 +	BDSUB3	SA3	BDSUBPT	
	36634		IX6	X3+X4	
1514	5160000204 +		SA6	BDSUBPT	
	6200001464 +		JP	BDSUB2	
		*		MAKE SURE LOW CORE IS ZERO	
1515	6110000035 +	BDSUB4	DOXJ	DF:DBLK:,CX,TEMP,B+,1	
1524	6110000035 +		DOXJ	DF:CBLK:,CX,TEMP,B+,1	
		*		NOW SCAN MAP DESCRIPTORS	
1533	7160000012		SX6	10	
		5160000204 +	SA6	BDSUBPT	INITIALIZE DESCRIPTOR POINTER
1534	76600		SX6	B0	INITIALIZE MAP INDEX
		5160000205 +	SA6	BDSUBX	

1535	7160000204 +	SX6	BDSUBPT	INITIALIZE
	5160000164 +	SA6	ERRINFO1	ERROR
1536	7160000205 +	SX6	BDSUBX	INFO
	5160000165 +	SA6	ERRINFO2	WORDS
1537	6110000035 +	BDSUB5	SETXJ	DF:READ:,CX,SUBPD,BDSUBPT,BDSUBMP,6
1546	0130000035 +		XJ	XJLOC,,BDSUBE3,10170B
1551	5110000172 +		SA1	BDSUBMP
	7120000001		SX2	1
1552	3611?		IX1	X1+X2 CHECK FOR END MARKER
	0301001645 +		ZR	X1,BDSUB8 END OF MAP DESCRIPTORS
1553	5110000172 +		SA1	BDSUBMP
	0311001565 +		NZ	X1,BDSUB6 NOT SCRATCH
1554	0331001565 +		NG	X1,BDSUB6 NOT SCRATCH
	6110000035 +		DOXJ	M,MVECAP,CX,SBSCR,FX,TEMP,-MTNUS0
1564	0200001575 +		JP	BDSUB7
1565	5021600001	*	SA2	A1+1
	76300		SX3	BO
1566	6170002057 +		CALLR	BDSUBY
1570	0701601575 +		OKTESTX	BT,(B1,B0),BDSUBE3/10120B
1575	7120000000	BDSUB7	SX2	CX,TEMP
	6170004607 +		CALLR	TESTDF
1577	5120000177 +		SA2	RDSUBMP+5
	0311001621 +		NZ	X1,BDSUB7C
1600	0302001671 +	*	ZR	X2,BDSUB7B
1601	6110000035 +	BDSUB7A	SETXJ	DF:OPRO1:,CX,TEMP READ ONLY DISK FILE
1604	0130000035 +		XJ	XJLOC,,BDSUBE3,10154B,RET1CTMP
1610	7110100570 +		SA1	DF:MMRO:
	0200001624 +		JP	BDSUB7F
1611	6110000035 +	BDSUB7B	SETXJ	DF:OPRW:,CX,TEMP READ WRITE DISK FILE
1614	0130000035 +		XJ	XJLOC,,BDSUBE3,10155B,RET1CTMP
1620	7110100571 +		SA1	DF:MMRW:
	0200001624 +		JP	BDSUB7F
1621	0302001623 +	BDSUB7C	ZR	X2,BDSUB7E
1622	7110100610 +	BDSUB7D	SX1	EC:MMRO: READ ONLY, NOT DISK FILE
	0200001624 +		JP	BDSUB7F
1623	7110100611 +	BDSUB7E	SX1	EC:MMRW: READ WRITE, NOT DISK FILE
1624	6110000035 +	BDSUB7F	SETXJ	X1,CX,SBCLS=-BDSUB-,CX,TEMP
1630	5110000176 +		SA1	BDSUBMP+4 PICKUP COUNT OR END+1
	0321001632 +		PL	X1,BDSUB7G IS A COUNT
1631	5120000175 +		SA2	BDSUBMP+3 IS END + 1
	73110		SX1	X1
	37112		IX1	X1-X2

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ SERVICES

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1632	10611	BDSUB7G	BX6	X1
	5160000043 +		SA6	XJLOC+6
1633	7110777603 -		YSETXJ	-BDSUBMP-2,-BDSUBMP-3,-XJLOC-6
1636	0130000035 +	*	XJ	XJLOC,,BDSUBE3,101-08
1641	5110000205 +		SA1	BDSUBX STEP MAP INDEX
	7261000001		SX6	X1+1
1642	54615		SA6	A1
	5110000204 +		SA1	BDSUBPT
1643	7261000006		SX6	X1+6 STEP MAP DESC POINTER
	54610		SA6	A1
1644	0200001537 +		JP	BDSUB5 DU ANOTH-R
		*		NOW SCAN CLIST ENTRIES
1645	5110000204 +	BDSUB8	SA1	BDSUBPT
	7261000001		SX6	X1+1
1646	54615		SA6	A1
	5110000207 +		SA1	BDSUBACN
1647	7261000016		SX6	X1+14
	5160000205 +	*	SA6	BDSUBX
1650	6110000035 +	BDSUB9	SETXJ	DF:READ:,CX,SUBPD,BDSUBPT,BDSUBCLD,2
1657	0130000035 +		XJ	XJLOC,,BDSUBE3,101-08
1662	5110000172 +		SA1	BDSUBCLD
	0301001705 +		ZR	X1,BDSUB10 CHECK FOR ZERO END MARKER
1663	5021000001		SA2	A1+1
	7130000001		SX3	1
1664	6170002057 +		CALLR	BDSUBY
1666	0701001673 +		OKTESTX	GT,(B1,B0),BDSUBE3,101508
1673	6110000035 +		SETXJ	M,CAPOUT,CX,SBCL,-BDSUBX,CX,TEMP
1677	0130000035 +		XJ	XJLOC,,BDSUBE3,101-08
1702	7263000001		SX6	X3+1
	5160000205 +		SA6	BDSUBX
1703	5110000204 +		SA1	BDSUBPT
	7261000002		SX6	X1+2 STEP POINTER
1704	54615		SA6	A1
	0200001650 +		JP	BDSUB9
		*		NOW MAKE CALL OPERATION
1705	5110000207 +	BDSUB10	SA1	BDSUBACN
	0301001721 +		NZ	X1,BDSUB10A HAS ARGUMENTS, SO NEW STYLE
1706	6110000035 +	*	SETXJ	M,MKOPR,CX,LCLAB,CV,SBOP,B0,CX,SBCLS,B0
1715	0130000035 +		XJ	XJLOC,,BDSUBE3,101-08
1720	0200001742 +		JP	BDSUB10B
		*		NEW STYLE WITH CAP ARGUMENTS
1721	6110000035 +	BDSUB10A	SETXJ	M,MKOPR,CX,LCLAB,CV,SBOP,B0,CX,SBCLS,I
1730	0130000035 +		XJ	XJLOC,,BDSUBE3,101-1B

1733 6110000035 +		SETXJ	M.BLKCAP,CX.SBOP,B,-BDSUBACN
1737 0130000035 +		XJ	XJLOC,,BDSUBE3,101#2
*			
*			NOW PLACE FIXED ENTRIES IN CLIST
*			
1742 6110000035 +	BDSUB10B	DOXJ	EC:MCAP!,CX.LCLAB,FX.TEMP.,-AL BITS
1751 6110000000		CALLR	BDSUB11,0,CX TEMP
1754 6110000001		CALLR	BDSUB11,1,CX.BDCAL
1757 6110000002		CALLR	BDSUB11,2,CX.SBOP
1762 6110000003		CALLR	BDSUB11,3,DF!READ:
1765 6110000004		CALLR	BDSUB11,4,DF!WRIT:
1770 6110000005		CALLR	BDSUB11,5,M.SENDE
1773 6110000006		CALLR	BDSUB11,6,M.GETE
1776 6110000007		CALLR	BDSUB11,7,CX.BDGST
2001 6110000012		CALLR	BDSUB11,10,CX.SBCL
2004 6110000014		CALLR	BDSUB11,12,CX.SBSC
2007 6110000015		CALLR	BDSUB11,13,CX.SBCLc
*			
*			ALL DONE
*			
2012 6170004617 +		CALLR	CLEANOF
2014 6170000000 X		CALLR	CLRMAP
2016 5110000207 +		SA1	BDSUBACN
10611		BX6	X1
2017 5160000124 +		SA6	NREGS+16B
0200004664 +		RTNR	RETURN ARG COUNT IN X6
*			
*			MAKE FIXED CLIST ENTRY
*			
2020 5110000207 +	BDSUB11	SA1	BDSUBACN
73311		SX3	X1+B1
76420		SX4	R2
2021 6110000035 +		SETXJ	M.CAPOUT,CX.SBCL,X-,X4
2025 0130000035 +		XJ	XJLOC,,BDSUBE3,102#0B
2030 0200004664 +		RTNR	
*			
*			COLLECTED SUB ERRORS
*			
2031 6110000035 +	BDSUBE3	DOXJ	DF:DSUB!,CX.SBCLS
*			
2037 6110000035 +	BDSUBE2	DOXJ	M,DELCL,CX.SBCL
*			
2045 0200004416 +	BDSUBE1	JP	ERRXIT
*			
*			
2046 0000000000000363774	ALL BITS	DATA	363774B APPROPRIATE OPTION BITS FOR USER TO GET

\*  
\*  
\*  
\*  
\*  
\* SIMULATES STANDARD READ GET PROCEDURE

FILE NAME, USER NAME IN X1, X2

IF X2 = CURRENT USER NAME, X3 INDICATES DEFAULT  
( IF X2 = "", WILL BE SET TO CURRENT USER NAME, AND  
X3 INDICATES DEFAULT )

OTHERWISE X3 IS SET TO 0

ACTUAL FILE NAME/USER NAME STORED AT BDENT, BDENT+1

ON RETURN B1 = 1 IF OK  
0 IF TRIED TO CREATE OBJECT BUT  
DIRECTORY FULL

2047	43052		BDGET	MX0	6#7
	11161			BX1	X0#X1
	43060			MX0	6#8
		11202		BX2	X0#X2
2050	0312002052	*		NZ	X2,BDGET1
	0332002052	*		NG	X2,BDGET1
2051	5120000233	*		SA2	USERNAME
		*			
2052	10611		BDGET1	BX6	X1
	5160000013	*		SA6	BDENT
		10622		BX6	X2
2053	5066000001			SA6	A6+1
	5140000233	*		SA4	USERNAME
2054	13424			BX4	X2-X4
	0334002056	*		NG	X4,BDGET2
2055	0314002056	*		NZ	X4,BDGET2
	0200003317	*		JP	FINDOBA
		*			
2056	76306		BDGET2	SX3	B0
	0200003317	*		JP	FINDOBA

\*  
\* SPECIAL LOOK UP TO USE DURING SUBPROCESS CONSTRUCTION  
\* AND DESTRUCTION

\* PARAMETERS ETC. ARE THE SAME AS BDGET

\*CHECK FOR SPECIAL

BDSUBY	SA4	=0L SPECIAL
	BX4	X2-X4
	NZ	X4,BDGET

\* LOOK UP IN SPECIAL LIST

MX0	60-12
BX1	X0*X1
SB1	SPCLSZ-1

\* LOOP THROUGH THE TABLE

BDSUBY2	SA2	SPCLTBL+BI
	BX3	X0*X2
	BX3	X1-X3
	ZR	X3,BDSUBY3
	SB1	BI=1
	GE	BI,B0,BDSUBY2

\* COME HERE IF THE OBJECT CAN NOT BE FOUND

BDSUBY4	SB1	0
	SX2	1

RTNR

\* RETURN THE OBJECT IN THE TABLE OF SPECIAL

BDSUBY3	BX4	=X0*X2
	DOXJ	EC:MCAP:,X4,CX,TEMP,-MINUS0
	SB1	1

RTNR

\* SYMBOL TABLE FOR SPECIAL

SPCL	MACRO	NAME,CAP
VFD		48/0L>NAME,12/CAP
ENDM		

SPCLTBL	BSS	0
	SPCL	THISPROC,CX,IPRC
	SPCL	SPDIR,CX,SUBPD
	SPCL	SCRATCH,CX,SBSCR
	SPCL	CODE,CX,SBCOD
	SPCL	TTYFILE,CX,TTYF
	SPCL	TTYREQ,CX,TTYRQ
	SPCL	TTYRESP,CX,TYRS
SPCLSZ	EQU	--SPCLTBL

\*  
\* GET AN ECS FILE TO USE AS A SUBPROCESS DESCRIPTOR  
\* CX TEMP CONTAINS A DISKFILE OR A SPD OR AN ECS FILE  
\* RETURNS CAP IN CX SUBPD  
\* RETURNS CODEFILE IN CX TEMP

\* DISPLAY THE CAP & DECIDE TYPE  
?107 611000035 + GETSPD DOXJ EC:MCAP1,CX.NULL,CV.SUBDR,0  
?116 611000035 + DOXJ EC:DSCP1,CX TEMP  
?124 5110000245 + SA1 CTYPDF  
13161 BX1 X6-X1  
43052 MX0 60-18  
?125 15110 BX1 -X0\*X1  
0301002161 + ZR X1,GETSPD1

\* CHECK FOR SPD  
?126 5110000247 + SA1 CTYSPD  
13161 BX1 X6-X1  
15110 BX1 -X0\*X1  
?127 0311002167 + NZ X1,GETSPD2 MUST BE A ECS FILE

\* OPEN THE SUBPROCESS DESCRIPTOR AND GWT A DIRECTORY  
?133 0130000035 + SETXJ SD:CONV1,CX TEMP  
XJ XJLOC,,,RETSPD

\* OPEN DIRECTORY  
?137 611000035 + DOXJ DR:OPDRI,CX SUBDR

\* SET BIT IN MAPCOUNT TO CLEAR CX SUBDR  
?145 5110000217 + SA1 MAPCOUNT  
43201 MX2 1  
20273 LX2 59  
?146 12612 BX6 X1+X2  
54670 SA6 A1  
5110004677 + \* GET THE DISK FILE IN THE DIRECTORY  
?147 6170002150 + SA1 =OLCODEFILE  
?150 5160000244 + CALLI BCDASCII  
6110000035 + SA6 ASCII0NM  
?155 0130000035 + SETXJ DR:UACC1,CX SUBDR, BLOCKNM,-TS.NULAK  
XJ XJLOC,,ERRXIT,1000:B,RETEMP

\* HANDLE A DISK FILE  
?161 6110100572 + GETSPD1 CALLR OPENDF,DF:OPR01,CX TEMP,CX SUBPD  
?164 76100 SX1 B0  
6170004543 + CALLR ATCHBLK  
?166 0200004664 + RTNR  
\* NOT DISKFILE OR SUBPROCESS DESCRIPTOR SO ASSUME ECS FILE  
?167 6110000035 + GETSPD2 DOXJ EC:MCAP1,CX TEMP,CV SUBPD,-MTNUS0  
?176 0200004664 + RTNR  
?177 00000000000000000000 RETSPD RETAUTH CX SUBDR,1

58  
W.W.B.

\*

\*

\*

COMMAND SERVICES C/L

\*

2201 5110000007 + CMMDSRV SAI CMMDTYPE  
6110002205 + CALL  
2204 6170002205 + ERR TRAVEC,CMMDOVEC,CMMDOVECN

\*

2205 0200002246 + CMMDVEC JP DEBUG 0  
2206 0200002255 + JP CMMDSUB 1  
\*\*\*\*\* JP CMMDUNN 2

2207 0200000000 X JP CHCKPSW 2  
2210 0200002266 + JP KILLPRC 3  
2211 0200002454 + JP CMMDERR 4  
2212 0200002343 + JP CLSUB 5  
2213 0200002333 + JP CMMDKIL 6  
2214 0200002465 + JP CLEANDR 7  
2215 0200002521 + JP LOGOUT 10  
2216 0200000000 X JP LOGON1 11  
2217 0200000000 X JP LOGON2 12  
2220 0200000000 X JP LOGOUT1 13  
2221 0200002564 + JP LOGOUT2 14

\*

2222 15 CMMDVECN BSS 0  
CMMDVEC

\*

\*

\*

CMMD SERVICE EXITS

\*

2222 0130000701 + CMMDXT0 XJ RESTORE  
2225 0130000662 + XJ RETURN

\*

2230 7130775545 = CMMDXT1 SX3 CMNDNRMRT  
0200002234 + JP CMMDXTX

\*

2231 7130775544 = CMMDXT2 SX3 CMDSUBRT  
0200002234 + JP CMMDXTX

\*

\*

2232 00000000010000000000 CMNDNRMRT VFD 30/1,30/CX,TEMP  
2233 00000000040000000027 CMDSUBRT VFD 30/4,30/CX,SBOP

\*

\*

2234 6110000035 + CMMDXTX SETXJ M,RETPAR,B0,A3  
2237 0130000701 + XJ RESTORE  
2242 0130000035 + XJ XJLOC  
2245 6170002246 + CALL CRASH

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
COMMAND SERVICES

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\*  
\*  
\*  
\*

MAKE A DEBUGGING CALL ON THE READ GHOST

P246 6160000004  
P247 0130000676 +  
P252 0130000662 +

DEBUG SB6 4  
XJ READ  
XJ RETURN

2255 6170001330 +  
2257 0200002231 +

CMMDSUB CALLR BDSub0  
CMMDXT2

## CONSTRUCT SUBPROCESS USING BEAD DESCRIPTOR

2260 5110000011 +  
43660  
11661  
2261 5160000233 +  
6170002653 +  
2263 6170002635 +  
2265 0200002230 +

CMMDOUNM SA1 CMMDBLK  
MX6 6\*8  
BX6 X6\*X1  
SA6 USERNAME  
CALLR BDSSINIT  
CALLR CTYPINIT  
JP CMMDOXT1

## SET USER NAME

2266 6110000035 +  
2271 0130000035 +  
2274 0200002271 +

KILLPRC SETXJ DF:XSEC:, -MINUSLRG  
KILLPRC1 XJ XJLOC, KILLPRC2  
JP KILLPRC1

2275 6110000035 +  
2304 6110000035 +

KILLPRC2 DOXJ M,MODPC,CX,BEADS, -INUS1,KILLPRC3  
DOXJ M,JUMP,CX,BEADS, -MINUS1

2313 6110000035 +  
2321 0306002330 +  
6110000035 +

KILLPRC3 DOXJ ENTERED HERE FROM LOGOUT ALSO  
ZR M,DSPCAP,CX,SHTEV  
DOXJ X6,KILLPRC4 (NO SHUT DOWN EVCH)  
EC:SEVI:CX,SHTEV,SATDTMSV+IND

2330 0130000662 +

KILLPRC4 XJ RETURN

## KILL AN OBJECT

2333 6170003672 +  
2335 0301002342 +  
2342 0200002222 +

CMMOKIL CALLR KILLOBJ  
OKTESTX ZR,X1,ERRXIT,700006  
JP CMMDOXT0

CLOSE ALL FILES OPENED FOR A SUBPROCESS

2343	6170002107 +	CLSUB	CALLR	GETSPD
2345	5110000656 +	CLSUB0	SA1	DSCRATCH
	5120000233 +		SA2	USERNAME
2346	7130000001		SX3	1
	6170003317 +		CALLR	FINDOBA
2350	0701002355 +		OKTESTX	GT,(B1,B0),ERRXIT,,0010B
2355	6110000035 +		DOXJ	M,MVECAP,CX,TEMP,C+,SBSCR,-MINUS0
	*			
2364	6110000035 +		SETXJ	DF:CLOS:,CX,SBSCR
2367	0130000035 +		XJ	XJLOC,,ERRXIT,6001-B
	*			
2372	7160000012		SX6	10
	5160000204 +		SA6	BDSUBPT
2373	76600		SX6	B0
	5160000205 +		SA6	BDSUBX
2374	7160000204 +		SX6	BDSUBPT
	5160000164 +		SA6	ERRINFO1
2375	7160000205 +		SX6	BDSUBX
	5160000165 +		SA6	ERRINFO2
	*			
2376	6110000035 +	CLSUB1	SETXJ	DF:READ:,CX,SUBPD,,BDSUBPT,BDSUBMP,6
2405	0130000035 +		XJ	XJLOC,,ERRXIT,6002-B
2410	5110000172 +		SA1	BDSUBMP
	7120000001		SX2	1
2411	36112		IX1	X1+X2 CHECK FOR END MARKER
	0301002447 +		ZR	X1,CLSUB5 END MARK-R
2412	5110000172 +		SA1	BDSUBMP
	0311002424 +		NZ	X1,CLSUB2 NOT SCRATCH
2413	0331002424 +		NG	X1,CLSUB2 NOT SCRATCH
	6110000035 +		DOXJ	M,MVECAP,CX,SBSCR,A+,TEMP,-MTNUSA
2423	0200002434 +		JP	CLSUB3
	*			
2424	5021600001	CLSUB2	SA2	A1+1
	76300		SX3	B0
2425	6170002057 +		CALLR	BDSUBY
2427	0701602434 +		OKTESTX	GT,(B1,B0),ERRXIT,,0030B
	*			
2434	7120000000	CLSUB3	SX2	CX,TEMP
	6170004607 +		CALLR	TESTDF
2436	0311002445 +		NZ	X1,CLSUB4 NOT A DIK FILE
	6110000035 +		SETXJ	DF:CLOS:,CX,TEMP
2442	0130000035 +		XJ	XJLOC,,ERRXIT,6004-B
	*			
2445	5110000204 +	CLSUB4	SA1	BDSUBPT
	7261000006		SX6	X1+6
2446	54616		SA6	A1
	0200002376 +		JP	CLSUB1
	*			
2447	6170004617 +	CLSUB5	CALLR	CLEANDF
				STEP DESCRIPTOR F

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
COMMAND SERVICES

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2451 6170000000 X  
2453 0200002222 \*

CALLR CLRMAP  
JP CMMDXT0

\*  
\*  
\*  
\*

RETURN ERROR INFO

2454	5110000164 +	CMMDERR	SA1	ERRINFO1
	53110		SA1	X1
	10611		BX6	X1
2455	5160000164 +		SA6	ERRINFO1
	5110000165 +		SA1	ERRINFO2
2456	53116		SA1	X1
	10611		BX6	X1
	5160000165 +		SA6	ERRINFO2
2457	0130002462 +		XJ	CMMDERRX
	*			
2462	4000000000 X	CMMDERRX	MXCAP	EC:RPAR
2463	00000000040000000162 +		VFD	30/4,30/ERRCLASS
2464	00000000000000000000000000		VFD	30/0,30/0

2465 7160777776  
5160000271 +  
2466 6170504024 +  
2470 0400002222 +

2471 5110600267 +  
7261777776  
2472 0306602222 +  
54610

2473 6110600035 +  
2477 0130600035 +  
2503 5110600073 +  
6211777774  
2504 0510002507 +

2507 5110600076 +  
7211000007  
2510 21103  
20136  
7160000077 +  
2511 12661  
54610

2515 6110600035 +  
0130600035 +  
2520 0400002471 +

\* CLEAN OUT ALL THE ENTRIES FROM A DIRECTORY  
\* SET CLEAN FLAG SO THAT THE DIRECTORY IS NOT KILLED  
CLEANDR SX6 =1  
SA6 CLNFLG  
CALLR KILLCDIR  
EQ CMMDOXTO  
\*\*\*\*\*  
\* DELETE THE REST OF THEIS PAGE IF THIS WORKS(I.E. IF YOU SEE THIS  
\* MESSAGE)  
\*\*\*\*\*  
\* SEE IF THERE ARE ANY MORE ENTRIES TO REMOVE  
CLEANDR1 SA1 KLDRN  
SX6 X1-1  
ZR X6,CMMDOXTO  
SA6 A1  
\* DISPLAY THE ENTRY  
SETXJ =DSPDIROP,CX,TEMP,,KLDRN  
XJ XJLOC,,,RETDSP  
SA1 KLDRBUF  
SB1 X1-3  
OKTEST NE,81,ERRXIT,10000\*B  
\* COMPUTE THE BLOCK DATA NAME  
SA1 KLDRBUF+3  
SX1 X1+7  
AX1 3  
LX1 30  
SX6 KLDRBUF+4  
BX6 X6+X1  
SA6 A1  
\* REMOVE THE ENTRY  
SETXJ =DELINKOP,CX,TEMP,,KLDRBUF+3  
XJ XJLOC,,ERRXIT,1000708  
CLEANDR1

\*  
\*  
\*  
\* LOGOUT THE USER  
\*  
\* GET RID OF SCANL FOR THE TEST DISK SYSTEM  
LOGOUT SA1 =OLSCANL  
SX2 0  
CALLR KILLOBA  
\* CLOSE EVERYTHING IN SIGHT  
DOXJ DF:CAOF:  
DOXJ DN:CLAW:  
\* GET RID OF USER TEMPORARY DIRECTORY  
SA1 USERNAME  
ZR X1,LOGOUTC NO TEMPDIR YET  
\*  
DOXJ M,MVECAP,CX,TEMPD,EX,TEMP,-MINUSA  
CALLR KILLDIR  
\* REMOVE ITS OWNERSHIP ENTRY  
SA1 USERNAME  
CALL BCDASCII  
SA6 ASCIIUNM  
DOXJ -DELOWNOP,-IS,TDLST,-BDIINM,-IS,NULAK  
LOGOUTC BSS 0  
\* RELEASE SWAP SPACE  
LOGOUT2 SETXJ DF:XSEC1,-MINUSLRG  
LOGOUTA XJ XJLOC,LOGOUTB  
JP LOGOUTA  
LOGOUTB DOXJ DF:CLUP:  
\* DECREMENT THE SYSTEM WIDE LOGON COUNT  
DOXJ EC:GEVH:,-IS,LCEC  
SX7 X7-1  
DOXJ EC:SEV:,-IS,LCEC,XF  
\* PURGE THE CALL STACK  
DOXJ M,MODPC,CX,BEADS,-,INUS1,KILLPRGS  
DOXJ M,JUMP,CX,BEADS,-,INUS1  
CALL CRASH

## INITIALIZATION SUBROUTINE TO DISPLAY DISK OBJECT CAPABILITY TYPES

			6	CTYPCNT	EQU	6	NUMBER OF CAP * S TO DISPLAY
2635	5150002652 *	10655		CTYPINIT	SAS	DCTYPIND	
2636	516000225 *	7140777776			BX6	X5	
2637	20436	43552			SA6	FINDOBT	
					SX4	=1	
					LX4	30	
					MX5	60-18	
				* LOOPTHROUGH THE CLIST			
2640	6110000035 *			CTYPLoop	DOXJ	M.DSPCAP,-FINDOBT	
2646	5110000225 *	6110000036			SA1	FINDOBT	
2647	23311	15675			SB1	30	
					AX3	B1,X1	
					BX6	=X5*X7	
					SA6	X3+CTYPVEC	
2650	36647	5263000245 *			IX6	X4+X1	
		5160000225 *			SA6	FINDOBT	
		63130			SB1	X3	
2651	0701002640 *	0200004664 *			GT	B1,B0,CTYPLoop	
2652	40000000050000000024			DCTYPIND	RTNR	CX,DCTYP,CTYPCNT=1	
					INDCAP		

## INITIALIZATION ROUTINE TO GET DIRECTORY CAPS

```

2653 5110004701 +
2654 6170002655 +
2655 5160000243 +
6110000035 +
2662 0130000035 +
* GET THE USERS ACCESS KEY
BDSMINIT SA1      =L/OWN.KEY/
                  CALL     BCDASCII
                  SA6      ASCIIUNM
                  SETXJ   =ACCESSOP,CX TEMP, BDAUNM,-IS.NULAK
                  XJ      XJLOC,,,REKEY

* SAVE THE PERMANENT DIRECTORY
DOXJ    EC:MCAP:,CX TEMP,C-,PERMD,-MINUS0

* DISPLAY THE PUBLIC ACES KEY
DOXJ    M.DSPCAP,-IS.PUBAK
SA7      PUBAKNUM

* CREATE A NEW USER DIRECTORY
SA1      USERNAME
CALL    BCDASCII
SA6      ASCIIUNM
XJ      CRTMPDIP,,,RETTEMPA

* OPEN IT
DOXJ    DR:OPDR:,CX TEMP0

* PUT AN ENTRY IN FOR THE DIRECTORY ITSELF
SA1      TEMPDBCD
CALL    BCDASCII
SA6      ASCIIUNM
DOXJ    M.MVECAP,CX TEMP0,AX TEMP,-MINUS1 ASSUMES OB.DSTRY = 1
DOXJ    -CRTHLKOP,CX TEMP0,BDAUNM,CX TEMP

* PUT AN ENTRY IN FOR THE PUBLIC DIRECTORY
SA1      PUBBCD
CALL    BCDASCII
SA6      ASCIIUNM
DOXJ    M.MVECAP,-IS.S,CX TEMP,OB,ACC TURN OFF ALL BUT ACC
DOXJ    -CRTHLKOP,CX TEMP0,BDAUNM,CX TEMP

* PUT THE SCAN LIST IN THE DIRECOTRY UNDER THE NAME OF SCANL
*
* CREATE THE CLIST AND TURN OFF THE DESTROY OPTION BIT
DOXJ    EC:CCL:,CX,LGLAB,CV TEMP,10
DOXJ    EC:RCAP:,CX TEMP,CV TEMP,-MINUS1 ASSUMES OB.DSTRY = 1

* MOVE THE CAPS INTO THE CLIST
* THIS MACRO MOVES ONE CAP AND MASKS IT IF NEEDED
MKSCANL MACRO    CAP,POS,MASK
IFC     NE,/MASK//,2
DOXJ    EC:MCAP:,CAP,CX,TPOBJ,MASK
DOXJ    EC:COUT:,CX TEMP,PAS,CX,TPOBJ
IFC     EQ,/MASK//,1
DOXJ    EC:COUT:,CX TEMP,PAS,CAP
ENDM

* SET UP THE SCANLIST
MKSCANL CX TEMP0,0,-MINUS1 TEMPDIR (OB.DSTRY = 1)
MKSCANL -IS.NULAK,1 THE NULL ACCESS KEY

```

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3025	6110000035 +	MKSCANL	CX.PERMO,2,0B.ACC	THE USERS PERMANENT DIRECTORY
3043	6110000035 +	MKSCANL	CX.ACC,3	THE USERS OWN ACCESS KEY
3052	6110000035 +	MKSCANL	=TS,S,4,0B.ACC	THE PUBLIC DIRECTORY
3070	6110000035 +	MKSCANL	=TS.PUBAK,5	THE PUBLIC ACCESS KEY
3077	0130000640 +	* CREATE THE DYNAMIC NAME TAG TO PUT THE LIST IN XJ CRTDNTOP,,,RETPOBJ		
3103	6110000035 +	* PUT THE CLIST IN IT AND WEDGE IT OPEN DOXJ DN:ODN1:,CX.TPOBJ,CX TEMP		
3112	6110000035 +	DOXJ	DN:CFLG:,CX.TPOBJ,T	
3121	5110004700 +	* PUT AN ENTRY IN THE DIRECTORY TO THE CLIST SA1 BOLSCANL		
3122	6170003123 +	CALL	RCDASCII	
3123	516000243 +	SA6	ASCIINUW	
	6110000035 +	DOXJ	DR:HDLK:,CX.TEMPD,_BDAUNM,CX.TPOBJ	
3133	6110000035 +	* MOVE THE DIRECTORY TO CX TEMP TO RETURN IT DOXJ M.MVECAP,CX.TEMPD,CX TEMP,-MINUSA RTNR		
3142	0200004664 +	* IP LIST TO CREATE A NEW USER IN THE DIRECTORY CRTMPDIP OPCAP DR:CRDR		
3143	4000000000 X	CSTFCAP	TDLST	
3144	40000000020000000017	BDAUNM	BLOCKD	ASCIINUW,1
3145	00000000010000000243 +	ITEMS	500,0	CHANGE THIS 0 TO 1 TO SHOW MONEY NEEDED
3146	00000000000000000764	RETEMPD	RETAUTH	CX.TEMPD,1
3150	000000000000000000000000	TEMPDBCD	DATA	0LTEMPODIR
3152	24051520041122000000	RETKEY	RETAUTH	CX.ACC,1
3153	000000000000000000000000			

LOOK UP AN OBJECT GIVEN ITS READ TWO PART NAME

X1,X2 HAS THE TWO PART NAME  
B1 HAS RETURN FOR A FAIL  
B2 HAS RETURN FOR AN ERROR

RETURNS:

OBJECT CAP IN CX,TOBJ  
POINTER TO DIRECTORY CAP IN DIRCAP  
POINTER TO ACCESS KEY IN ACKCAP  
X2 HAS 1 IF ERRCODES ~ ERRNUM HAVE INFO

ENTER AT LOOKUP2 TO LOOK UP THE SAME OBJECT AGAIN

\* SAVE THE PARAMETERS

LOOKUP	BX6	X2
	SA6	ASCIINUM
	SX6	B1
	SA6	LKUPFJMP
	SX6	B2
	SA6	LKUPEJMP

\* GET THE ASCII NAME FOR THE OBJECT

CALL	BCDASCII	
	SA6	ASCIIONM

\* CHECK FOR BEING THE CURRENT USER

SA1	ASCIUNM
SA2	USERNAME
IX3	X1-X2
ZR	X3,LOOKUP4

\* CHECK FOR USERNAME LOCAL

SA2	SL.LOCAL.
IX3	X1-X2
ZR	X3,LOOKUP5

\* CHECK FOR BEING A SYSTEM USERNAME

SB1	0
SA2	BCD
IX3	X2-X1
ZR	X3,LOOKUP3
SA2	PUBBCD

IX3	X2-X1
ZR	X3,LOOKUP3
SB1	B1+1

SA2	CLASBCD
IX3	X2-X1
ZR	X3,LOOKUP3
SB1	B1+1

SA2	OPERBCD
IX3	X2-X1
ZR	X3,LOOKUP3

JP	LOOKUP1
----	---------

3155	10622	
		5160000243 +
		76610
3156	5160000241	+ 76620
3157	5160000242	+
3160	6170003161	+
3161	5160000244	+
		5110000243 +
3162	5120000233	+ 37312
3163	0303003175	+
		5120004702 +
3164	37319	
		0303003204 +
3165	6110000000	
		5120003272 +
3166	37321	
		0303003200 +
3167	5120003275	+ 37321
3170	0303003200	+
		6111000001
3171	5120003273	+ 37321
3172	0303003200	+
		6111000001
3173	5120003274	+ 37321
3174	0303003200	+
		0200003207 +

		* USE THE CURRENT USERS DIRECTORY
3175	7160000035	LOOKUP4 SX6 CX.TEMPD
	5160000236 +	SA6 DIRCAP
3176	5110000627 +	SA1 IS.NULAK
	10611	BX6 X1
3177	5160000235 +	SA6 ACKCAP
	04000003220 +	EQ LOOKUP2
		* USE THE PUBLIC ACCESS KEY ON A SYSTEM DIRECTORY
3200	5111000634 +	LOOKUP3 SA1 B1+IS.S
	10611	BX6 X1
3201	5160000236 +	SA6 DIRCAP
	5110000625 +	SA1 IS.PUBAK
3202	10611	BX6 X1
	5160000235 +	SA6 ACKCAP
3203	04000003220 +	EQ LOOKUP2
		* LOOK UP IN CX.SUBDR WITH NULL ACESKEY
3204	7160000026	LOOKUP5 SX6 CX.SUBDR
	5160000236 +	SA6 DIRCAP
3205	5110000627 +	SA1 IS.NULAK
	10611	BX6 X1
3206	5160000235 +	SA6 ACKCAP
	04000003220 +	EQ LOOKUP2
		* GET THE DIRECTORY OF ANOTHER USER
3207	7160000040	LOOKUP1 SX6 CX.OUDIR
	5160000236 +	SA6 DIRCAP
3210	7160000037	SX6 CX.ACC
	5160000235 +	SA6 ACKCAP
3211	5110000243 +	SA1 ASCIINM
3212	6170003213 +	CALL BCDASCII
3213	5160000243 +	SA6 ASCIINM
3214	0130003262 +	XJ OUDIRIP,LKUPERR1,LKUPERR,,RETDIR
		* LOOK UP THE OBJECT IN THE DIRECTORY TO BE USED
3220	6110000035 +	LOOKUP2 SETXJ -ACCESSOP,-DIRCAP, BLOCKNM,-ACKCAP,-MINUSO
3227	0130000035 +	XJ XJLOC,LKUPFAIL,LKUPERR,,RETPOBJ
3233	76200	SX2 B0
	0200004664 +	RTNR
		* RETURN AN ERROR
3234	6170003235 +	LKUPERR1 POPR
3235	76200	SX2 B0
	04000003240 +	EQ LKUPERR2
3236	6170003237 +	LKUPERR POPR
3237	7120000001	SX2 I
3240	5110000242 +	LKUPERR2 SA1 LKUPEJMP
	63110	SB1 X1
3241	0210000000	JP B1
		* IT IT WAS WITH THE USER'S NAME LOOK IN PERMDIR
3242	5110000236 +	LKUPFAIL1 SA1 DIRCAP
	7211777742	SX1 X1-CX.TEMPD
3243	0311003257 +	NZ X1,LKUPFL1
	6110000035 +	SETXJ -ACCESSOP,CX.PERMD,-BLOCKNM,CX.ACC,-MINUSO
3252	0130000035 +	XJ XJLOC,LKUPFL1,LKUPFL1,,RETPOBJ
3256	76200	SX2 B0
	0200004664 +	RTNR

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* RETURN A FAILURE			
3257	6170003260 +	LKUPFL1	POPR
3260	5110000241 +		SA1
	76200		SX2
	63110		SB1
3261	0210000000		JP
3262	4000000000 X	* IP LIST TO FIND ANOTHER DIRECTORY	
3263	400000000020000000017	OUDIRIP	OPCAP
3264	00000000010000000243 +		CSTFCAP
3265	4000000001000000017		BLOCKD
3266	77777777777777777777		ASCIIUNM,1
			CSTFCAP
			NULAK
			=0
3267	00000000010000000244 +	* OTHER READ ONLY DATA	
3270	00000000000000000000	BLOCKNM	BLOCKD
3272	23000000000000000000	RETDIR	RETAUTH
3273	03140123230000000000	SBCD	DATA
3274	17200522012405000000	CLASSBCD	DATA
3275	20250214110300000000	OPERBCD	DATA
		PUBBCD	DATA
			OLCLASS
			OLOPERATE
			OLPUBLIC

CONVERT 8 BCD CHARACTERS IN A WORD INTO ASCII

CALL WITH THE MACRO CALL NOT CALLR

CALL WITH THE BCD WORD IN X1

RETURNS THE ASCII WORD IN X6

DOES NOT TOUCH REGISTERS B1 AND B2

\* INITIALIZE REGISTERS TO LOOP

BCDASCI	S86	7#7	SHIFT COUNT AND DONE COUNT
	MX6	0	CLEAR FOR BUILDING IN
	MX0	60-6	MASK FOR EXTRACTING BCD CHARACTERS
	MX5	60-7	MASK FOR EXTRACTING ASCII CHARACTERS

\* LOOP THROUGH THE WORD

BCDASCI	LX1	6	POSITION BCD CHAR
	BX2	=X0*X1	EXTRACT
	ZR	X2,BCDASC2	ZERO IS END

\* GET THE WORD IN THE CONVERSION TABLE

	LX2	60-3	USE UPPER 3 BITS AS INDEX
	SA3	X2+DISASC	

\* GET THE CHARACTER OUT OF THE TABLE ENTRY

	LX3	7#4	SHIFT INTO PLACE FOR FURTHER SHIFT
	BX2	Xn*X2	REMOVE LOWER 3 BITS

LX2

S85

LX2

S85

LX3

S85

BX3

=X5\*X3

\* SHIFT THE CHARACTER INTO POSITION AND ADD TO THE RESULT

LX3

S86

BX6

GE

BCDASCI

\* RETURN WITH RESULT IN X6

BCDASC2

JP

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\* MACRO FOR CONSTRUCTION CONVERSION TABLE

TOASC MACRO

S,T,U,V,W,X,Y,Z

VFD

4/0,7/S#B,7/T#B,7/F#B,7/V#B,7/W#B

VFD

7/X#B,7/Y#B,7/Z#B

ENDM

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ DIRECTORY STIMULATED

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### CONVERSION TABLE

3307	0000412110644	DISASC	TOASC	00,41,42,43,44,45,46,47
3310	0120512512654		TOASC	50,51,52,53,54,55,56,57
3311	0140613114664		TOASC	60,61,62,63,64,65,66,67
3312	0160713504021		TOASC	70,71,72,20,21,22,23,24
3313	0052261346031		TOASC	25,26,27,30,31,13,15,12
3314	0036100441035		TOASC	17,10,11,04,35,00,14,16
3315	0006733646407		TOASC	03,73,75,32,07,77,11,06
3316	0174021607440		TOASC	76,02,34,36,40,37,56,33

\*  
\*  
\* FIND OBJECT AT X1,X2 PLACE IN CX TEMP  
(ULD BEAR 2 PART NAMES)  
\*

\* IF NOT FOUND EXAMINE X3

\*  
\* X3 = 0 RETURN WITH NULL  
\* X3 = 1 CREATE DISK FILE WITH NAME X1,X2  
\* CLOSE IT  
\* PLACE AT CX TEMP  
\* X3 = 2 CREATE CLASSCODE AND PUT IN  
\* DYNAMIC NAME TAG ENTERED UNDER NAME X1,X2  
\* X3 = OTHER PLACE CONTENTS OF CX TEMP IN DNT  
\* HARDLINKED UNDER NAME X1,X2  
\*

\* ON RETURN SB1 = 1 IF OK, 0 IF ANY ERRORS

2317 10633  
5166000225 \*

2320 6110003416 \*

2323 0130000711 \*

2326 43052

15660

5120000251 \*

2330 5120000250 \*

5120000245 \*

2333 5120000246 \*

5120000252 \*

2336 6170003337 \*

2337 7120000041

2340 5110000240 \*

7231777772

2341 0323003350 \*

7261000001

2342 54615

6110003416 \*

2345 0400003323 \*

2346 76200

0400003350 \*

2347 7120000001

2350 0130000713 \*

2353 6110000000

0200004664 \*

\* SAVE THE PARAMETERS

FINDOBA BX6 X3

SA6 FINDOBT

\* LOOK UP THE NAME IN THE DIRECTORY

CALLR LOOKUP,FOBCREAT,FOBERR

\* DECIDE WHICH TYPE OF OBJECT WAS RETURNED

FOBAGAIN XJ DEPTPOIP

MX0 60-18

BX6 =X0\*X6

CMPCTYP DNT,OPEN

CMPCTYP SNT,OPEN

CMPCTYP DF,OPEN1

CMPCTYP DIR,OPEN1

CMPCTYP ACK,OPEN1

CALLI CRASH

\* THIS IS THE CODE TO TRY AGAIN WHEN STRANGE ERRORS OCCUR

FOBLLOOP SX2 1

FORLOOPD0 SA1 FOBLPCNT

SX3 X1-5

PL X3,FOBERR

SX6 X1+1

SA6 A1

CALLR LOOKUP2,FOBCREAT,FOBERR

FOBAGAIN

\* THIS IS THE CODE TO RETURN WHEN THERE IS AN ERROR

FOBERRO SX2 B0

EQ FOBERR

FOBERRI SX2 1

XJ NULTMPIP

SB1 0

RTNR

3354 0130003376 + \* GET AN OBJECT OUT OF A DYNAMIC NAME TAG  
OPENDNT XJ OPNDNTIP,OPENDNT2,HECKERR,OPENEV,RETEMP  
3360 0130003401 + XJ CLODNTIP  
3363 6110000001 OPENDNTI S81 1  
0200004664 + RTNR  
3364 5110006295 + \* IF MISSING OBJECT TO CREATE IS A CLASS CODE PUT ONE IN THIS DNT  
OPENDNT2 SAI FINDOB  
7211777775 SX1 X1-2  
3365 0311503346 + NZ X1,FOBERRO  
3366 0130003452 + \* CREATE THE CLASS CODE AND PUT IT IN THE DNT  
XJ CRTCCIP  
3371 76500 SX5 B0  
3372 0130003443 + XJ PUTDNTIP,FOBLOOP0,HECKERR,OPENEV  
3375 6110000001 S81 1  
0200004664 + RTNR  
3376 4000000000 X \* IP LISTS FOR DNT  
OPNDNTIP OPCAP DN:ODN2  
3377 00000000000000000001 ITEMS CX,TPOBJ,-0  
3401 4000000000 X CLODNTIP OPCAP DN:CLDN  
3402 00000000000000000001 ITEMS CX,TPOBJ  
\* RETURN A DIRECTORY, ACCESS KEY OR DISK FILE WITHOUT OPENING IT  
3403 OPENIDIR BSS 0  
3403 OPENIACK BSS 0  
3403 0130000717 + OPENIOF XJ MTOBJTMR  
3406 6110000001 S81 1  
0200004664 + RTNR  
3407 \* STATIC NAME TAGS AND DIRECTORIES SHOULD NOT BE HERE  
OPENSN T BSS 0  
3407 0400003346 + EQ FOBERR0  
\* ERROR VECTOR FOR OPENING OBJECTS  
3410 00000006000001003347 + OPENEV EVECN E,ABLOCK,E,NODECS,FOBERR1  
3411 00000010000001003337 + EVECN E,MISCE,E,MISSOB,FOBLOOP  
3412 00000003000000003337 + EVECN E,FILES,E,NOFILE,FOBLOOP  
3413 00000003000025003337 + EVECN E,FILES,E,NOFILE,FOBLOOP  
3414 00000003000043003347 + EVECN E,FILES,E,FULL,FOBERR1  
3415 000000000000000000 DATA 0

**READS, HANDLES READ AND COMMAND PROCESSOR SERVICES  
READ DIRECTORY STIMULATED**

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READ DIRECTORY STIMULATED

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3473 4000000000 X CLSTPOBJ OPCAP DF:CLO  
3474 00000000000000000001 RETEMP2 ITEMS CX.TPOBJ  
3475 00000000000000000000 RETEMP2 RETAUTH CX.TEMP,2  
\*  
\*  
\*  
\* RETURN NULL CAPABILITY  
3477 0130000713 + NULLRET XJ NULIMPIP  
3502 6110000001 SB1 1  
0200004664 + RTNR  
\*  
\*  
\*  
\* CHECK FOR USING A PUBLIC DIRECTORY  
3503 5110000236 + FOBCRT2 SAI DIRCAP  
0321003516 + PL X1.FOBCRT3  
\* ADD THE PUBLIC ACCESS KEY TO THE ENTRY  
3504 6110000035 + DOXJ -ADDKEYOP,-DIRCAP,-BLOCKN,-IS.NULAK,-PUBAKNUM,-LOWONES  
\*RETURN  
3506 6110000001 FOBCRT3 SB1 1  
0200004664 + RTNR  
\* ERROR VECTOR FOR ERRORS THAT CAN HAPPEN WHILE CREATING AN OBJECT  
3517 00000015000003003347 + CREATEV EVECN EC.DIRCT,EN.DUPNM,FOBLLOOP  
3520 00000015000004003347 + EVECN EC.DIRCT,EN.NOSPC,FOBERR1  
3521 00000007000002003347 + EVECN E.OPER,E.CAPTY,FOB-RR1  
3522 00000003000000003347 + EVECN E.FILES,E.NOFIL,FOBERR1  
3523 00000003000041003347 + EVECN E.FILES,E.NULFH,FOBERR1  
3524 00000003000034003347 + EVECN E.FILES,E.TMOPN,FOBERR1  
3525 00000003000002003347 + EVECN E.FILES,E.INMAPS,FOBERR1  
3526 00000003000043003347 + EVECN E.FILES,E.FULL,FOB-RR1  
3527 00000003000025003347 + EVECN E.FILES,E.NOFILE,FOBERR1  
3530 00000006000000003347 + EVECN E.ABLOCK,E.NUABLK,FOBERR1  
3531 00000006000001003347 + EVECN E.ABLOCK,E.NUECS,FOBERR1  
3532 00000006000004003347 + EVECN E.ABLOCK,E.NUDSK,FOBERR1  
3533 00000000000000000000 DATA 0  
\* SOME READ ONLY DATA  
3534 00000000000000000000 RETEMP RETAUTH CX.TEMP,1  
3536 00000000000000000000 RETPOBJ RETAUTH CX.TPOBJ,1

\* KILL OBJECT X1,X2 IF POSSIBLE - NOP OTHERWISE

2540 6110003573 +	KILLOBA	CALLR	LOOKUP,KILLOBDN,KILLOBDN
2543 0130000711 +		XJ	DSPTPOIP
2546 4305?		MX0	60-18
15660		BX6	=X0*X6
5120000250 +		CMPCTYP	SNT,DEL
2550 5120000251 +		CMPCTYP	DNT,DEL
5120000245 +		CMPCTYP	DF,DEL
2553 5120000246 +		CMPCTYP	DIR,DEL
5120000247 +		CMPCTYP	SPD,DEL
2556 6170003557 +		CALL	CRASH
	* CALL KILLOBJ TO KILL THE OBJECT (MOV= TO CX TEMP FIRST)		
2557	DELSNT	BSS	0
2557	DELDFT	BSS	0
2557	DELDIR	BSS	0
2557	DELSPD	BSS	0
2557 0130000717 +		XJ	MTOBJTMR
2562 6170003612 +		CALLR	KILLOBJ
2564 6110000035 +		SETXJ	-DELINOP,-DIRCAP, BLOCKNM,-ACKCAP
2570 0130000035 +		XJ	XJLOC,KILLOBDN,DELINK
2573 0200004664 +	KILLOBDN	RTNR	
	* OPEN A DYNAMIC NAME TAG TO GET THE OBJECT OUT		
2574 0130003376 +	DELDNT	XJ	OPNDNTIP,KILLOBDN,KILLOBDN,RETEMP
2600 6170003612 +		CALLR	KILLOBJ
2602 6110000035 +	DELINK	SETXJ	-DELINKOP,-DIRCAP, LBLOCKNM
2606 0130000035 +		XJ	XJLOC,KILLOBDN,KILLOBDN
2611 0200004664 +		RTNR	
	* THE OPERATIONS FOR DELETING ENTRIES		

\*  
\*  
\* KILL OBJECT AT CX.\*EMP  
\*

\* RETURNS WITH X1 = IF SUCCESSED  
\* = IF FAIL  
\* X2 = IF INFO IN ERRCLASS AND ERRNUM  
\* IF NOT

1577	FILETYPE	EQU	1577B	FILE
1757	ECTYPE	EQU	1757B	EVENT CHANNEL
1377	CTYPE	EQU	1377B	CLIST
1767	ABTYPE	EQU	1767B	ALLOCATION BLOCK
1677	OPTYPE	EQU	1677B	OP RATION (SUB PROCESS CALL)

\* SET CLEAN FLAG TO INSURE THING KILLED

KILLOBJ	SX6	R0
	SA6	CLNFLG

\* DETERMINE THE TYPE OF OBJECT

DOXJ	M,DSPCAP,CX,TEMP
MX0	A0=18
SX6	=X0*X6
SX1	X6-FILETYPE
ZR	X1,KILLOBF
SX1	X6-ECTYPE
ZR	X1,KILLOBE
SX1	X6-CTYPE
ZR	X1,KILLOBC
SX1	X6-ABTYPE
ZR	X1,KILLALB
SX1	X6-OPTYPE
ZR	X1,KILLOBO
CMPCTYP	OF,KILL
CMPCTYP	DIR,KILL
CMPCTYP	SNT,KILL
CMPCTYP	SPD,KILL

3612 76605  
5165000271 \*

3613 611000035 \*

3621 43052

15660

7216776200

3622 0301003641 \*

7216776020

3623 0301003705 \*

7216776400

3624 0301003714 \*

7216776010

3625 0301003732 \*

7216776100

3626 0301003723 \*

5120000245 \*

3630 5120000246 \*

5120000250 \*

3633 5120000247 \*

5120000248 \*

3635 76205  
0200003637 \*

3636 7120000001

3637 7110000001

0200004664 \*

KILLOBJ0	SX2	R0
	JP	KILLOBJZ
KILLOBJ1	SX2	I
KILLOBJZ	SX1	I
	RTNR	
*		
KILLOBJY	SX1	R0
	SX2	R0
	RTNR	

3640 76105  
76200

0200004664 \*

KILL FILE			
2641	6110000035 *	KILLOBF	SETXJ
2645	0130000035 *		XJ
2650	5110000253 *		S41
	7221777772		SX2
2651	0322603637 *		PL
	6110000035 *		SETXJ
2655	5110000253 *	*	XJ
	76700		S41
			SX7
			B0
			INITIALIZE SCAN
2656	5170000274 *	KILLOBF1	SA7
2657	0130000272 *		XJ
2662	0316003667 *		NZ
	5170000277 *		SA7
2663	0130000275 *		XJ
2666	0200003656 *		JP
		*	
2667	37316	KILLOBF2	IX3
	0303003676 *		ZR
2670	5221600253 *		SA2
	73520		SX5
		*	
2671	7266777776	KILLOBF3	SX6
	0306003675 *		ZR
2672	5022777776		SA2
		*	
2673	2027*	KILLOBF4	LX2
	0332003671 *		NG
	20501		LX5
2674	0200003673 *		JP
		*	
2675	3677*	KILLOBF5	IX7
	0200003656 *		JP
		*	
2676	6110000035 *	KILLOBF6	SETXJ
2701	0130000035 *		XJ
2704	0200003640 *		JP

\*

\*

\*

\*

KILL EVENT CHANNEL

\*

3705 6110000035 +  
3710 0130000035 +  
3713 0200003640 +

KILLOBE SETXJ M,DESECH,CX,TEMP  
XJLOC,,KILLOBER  
KILLOBJY

\*

\*

\*

KILL CLIST

\*

3714 6110000035 +  
3717 0130000035 +  
3722 0200003640 +

KILLOBC SETXJ M,DELCL,CX,TEMP  
XJLOC,,KILLOBER  
KILLOBJY

\*

\*

\*

KILL AN OPERATION

\*

3723 6110000035 +  
3726 0130000035 +  
3731 0200003640 +

KILLOBO SETXJ EC:DOPRI,CX,TEMP  
XJLOC,,KILLOBER  
KILLOBJY

## \* KILL AN ALLOCATION BLOCK TREE

3732 7160000001 KILLALR SX6 I  
5160000267 \* SA6 KLABN  
3733 7160777776 SX6 -1  
5160000270 \* SA6 KLAB1ST  
\* INITIALIZE THE CLIST SPOTS  
3734 6110000035 \* DOXJ M,MVECAP,CX,TEMP,CV,RALB,-MINUS0  
3743 6110000035 \* DOXJ M,MVECAP,CX,TEMP,CV,FALB,-MINUS0  
\* GET THE NEXT OBJECT  
3752 6110000035 \* KLAB0 SETXJ -GETCAP0P,CX,FALB,AX,TEMP,I  
3756 0130000035 \* XJ XJLOC,KLAB1,KILLOB-R  
\* IS THE OBJECT ANOTHER ALLOCATING BLOCK  
3761 6110000035 \* DOXJ M,DSPCAP,CX,TEMP  
3767 7266776010 SX6 X6-ABTYPE  
0306003773 \* ZR X6,KLAB2  
\* KILL THE OBJECT  
3770 6170003612 \* CALLR KILLOBJ  
\* IF IT WAS NOT KILLED RETURN AN ERROR  
3772 0301003752 \* ZR X1,KLAB0  
0400003637 \* EQ KILLOBJZ  
\* HANDLE AN ALLOCATION BLOCK  
\* INSURE THAT THE 1ST FLAG IS SET  
3773 7160000001 KLAB2 SX6 I  
5160000270 \* SA6 KLAB1ST  
\* CHANGE WHICH BLOCK IS TO BE KILLED  
3774 6110000035 \* KLAB4 DOXJ M,MVECAP,CX,TEMP,CV,FALB,-MINUS0  
4003 0400003752 \* EQ KLAB0  
  
\* WHEN ALL POSSIBLE OBJECTS ARE KILLED FROM A BLOCK KILL IT  
4004 6110000045 \* KLAB1 SETXJ -KILLOBP,CX,FALB  
4007 0130000035 \* XJ XJLOC  
\* CHECK FOR THE KILLED ALLOCATINN BLOCK BEING THE ROOT  
4012 5110000270 \* KLAB3 SAI KLAB1ST  
0331003640 \* NG X1,KILLOBJY  
\* RESTART WITH THE ORIGINAL BLOCK  
4013 7160777776 SX6 -1  
5160000270 \* SA6 KLAB1ST  
4014 6110000035 \* DOXJ M,MVECAP,CX,RALB,CV,FALB,-MINUS0  
4023 0400003752 \* EQ KLAB0

\* KILL A DIRECTORY TREE OF ARBITRARY STUFF

\* SET UP FIRST FLAG AND COUNTER OF ENTRIES TO SKIP ON DISPLAY

4024 716077776 \* KILLDIR SX6 =1  
5160000270 + SA6 KLDR1ST  
4025 716000001 \* SX6 1  
5160000267 + SA6 KLDRN

\* INSURE OB.DESTRY IS ON BEFORE KILLING

4026 611000035 + DOXJ EC:DSCP:,CX,TEMP  
4034 711000001 \* SXI OB.DSTRY  
20122 LXI 18  
15116 BX1 =X6\*X1  
4035 0301004040 + ZR X1,KLDR11  
7160000007 SX6 E.OPER  
4036 5160000162 + SA6 ERRCLASS  
7160000002 SX6 E.CAPTY  
4037 5160000163 + SA6 ERRNUMB  
0400003636 + EQ KILLOBJ1

\* SAVE THE ROOT DIRECTORY CAP

4040 611000035 + KLDRII DOXJ M,MVECAP,CX,TEMP,C.,RDIR,-MINUS0

\* OPEN THE ROOT DIRECTORY TO SPEED UP KILL

4047 611000035 + SETXJ DR:OPDR:,CX,TEMP  
4052 0130000035 + XJ XJLOC,,KILLOBR

\* DISPLAY AND ACT ON THE NTH DIRECTORY ENTRY

4055 611000035 + KLDRDSP SETXJ =DSPDIROP,CX,TEMP,,KLDRN  
4061 0130000035 + XJ XJLOC,KLDRI1,KILLOBR,,RETDSP

\* THE CODE TO DETERMINE OWNERSHIP

4065 511000073 + SA1 KLDRBUF  
721177774 SX1 X1-3  
4066 0301004071 + ZR X1,KLDR2 JUMP IF IN OWNERSHIP ENTRY

4067 5110000267 + KLDRI4 SA1 KLDRN  
7261000001 SX6 X1+1  
4070 54612 \* SA6 A1  
0400004055 + EQ KLDRDSP

\* COMPUTE THE BLOCK DATA FOR THE NAME

4071 5110000076 + KLDRI2 SA1 KLDRBUF+3  
7211000007 SX1 X1+7  
4072 21103 \* AX1 3  
20136 LX1 30  
7160000077 + SX6 KLDRBUF+4  
4073 12616 \* BX6 X1+X6  
54670 SA6 A1

\* DETERMINE IF THE OWNED OBJECT IS A DIRECTORY

5110000074 + SA1 KLDRBUF+1  
4074 721177776 SX1 X1+CTYPVEC-CIYPDIR  
0301004107 + ZR X1,KLDR3 JUMP IF A DIRECTORY IS TO BE KILLED

\* REMOVE THE ENTRY FROM THE DIRECTORY

4075 6110000035 + SETXJ =DELOWNOP,CX,TEMP,,KLDRBUF+3,-IS,NULAK

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
KILL OBJECT

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4101 0130000035 + XJ XJLOC,,KILLOBJ1  
4104 0400004055 + EQ KLDRDSP  
4105 00000000110000000073 + \* SOME READ ONLY DATA FOR DISPLAYING DIRECTORY ENTRIES  
RETDSP RETAUTH ..KLDRCBUF,KLDRBS7  
\*  
\*  
\*  
\* IF A DIRECTORY IS FOUND START KILLING OBJECTS IN IT  
\* MOVE ITS DIR AND NAME TO A SAFE PLACE  
4107 6110000035 + KLDRC3 DOXJ M.MVECAP,CX TEMP.C..FDIR..-MINUS0  
4108 6160000004 S86 L.DIRNM-1  
4109 5116000077 + KLDRC5 SA1 B6+KLDRCBUF+4  
10611 BX6 X1  
4110 516600262 + SA6 B6+KLDRCNM+1  
6166777776 S86 B6-1  
4111 0660004117 + GE B6.KLDRC  
6110000035 + \* CLOSE THE DIRECTORY TO KEEP DOWN THE ECS  
DOXJ DR:CLDR1,CX TEMP  
\* FIX THE POINTER  
4112 5110000076 + SA1 KLDRCBUF+3  
43036 MX6 30  
11101 BX1 X0\*X1  
4113 7160000262 + SX6 KLDRCNM+1  
12616 BX6 X1\*X6  
4114 5160000261 + SA6 KLDRCNM  
6110000035 + \* GET THE CAP FOR THE DIRECTORY  
SETXJ -ACCESSOP,CX.FDIR..KLDRCNM,-IS.NULAK  
XJ XJLOC,,,RETEMP  
\* CHECK 1ST FLAG AND INSURE IT IS SET  
4115 5110000270 + SA1 KLDRC1ST  
0321004145 + PL X1.KLDRC  
4116 5120000267 + SA2 KLDRCN  
10622 BX6 X2  
54610 SA6 A1  
4117 7160000001 KLDRC6 SX6 1  
5160000267 + SA6 KLDRCN  
\* OPEN THE NEW DIRECTORY TO KILL OUT OF  
SETXJ DR:OPDR1,CX TEMP  
XJ XJLOC,,KLDRC  
EQ KLDRDSP  
\* HANDLE ERROR ON OPENING THE DIRECTORY  
\* OK IF THE ERROR IS FROM THE DIRECTORY BEING GONE  
4118 6110000035 + KLDRC8 CALLR ERRVEC,KLDRC  
4119 6170004160 + CALL CRASH  
4120 00000003000025004162 + KLDRC9 EVECN E.FILES,E.NODFIL,KIDR1  
4121 00000000000000000000 DATA 0  
\*  
\*  
\* WHEN A DIRECTORY HAS BEEN EXHAUSTED KILL IT  
\* DECIDE IF IT IS THE ROOT DIR THAT IS DONE  
4122 5110000270 + KLDRC1 SA1 KLDRC1ST  
0331004214 + NG X1.KLDRC7 TOP DIR EXHAUSTED  
\* NOT WORKING ON THE ROOT SO GO BACK TO THE ROOT

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
KILL OBJECT

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4163 10611 BX6 X1  
5160000267 \* SA6 KLDRN  
4164 716077776 SX6 =1  
54610 SA6 A1  
\* GET RID OF THE PROFILE  
CALLR DELPROF  
\* MOVE THE ROOT DIR CAP INTO CX TEMP  
DOXJ M,MVECAP,CX,DIR,CX,TEMP,-MINUS0  
\* DELETE THE DIRECTORY FROM ITS FATHER  
SETXJ -DELOWNOP,CX,FDIR,LKLDRN,TS,NULAK  
XJ XJLOC,,KILLOBJ1  
\* REOPEN THE ROOT DIR TO RESUME KILLING  
DOXJ DR:OPDR:,CX,TEMP  
EQ KLDRDSP  
\*  
\*  
\* DECIDE IF SHOULD KILL THE DIRECTORY OR RETURN  
KLDR7 SAI CLNFLG  
0321004224 + PL X1,KLDR10  
4215 6110000035 + DOXJ DR:CLDR:,CX,TEMP  
4223 0200004664 + RTNR  
\* REMOVE THE PROFILE BEFORE KILLING  
KLDR10 BSS 0  
4224 6170000000 X CALLR DELPROF  
4226 0311603637 + NZ X1,KILLOBJZ  
0400004227 + EQ KILLDF

\*  
\*  
\*  
\*  
\* CODE TO KILL AN ARBITRARY DISK OBJECT  
\* OBJECT IN CX TEMP  
\*

4227	KILLDF	BSS	0
4227	KILLSNT	BSS	0
4227	KILLSPD	BSS	0
4227 6110000035 +		SETXJ	=DESTROY,CX TEMP
4232 0130000035 +		XJ	XJLOC,KILLOBJY,KILL OBJ1
4235 04000003640 +		EQ	KILLOBJY

\*  
\*  
\* CLEAN THE USERS STUFF OFF THE LOCAL ALLOCATION BLOCK  
\*  
4236 7160000001 5160000267 + CLEANAB SX6 I  
4237 7160777776 5160000270 + SA6 KLABN  
SA6 =1  
SA6 KLAB1ST  
\* INITIALIZE THE CLIST SPOTS  
DOXJ M,MVECAP,CX,LCLAB,FX,RALB,-MINUS0  
DOXJ M,MVECAP,CX,LCLAB,FX,FALB,-MINUS0  
\* GET THE NEXT OBJECT  
CLAB0 SETXJ -GETCAP0P,CX,FALS,FX,TEMP,-USRABCT  
XJ XJLOC,CLAB1,KILLOBE0R  
\* IS THE OBJECT ANOTHER ALLOCATING BLOCK  
DOXJ M,DSPCAP,CX,TEMP  
SX6 X6-ABTYPE  
ZR X6,CLAB2  
\* KILL THE OBJECT  
CALLR KILLOBJ  
\* IF IT WAS NOT KILLED RETURN AN ERROR  
ZR X1,CLAB0  
EQ KILLOBJZ  
\* HANDLE AN ALLOCATION BLOCK  
\*INSURE THAT THE 1ST FLAG IS SET  
CLAB2 SX6 I  
SA6 KLAB1ST  
\* CHANGE WHICH BLOCK IS TO BE KILLED  
CLAB4 DOXJ M,MVECAP,CX,TEMP,CY,FALB,-MINUS0  
EQ CLAB0  
\*  
\* CHECK FOR THE ORIGINAL BLOCK BEFORE KILLING THE BLOCK  
CLAB1 SA1 KLAB1ST  
NG X1,KILLOBJY  
\* WHEN ALL POSSIBLE OBJECTS ARE KILLED FROM A BLOCK KILL IT  
SETXJ -KILLAB0P,CX,FALB  
XJ XJLOC  
\* RESTART WITH THE ORIGINAL BLOCK  
SX6 -I  
SA6 KLAB1ST  
DOXJ M,MVECAP,CX,RALB,CY,FALB,-MINUS0  
EQ CLAB0

\*

\*

\*

ERROR DURING DELET-

\*

4330 611004333 +  
4332 617004333 +

KILLOBER CALLR  
CALL

ERRVEC,KILLOBEV  
CRASH

UNEXPECTED ERROR

\*

4333 00000010000001003640 +  
4334 00000003000000003640 +  
4335 00000011000002003640 +  
4336 00000010000000003640 +  
4337 00000006000000003640 +  
4340 00000007000002003636 +  
4341 00000003000025003640 +  
4342 00000000000000000000

KILLOREV EVECN  
EVECN  
EVECN  
EVECN  
EVECN  
EVECN  
EVECN  
DATA

8.1,KILLOBJY  
3.0,KILLOBJY  
9.2,KILLOBJY  
8.0,KILLOBJY  
E,ABLOCK,E,NOABLK,KILLOBJY  
E,OPER,E,CAPTY,KILLOBJ1  
E,FILES,E,NOUFIL,KILLOBJY  
0

NO SUCH OBJECT

FILE GONE

EVENT CHAN GONE

CLIST GONE

\*  
\*  
\*  
\*  
\*

## ERROR HANDLING

6

ECLASS EQU  
ENUM EQU6  
7

4343 0130000723 \*

ERRCALL XJ

ESAVE SAVE REGISTERS

\*

4346 5110000006

SA1

ECLASS SAVE

5120000007

SA2

ENUM ERROR

4347 10611

BX6

CLASc

5160000162 \*

SA6

ANn

10622

BX6

NUMBER

4350 5160000163 \*

SA6

ERRNUMB

43052

MX0

60-18

15220

BX2

=X0\*X2 AND PACK THEM

4351 15615

BX6

=X0\*X1

20622

LX6

18

12662

BX6

X6\*X2

4352 5160000161 \*

SA6

ERRCN AND SAVE

\*

4353 0130000727 \*

XJ

EDSPSTK READ TOP OF STACK

4356 5110000150 \*

SA1

ESTKBF+1 CHECK CLASS CODE

5120000152 \*

SA2

OWNCLSCD

4357 13212

BX2

X1-X2

0312004415 \*

NZ

X2,ERRCALL2 WRONG

4360 0332004415 \*

NC

X2,ERRCALL2 CODE

\*

NEXT INSTRUCTIONS WILL HAVE TO CHANGE  
WHEN FORM OF STACK ENTRIE CHANGES

\*

\*

\*

\*

4361 20101 5110000147 \*

SA1

ESTKBF

0331004403 \*

LX1

1

20173

NG

X1,ERRCALL1 INTERRUPTED BIT ON

4362 73115

LX1

60-1

5221777776

SX1

X1

NOW HAVE ADDRESS OF XJ + 1

\*

\*

\*

\*

4363 36612 73220

SX2

X2 GET OFFSET

5160000157 \*

IX6

NOMINAL NEXT ADDRESS

4364 7266777776

SA6

SAVE IT

5160000156 \*

SX6

X6-1

4365 0130000153 \*

SA6

ESTPC+3 FIX PCNTS OF OLD STACK ENTRY

\*

4370 53165

XJ

ESTPC TO TAKE ERROR EXIT

43036

\*

15610

SA1

X6

4371 5160000160 \*

MX0

30

\*

BX6

=X0\*X1 GET ERROR TAG

SA6

ERRTAG SAVE IT

4372 0130000725 +  
4375 0130000663 +  
4400 0130000662 +

XJ  
XJ  
XJ

ERESTORE RESTORE REGISTERS  
SETEMSK RESET ERROR MASK  
RETURN CONTINUE WITH ERROR EXIT

4403 7160004415 +  
5160000156 +  
4404 0130000153 +  
4407 0130000663 +  
4412 0130000662 +

ERRCALL1 SX6  
SA6  
XJ  
XJ  
XJ

ERRCALL2  
ESTPC+3 PREPARE FCNTR  
ESTPC OF OLD STACK ENTRY  
SETEMSK RESET ERROR MASK  
RETURN AND CONTINUE AFTER RETURN

4415 0200004517 +

ERRCALL2 JP

NOT IN MIDDLE OF XJ  
WRONG CLASS CODE  
ECRASH

```

*          DO AN ERROR RETURN
*
4416 6170004617 +
4420 6170000000 X
4422 5110000171 +
0301004435 +
4423 5110000160 +
43060
15210
4424 11301
20222
20360
12623
4425 5160000170 +
7160000017
4426 5160000167 +
4427 0130000701 +
4432 0130000166 +
*          CAN NOT RETURN
ERRXIT    CALLR    CLEANDF
          CALLR    CLRMAP
          SA1     RUNFLAG
          ZR      X1,ERRXIT1
          SA1     ERRTAG
          MX0     60-12
          BX2     ~X0*X1    MODIFIER
          BX3     X0*X1    NUMBER
          LX2     1B
          LX3     60-12
          BX6     X2*X3
          SA6     ERETURN+2
          SX6     15
          SA6     ERETURN+1
          XJ      RESTORE
          XJ      ERETURN

*          CAN NOR RETURN, SO DO A SYSTEM ..STOP
*
4435 6160000004
4436 0130000676 +
4441 0200004435 +
*          PASS AN ERROR ON TO THE CALLER
*
4442 6170004617 +
4444 6170000000 X
4446 5110000171 +
0301004435 +
4447 5110000162 +
10611
4450 5160000167 +
5110000163 +
4451 10611
5160000170 +
4452 0130000701 +
4455 0130000166 +
*          PASSXIT    CALLR    CLEANDF
*          CALLR    CLRMAP
*          SA1     RUNFLAG
*          ZR      X1,ERRXIT1
*          SA1     ERRCLASS
*          BX6     X1
*          SA6     ERETURN+1
*          SA1     ERRNUMB
*          BX6     X1
*          SA6     ERETURN+2
*          XJ      RESTORE
*          XJ      ERETURN

```

4460 5160000160 +  
7160777775  
4461 5160000162 +  
20622  
4462 15661  
5160000161 +  
76600  
4463 5160000163 +  
7167000001  
4464 5160000167 +  
0270000000

SPCLERR SA6 ERRTAG  
SX6 -2  
SA6 ERRCLASS  
LX6 18  
MX1 60-18  
BX6 =X1\*X6  
SA6 ERRCN  
SX6 B0  
SA6 ERRNUMB  
SX6 B7+1  
SA6 ERRNEXT  
JP B7

THIS CODE GENERATES A PSEUDO ERROR

CLASS = -2  
NUMB = 0

ERRNEXT = B7+1  
ERRTAG = X6

RETURNS TO B7

ERRTAG  
-2  
ERRCLASS  
18  
60-18  
=X1\*X6  
ERRCN  
B0  
ERRNUMB  
B7+1  
ERRNEXT  
B7

THIS CODE CONVERTS FRETURN TO ERROR

CLASS = -1  
NUMBER = 0

DESTROYS A1, X1, A2, X6

4465 0130000723 +  
4470 7160777776  
5160000162 +  
4471 76600  
5160000163 +  
56170  
4472 43636  
15616  
5160000160 +  
4473 7160777776  
20622  
43152  
4474 15661  
5160000161 +  
76670  
4475 5160000167 +  
0270000000

UNEXFRDN XJ ESAVE  
SX6 -1  
SA6 ERRCLASS  
SX6 B0  
SA6 ERRNUMB  
SA1 B7  
MX6 60-30  
BX6 =X6\*X1  
SA6 ERRTAG  
SX6 -1  
LX6 18  
MX1 60-18  
BX6 =X1\*X6  
SA6 ERRCN  
SX6 B7  
SA6 ERRNEXT  
JP B7

\* THIS CODE DECIPHERS AN ERROR XFER VECTOR

\* VECTOR STARTS AT BT

\* EACH WD IN VECTOR AF FORM

\* VFD 6/0/18/ECLASS,18/ENUMB,18/XFER

\* OR VFD 60/LMOREVECTOB

\* OR VFD 60/\* ( END OF VECTOR )

4476	43036		ERRVEC	MX0	60-36	
		5116000161 +		SA1	ERRCN	
4477	56217	15110		BX1	=X0*X1	PREPARE OBSERVED ERRCODE AND NUMBER
				SA2	B1	PICK UP FIRST CANDIDATE
4500	0332004504 +		ERRVEC1	NG	X2,ERRVEC2	XFER ENTRY
		0302004505 +		ZR	X2,ERRVEC3	ALL DONE
4501	63226	26252		SB2	X2	PREPARE FOR POSSIBLE XFER
		15220		LX2	60-18	
				BX2	-X0*X2	
4502	0302004506 +	13212		BX2	X1-X2	
		5022000001		ZR	X2,ERRVEC4	FOUND
4503	0200004560 +			SA2	A2+1	
				JP	ERRVEC1	
4504	53226	0200004500 +	ERRVEC2	SA2	X2	NEW PORTION OF LIST
				JP	ERRVEC1	
4505	0200004664 +		ERRVEC3	RTNR		
4506	6170004507 +		ERRVEC4	POPB		
4507	0220000000			JP	B2	
						ROUTINE TO CALL ERRVEC WITH XFER VECTOR IN
						ERRTAG AND CRASH IF IT RETURNS
4510	5150000160 +	63150	CHECKERR	SAB	ERRTAG	
4513	6170004514 +			CALLR	ERRVEC,X5	
				CALL	CRASH	

**READS**      **HANDLES READ AND COMMAND PROCESSOR SERVICES**  
**CRASH**

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4514	0130006723 +	CRASH	XJ	SAVE
4517	7170000135 +	ECRASH	SX7	REGS+7
	5170000164 +		SAT	ERRINFO1
4520	7170000147 +		SX7	STKBF
	5170000165 +		SAT	ERRINFO2
4521	7170110000		SX7	110000B
	5170000160 +		SAT	ERRTAG
4522	0400004416 +		EQ	ERRAIT
		*		
		*		
		*		
4523	6170004524 +	UNEXERR	CALL	ECRASH

\*

\*

\*

\*

\*

\*

### OPEN A DISK FILE

B1 OPEN ACTION ( DF:OPRO1 OR DF:OPRW1 )  
B2 INDEX OF DISK CAP  
B3 DESIRED INDEX OF ECS CAP

ONLY ONE FILE CAN BE OPEN AT A TIME

4524 5110000210 +  
0301004526 \*

OPENDF SAI OFFFLAG  
ZR X1,OPENDF1  
CALL CRASH

A FILE ALREADY OPEN

4525 6170004526 \*  
  
4526 76116  
76220  
76630  
4527 5160000211 +  
7170000001  
4530 20734  
12667  
5160000055 \*

OPENDF1 SX1 B1  
SX2 B2  
SX6 B3  
SA6 OPNFILE  
SX7 1 REMEMBER WHERE FILL IS  
LX7 30  
SX6 X6+X7 CAP RTN AUTH  
SA6 RETLOC+1  
SX6 B0  
SA6 RETLOC  
SETXJ X1,X2  
XJ XJLOC,,,RETLOC  
SX6 1  
SA6 OFFFLAG  
RTNR SIGNAL AN OPEN FILE

\*

\*

\*

\*

\*

\*

\*

\*

\*

### ATTACH A FILE BLOCK IN CURRENTLY OPEN FILE

X1 FILE ADDRESS OF BLOCK

ONLY ONE BLOCK CAN BE ATTACHED AT ANY TIME

4543 5120000210 +  
7222777775  
4544 0332004546 \*  
4545 6170004546 \*

ATCHBLK SAZ OFFFLAG  
SX2 X2-Z  
NG X2,ATCHBLK1  
CALL CRASH

EITHER NO OPEN FILE OR A BLOCK  
ALREADY ATTACHED

4546 10311  
16611  
5160000212 \*  
4547 6110000035 \*  
4556 7160000002  
5160000210 \*  
4557 0200004664 \*

ATCHBLK1 BX3 X1  
BX6 ATCHDBLK REMEMBER THE ADDRESS FOR DETACH  
SA6 DOXJ DF:ATCH1,OPNFILE+IND,X3,1  
SX6 2  
SA6 OFFFLAG SIGNAL THAT A BLOCK ATTACHED  
RTNR

	*		DETACH CURRENTLY ATTACHED DISK FILE BLOCK	
	*			
4560	5120000210 + 7222777775	DTCHBLK	SA2 SX2 ZR CALL	DFFLAG X2-2 X2,DTCHBLK1 CRASH NO BLOCK ATTACHED
4561	0302004563 +			
4562	6170004563 +			
4563	7160000001 54620	DTCHBLK1	SX6 SA6 DOXJ RTNR	1 A2 SIGNAL: NO ATTACHED BLOCK DF:DTCH1,OPNFILE+IND,ATCHDBLK+INH,1
4564	6110000035 +			
4573	0200004664 +			
	*		CLOSE CURRENTLY OPEN FILE	
	*		MUST BE NO ATTACHED BLOCK	
4574	5120000210 + 7222777776	CLOSDF	SA2 SX2 ZR CALL	DFFLAG X2-1 X2,CLOSDF1 CRASH NO OPEN FILE OR AN ATTACHED BLOCK
4575	0302004577 +			
4576	6170004577 +			
4577	76600 54620	CLOSDF1	SX6 SA6 DOXJ RTNR	B0 A2 SIGNAL: NO OPEN FILE DF:CLO1,OPNFILE+INH
4606	6110000035 + 0200004664 +			
	*		TEST FOR DISK FILE	
	*		HAVE INDEX OF CAP IN X2	
	*		RETURNS WITH X1 = 0 IF IS A DISK FILE	
4607	6110000035 +	TESTDF	DOXJ	EC:DSCP1,X2
4615	43052 5110000245 + 13116		MXG SA1 SX1 SX1 RTNR	60-18 CTYPDF GET DISK FILE TYPE X1-X6 COMPARE =X0*X1 TYPE FIELDS
4616	15116 0200004664 +			
	*		CLEAN UP THE CURRENT OPEN FILE	
4617	5110000210 + 63110	CLEANDF	SA1 SB1	DFFLAG X1
4620	0710004632 + 6120000002		LT SB2	B1,B0,CLEANDFX 2
4621	0721004632 + 0210004622 +		GT JP	B1,B2,CLEANDFX CLNDFSWT+B1
4622	0200004631 +	CLEANDFSWT	JP	CLEANDFO
4623	0200004627 +		JP	CLEANDF1
4624	0200004625 +		JP	CLEANDF2
	*			

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
GENERAL DISK FILE OPEN CLOSE ATTACH DETACH

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4625	6170004560 +	CLEANDF2	CALLR	DTCHBLK
		*		
4627	6170004574 +	CLEANDF1	CALLR	CLOSDF
		*		
4631	0200004664 +	CLEANDF0	RTNR	
		*		
		*		BAD DFFLAG
		*		
4632	76600 516000210 +	CLEANDFX	SX6	B0
			SA6	DFFLAG
4633	6170004634 +		CALL	CRASH

4634	43074		SET	MX0	60
	66570			S65	R7
	10611			BX6	X1
4635	6170004636	*		CALL	SETA
4636	10622			BX6	X2
4637	6170004640	*		CALL	SETA
4640	10266			BX2	X6
	10623			BX6	X3
4641	6170004642	*		CALL	SETA
4642	10366			BX3	X6
	10644			BX6	X4
4643	6170004644	*		CALL	SETA
4644	10466			BX4	X6
	10655			BX6	X5
4645	6170004646	*		CALL	SETA
4646	10566			BX5	X6
4647	66755		SETB	SB7	S5
	0270000000			JP	R7
4650	0602004647	*	SETA	GE	S0,S2,SETB
	0326004655	*		PL	X6,SETA3
4651	14666			BX6	=X6
4652	53165		SETA1	SA1	X6
	10671			BX6	X1
4653	56616		SETA2	SA6	S1
	6111000001			SB1	S1+1
4654	612277776			SB2	S2-1
	0270000000			JP	R7
4655	7266677777		SETA3	SX6	X6-IND
	0326004652	*		PL	X6,SETA1
4656	7266700000			SX6	X6+IND
	0200004653	*		JP	SETA2

THIS SUBROUTINE XFERS S2 ITEMS  
(UR'S, WHICH EVER IS LESS )  
FROM X1, X2, . . . X5 TO S1, S1+1, . . . S1+4

IF XN IS POSITIVE, CONTENTS OF XN IS XFERED  
IF XN IS NEGATIVE, CONTENTS OF CELL ADDRESS -XN

X1 WILL BE DESTROYED

S1 IS ADVANCED AND S2 DECREMENTED BY 1 FOR EACH XFER

\*  
\*  
\*  
\*  
\* HANDLE A CALL WITH STACK  
\*  
4657 5150000070 + CALLR SA5 CSTKPNTR  
0305004663 + ZR X5,CALLRERR  
4660 63650 SB6 X6  
6166777776 SB6 B6-1  
4661 5166000056 + SA6 CALLSTK+B6  
76660 SX6 B6  
54650 SA6 A5  
4662 0270000000 JP B7  
  
\*  
\*  
\* CALLRERR CALL CRASH  
\*  
\*  
\*  
\* HANDLE A RETURN WITH CALL STACK  
\*  
\*  
4664 5150000070 + RTNR SAB CSTKPNTR  
63650 SB6 X5  
4665 7166000001 54650 SX6 B6+1  
SA6 A5  
4666 5156000056 + SAB CALLSTK+B6  
63750 SB7 X5  
4667 0270000000 JP B7  
  
\*  
\* POP CALL STACK  
\*  
\*  
4670 5150000070 + POPO SAB CSTKPNTR  
7265000001 SX6 X5+1  
4671 54650 0270000000 SA6 A5  
JP B7

\*

\*

\*

DO AN XFER VECTOR

\*

\*

\*

X1 INDEX  
B1 START OF VECTOR  
B2 SIZE OF VECTOR

\*

\*

RETURNS IF X1 OUT OF RANGE

\*

4672 63315  
0730004675 +  
4673 0632604675 +  
66113  
4674 0210000000  
4675 0270000000

TRAVEC SB3  
LT  
GE  
SB1  
JP  
\*  
TRAVEC1 JP

X1  
B3,B0,TRAVEC1  
B3,B2,TRAVEC1  
B1+B3  
B1  
R7

\*  
\*  
\*  
\*  
\* THE MACRO TO DO IT  
\*  
BEADS MACRO NM,SNM  
IFC EQ,/SNM//  
ENTRY NM  
ELSE  
ENTRY SNM  
SNN EQU NM  
ENDIF  
ENDM

\*  
\* DEFINE THE LINKAGE FROM XTEXT FILE  
\*

4675

BEXTS	XTEXT		
BEADS	USRBLK	BEXTS	1
BEADS	USRONT	BEXTS	1
BEADS	USRTYPE	BEXTS	1
BEADS	BCDASCII,BCDASCI	BEXTS	1
BEADS	CALLR	BEXTS	1
BEADS	CHECKERR,CHKERR	BEXTS	1
BEADS	CLEANAB	BEXTS	1
BEADS	CMMDBLK	BEXTS	1
BEADS	CMMDERR	BEXTS	1
BEADS	CLOSDF	BEXTS	1
BEADS	CRASH	BEXTS	1
BEADS	CTYFINIT,CTYPINI	BEXTS	1
BEADS	CTYPDF	BEXTS	1
BEADS	CTYPDIF	BEXTS	1
BEADS	CTYPSNT	BEXTS	1
BEADS	CTYPSPD	BEXTS	1
BEADS	CTYPACK	BEXTS	1
BEADS	CS.NULAK,CS.NULK	BEXTS	1
BEADS	CS.LCEC	BEXTS	1
BEADS	CS.PROF	BEXTS	1
BEADS	CS.PUBAK,CS.PUBK	BEXTS	1
BEADS	CS.S	BEXTS	1
BEADS	CS.TDLST,CS.IDLS	BEXTS	1
BEADS	CX.ACC	BEXTS	1
BEADS	CX.CSTF	BEXTS	1
BEADS	CX.CLSCD,CX.GLCD	BEXTS	1
BEADS	CX.DAYF	BEXTS	1
BEADS	CX.FDIR	BEXTS	1
BEADS	CX.LCLAB,CX.LCAB	BEXTS	1
BEADS	CX.NULL	BEXTS	1
BEADS	CX.OPRS	BEXTS	1
BEADS	CX.PERMD,CX.PRMD	BEXTS	1
BEADS	CX.PROF	BEXTS	1
BEADS	CX.SUBDR,CX.SBDR	BEXTS	1
BEADS	CX.TEMP	BEXTS	1

BEADS	CX.TEMP0,CX.TMPD	BEXTS	1
BEADS	CX.TP0BJ,CX.IOBJ	BEXTS	1
BEADS	DSPBUF	BEXTS	1
BEADS	DAYFBUF	BEXTS	1
BEADS	DAYFPPT	BEXTS	1
BEADS	ERRTAG	BEXTS	1
BEADS	ERRAIT	BEXTS	1
BEADS	FTHRBUF	BEXTS	1
BEADS	HEADBUF	BEXTS	1
BEADS	IS.LCEC	BEXTS	1
BEADS	IS.DAYF	BEXTS	1
BEADS	IS.DFEC	BEXTS	1
BEADS	IS.NULAK,IS.NULK	BEXTS	1
BEADS	IS.PROF	BEXTS	1
BEADS	IS.PUBAK,IS.PUBK	BEXTS	1
BEADS	IS.S	BEXTS	1
BEADS	IS.TDLST,IS.IDLS	BEXTS	1
BEADS	KILLDIR	BEXTS	1
BEADS	KILLOBA	BEXTS	1
BEADS	KILLOBJ	BEXTS	1
BEADS	MAPCOUNT,MAPCNT	BEXTS	1
BEADS	NREGS	BEXTS	1
BEADS	OPENDF	BEXTS	1
BEADS	PASSXIT	BEXTS	1
BEADS	PROFBUF	BEXTS	1
BEADS	PROFPPT	BEXTS	1
BEADS	PUBAKNUM,PBAKNUM	BEXTS	1
BEADS	RESTORE	BEXTS	1
BEADS	RUNFLAG	BEXTS	1
BEADS	RETPOBJ	BEXTS	1
BEADS	RTNR	BEXTS	1
BEADS	R.CNTIM	BEXTS	1
BEADS	SAVES	BEXTS	1
BEADS	SHTDTMSV,SHTUTMV	BEXTS	1
BEADS	S.CNTIM	BEXTS	1
BEADS	S.FXEC5	BEXTS	1
BEADS	S.MOTS	BEXTS	1
BEADS	SRCLEERR	BEXTS	1
BEADS	TEMP1	BEXTS	1
BEADS	TEMP2	BEXTS	1
BEADS	TRAVEC	BEXTS	1
BEADS	UNEAEERR	BEXTS	1
BEADS	USRABCT	BEXTS	1
BEADS	UNEAFRTN,UNEAFRT	BEXTS	1
BEADS	USERNAME,USRNAME	BEXTS	1
BEADS	XJLOC	BEXTS	1
END		BEXTS	1

4703

41001

STORAGE USED  
6600 ASSEMBLY

14579 STATEMENTS  
52.351 SECONDS

1051 SYMBOLS  
4532 REFERENCES

000016 INVENTED SYMBOLS

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
ERROR DIRECTORY.

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

READS, HANDLES READ AND COMMAND PROCESSOR SERVICES  
SYMBOLIC REFERENCE TABLE.

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ABTYPE	1767		84/13 D	84/30	87/17	92/16					
ACCESSOP	645	PROGRAM*	41/28 L	72/12	75/34	75/51	89/28				
ACKCAP	235	PROGRAM*	36/23 L	75/06 S	75/14 S	75/21 S	75/27 S	75/34	83/24		
ADDKFYOP	651	PROGRAM*	41/32 L	82/19							
ALBITS	2546	PROGRAM*	59/67	59/50 L							
ASCIONM	244	PROGRAM*	36/30 L	62/35 S	74/27 S	76/14					
ASCIUNM	243	PROGRAM*	36/29 L	72/10 S	72/28 S	73/13 S	74/20 S	75/28	76/10		
			70/21 S	72/21 S	72/34 S	73/21	74/29	75/30 S			
ATCHBLK	4543	PROGRAM*	62/41	100/39 L							
ATCHBLK1	4546	PROGRAM*	100/41	100/45 L							
ATCHDBLK	212	PROGRAM*	33/26 L	100/47 S	101/11						
RCONSCI	3276	PROGRAM*	106/22 D								
RCONSCII	3276	PROGRAM*	62/35	72/10	72/28	73/13	75/30	106/22			
			70/21	72/21	72/34	74/27	77/16 L				
RCONSCI	3300	PROGRAM*	77/21 L	77/41							
RCONSC2	3306	PROGRAM*	77/23	77/43 L							
RDAUNM	3745	PROGRAM*	70/23	72/12	72/31	72/37	73/15	73/21 L			
RDCNT	12		36/05 D								
RDR6	7	PROGRAM*	28/07 L	48/06							
RDMEL	1313	PROGRAM*	48/12	53/04 L							
RDENT	13	PROGRAM*	28/11 L	51/03	52/04 S	52/22	52/35 S	60/28 S			
			49/26	51/29 S	52/11 S	52/30 S	52/04				
RDENTCNT	12	PROGRAM*	28/10 L								
RDGET	2647	PROGRAM*	50/22	54/10	60/19 L	61/11					
RDGET1	2652	PROGRAM*	60/23	60/24	60/27 L						
RDGET2	2656	PROGRAM*	60/33	60/34	60/37 L						
RDN00P	1723	PROGRAM*	48/11	48/14	48/16	48/18	48/21	49/05 L			
			48/13	48/15	48/17	48/19	48/22				
RDNORMRT	1734	PROGRAM*	49/15	49/23 L							
RDPREAD	1753	PROGRAM*	48/10	48/20	50/19 L						
RDPREADPB	206	PROGRAM*	33/14 L	50/45 S	51/48						
RDPREAD1	1227	PROGRAM*	50/51	50/52	51/12 L						
RDPREAD1A	1203	PROGRAM*	50/31	50/37 L							
RDPREAD1B	1211	PROGRAM*	50/35	50/44 L							
RDPREAD2	1263	PROGRAM*	51/47 L	51/51							
RDPREAD3	1274	PROGRAM*	51/49	52/02 L							
RDPREAD4	1276	PROGRAM*	51/49	52/09 L							
RDPREAD4A	1302	PROGRAM*	52/12	52/15 L							
RDPREAD5	1304	PROGRAM*	50/40	50/51	51/16	51/40	52/13	52/22 L			
RDPREAD5A	1306	PROGRAM*	51/42	52/29 L	52/15	52/34 L					
RDPREAD6	1207	PROGRAM*	51/30	52/05							
RDTDTA	1736	PROGRAM*	49/26 L	49/30	55/13						
RDSBHDSZ	12		33/05 D	33/07							
RDSET	1317	PROGRAM*	48/23	54/07 L							
RDSMINIT	2653	PROGRAM*	65/14	72/08 L							
RDSRV	1101	PROGRAM*	45/18	48/06 L							
RDSUBACN	207	PROGRAM*	33/15 L	55/20 S	58/19	58/42	59/02	59/23	59/31		
RDSUBCLD	172	PROGRAM*	33/10 D	58/24	58/25						
RDSUBE1	2645	PROGRAM*	55/14	55/33	55/42	59/47 L					
RDSUBE2	2537	PROGRAM*	55/48	59/45 L							
RDSUBE3	2631	PROGRAM*	56/03	56/18	56/35	57/22	58/05	58/31	59/01	59/43 L	
			56/03	56/21	57/08	57/33	58/25	58/33	59/03		
			56/13	56/31	57/22	57/38	58/31	58/47	59/36		

READS, HANDLES READ AND COMMAND PROCESSOR SERVICES  
SYMBOLIC REFERENCE TABLE.

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RDSURHD	172	PROGRAM*	33/07 L	33/10	55/17	55/41	55/46	55/47
RDSURMP	172	PROGRAM*	33/09	55/13	55/24	55/46	55/47	56/24
RDSURPT	204	PROGRAM*	33/09 D	57/08	57/25	57/51	58/04	66/27
			57/07	57/12	57/49	58/03	66/26	66/31
			33/12 L	56/30	56/40 S	57/07	58/24	66/20
			56/23 S	56/33	56/51 S	58/09	58/35	66/26
			56/26	56/38	57/01	58/16	66/17 S	66/48
RDSURRT	1735	PROGRAM*	49/18	49/24 L				
RDSURX	205	PROGRAM*	33/13	57/03	58/06	58/32	66/19 S	
			56/33 S	57/49	58/21 S	58/34 S	66/22	
RDSURY	2657	PROGRAM*	57/20	58/29	61/09 L	66/39		
RDSURY2	2662	PROGRAM*	61/17 L	61/22				
RDSURY3	2667	PROGRAM*	61/20	61/28 L				
RDSURY4	2665	PROGRAM*	61/24 L					
RDSUB0	1330	PROGRAM*	55/08 L	65/05				
RDSUB0A	1241	PROGRAM*	55/12 L					
RDSUB0B	1366	PROGRAM*	55/25	55/36 L				
RDSUB10	1705	PROGRAM*	58/26	58/42 L				
RDSUB10A	1721	PROGRAM*	58/43	58/52 L				
RDSUB10B	1742	PROGRAM*	58/47	59/06 L				
RDSUB11	2620	PROGRAM*	59/08	59/10	59/12	59/14	59/16	59/18
			59/09	59/11	59/13	59/15	59/17	59/31 L
RDSUR2	1464	PROGRAM*	56/26 L	56/41				
RDSUR2A	1447	PROGRAM*	56/09	56/16 L				
RDSUR3	1513	PROGRAM*	56/31	56/38 L				
RDSUR4	1515	PROGRAM*	56/28	56/45 L				
RDSUR5	1537	PROGRAM*	57/06 L	58/12				
RDSUR6	1565	PROGRAM*	57/13	57/14	57/18 L			
RDSUR7	1575	PROGRAM*	57/16	57/23 L				
RDSUR7A	1601	PROGRAM*	57/31 L					
RDSUR7B	1611	PROGRAM*	57/29	57/36 L				
RDSUR7C	1621	PROGRAM*	57/26	57/41 L				
RDSUR7D	1622	PROGRAM*	57/43 L					
RDSUR7E	1623	PROGRAM*	57/41	57/46 L				
RDSUR7F	1624	PROGRAM*	57/34	57/39	57/44	57/48 L		
RDSUR7G	1632	PROGRAM*	57/50	58/01 L				
RDSUR8	1645	PROGRAM*	57/11	58/16 L				
RDSUR9	1650	PROGRAM*	58/23 L	58/38				
RDVEC	1105	PROGRAM*	48/07	48/10 L	48/26			
RDVECSZ	16	PROGRAM*	48/08	48/26 D				
RDXITX	1737	PROGRAM*	49/16	49/19	49/29 L			
RDXITO	1124	PROGRAM*	49/05	49/12 L	53/07			
RDXITI	1732	PROGRAM*	49/15 L	52/37	54/12			
RDXIT2	1733	PROGRAM*	49/18 L					
RDX1	10	PROGRAM*	28/08 L	50/19	54/07			
RDX2	11	PROGRAM*	28/09 L	50/20	54/08			
REND	476	PROGRAM*	42/24 L	64/06	96/24			
RLOCKXJL5	661	PROGRAM*	41/44 L	55/32				
RLOCKNM	3267	PROGRAM*	62/37	75/51	81/25	82/19	83/30	
			75/34	76/14 L	81/49	83/24		
RLOCKSHP	237	PROGRAM*	36/25 L	81/46 S	81/49			

READS HANDLES READ AND COMMAND PROCESSOR SERVICES  
SYMBOLIC REFERENCE TABLE.

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CALLR	4657	PROGRAM#	47/04	56/02	59/11	59/22	66/06	70/18	90/07	98/44
			50/23	56/09	59/12	59/23	66/10	79/28	90/25	102/02
			50/42	57/21	59/13	62/40	66/40	79/46	92/20	102/04
			52/13	57/25	59/14	62/42	66/44	83/07	93/06	104/05 L
			52/37	58/30	59/15	65/06	67/01	83/23	96/05	
			53/07	59/08	59/16	65/15	67/02	83/29	96/06	
			54/11	59/09	59/17	65/16	69/09	87/21	96/31	
			55/09	59/10	59/18	65/38	70/09	89/44	96/32	
CALLRERR	4663	PROGRAM#	104/06	104/15 L						
CALLSTK	56	PROGRAM#	30/18	L	45/11	104/09 S	104/24			
CHKERR	4510	PROGRAM#	106/24	D						
CHKPSW	0	EXTERNAL*	63/11							
CHECKERR	4510	PROGRAM#	80/03		80/14	81/22	81/26	81/50	81/52	98/42 L 106/24
CHKBLK	272	PROGRAM#	37/03	L	85/15 S	85/16				
CLAB0	6256	PROGRAM#	92/12	L	92/21	92/29	92/42			
CLAB1	4310	PROGRAM#	92/14		92/33 L					
CLAB2	4277	PROGRAM#	92/17		92/25 L					
CLAB4	4300	PROGRAM#	92/28	L						
CLASS	14		5/03	D	5/35	6/01	6/21	6/43	7/17	7/43
			5/07	D	5/36	6/02	6/22	6/44	7/19	7/44
			5/11	D	5/37	6/03	6/23	6/45	7/20	7/45
			5/13		5/38	6/05	6/27 D	6/47	7/21	7/46
			5/14		5/40	6/06	6/30	6/51 D	7/23	7/47
			5/16		5/41	6/07	6/31	7/01	7/25	7/48
			5/17		5/43	6/09	6/33	7/02	7/27	7/49
			5/19		5/44	6/10	6/34	7/03	7/29	8/01 D
			5/20		5/45	6/11	6/35	7/04	7/30	8/03
			5/21		5/46	6/12	6/36	7/05	7/31	8/04
			5/24		5/47	6/13	6/37	7/06	7/33	8/05
			5/25		5/49	6/15	6/38	7/10 D	7/34	8/10 D
			5/26		5/50	6/16	6/39	7/12	7/35	8/12
			5/27		5/51	6/17	6/40	7/14	7/39 D	8/13
			5/32	D	5/52	6/18	6/41	7/15	7/41	8/14
			5/34		5/53	6/20	6/42	7/16	7/42	8/18 D
CLASBCD	3973	PROGRAM#	74/46	76/17 L						
CLFANAB	4236	PROGRAM#	47/03	92/04 L						
CLEANDF	4617	PROGRAM#	52/36	59/21		66/53	96/04	96/30	101/43 L	
CLEANDFX	6432	PROGRAM#	101/45	101/47		102/10 L				
CLFANDF0	4631	PROGRAM#	101/50	102/05 L						
CLFANDF1	4627	PROGRAM#	101/51	102/03 L						
CLFANDF2	4625	PROGRAM#	101/52	102/01 L						
CLEANDR	2465	PROGRAM#	63/16	69/06 L						
CLEANDR1	2471	PROGRAM#	69/15 L	69/36						
CLNDFSWT	4622	PROGRAM#	101/48	101/50 D						
CLNFLG	271	PROGRAM#	37/01 L	69/07 S	84/19 S	90/18				
CLNDNTIP	3401	PROGRAM#	80/03	80/19 L						
CLNSDF	4574	PROGRAM#	101/18 L	102/03						
CLNSDF1	4577	PROGRAM#	101/20	101/23 L						
CLPMAP	0	EXTERNAL*	59/22	67/01		96/05	96/31			
CLSTPOBJ	3473	PROGRAM#	81/51	82/01 L						
CLSTSZ	44		24/34	25/48 L						
CLSUR	2343	PROGRAM#	63/14	66/05 L						
CLSUB0	2345	PROGRAM#	66/06 L							

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CS.TDLS	2		106/41 D						
CS.TDLST	2		25/11 D	41/07	73/20	76/09	106/41		
CTYPACK	252	PROGRAMS	36/37 L	79/36					
CTYPCNT	6		71/08 D	71/27					
CTYPDF	245	PROGRAMS	36/32 L	50/37	62/11	79/34	83/12	84/34	101/35
CTYPDIF	246	PROGRAMS	36/33 L	79/35	83/13	84/35	88/50		
CTYPDNT	251	PROGRAMS	36/36 L	79/32	83/11				
CTYPE	1977		84/12 D	84/28					
CTYPINI	2435	PROGRAMS	106/30 D						
CTYPINIT	2435	PROGRAMS	65/15	71/09 L	106/30				
CTYPLLOOP	2440	PROGRAMS	71/16 L	71/25					
CTVPSNT	250	PROGRAMS	36/35 L	79/33	83/10	84/36			
CTVPSPD	247	PROGRAMS	36/34 L	62/17	83/14	84/37			
CTYPVEC	245	PROGRAMS	36/31 L	71/21 S	88/50				
CX.ACC	37		25/39 L	73/03	73/27	75/26	75/51		
CX.BDCAL	7		24/52 L	59/09					
CX.BDGST	10		24/53 L	46/43	55/46	59/15			
CX.BEAD	4		24/49 L	42/24					
CX.BEADS	12		25/02 L	65/25	65/26	70/35	70/36		
CX.CLCD	5		106/44 D						
CX.CLSOD	5		24/50 L	32/13	42/20	106/44			
CX.CMMDR	11		25/01 L	46/25					
CX.CODEF	2		24/47 L	42/16					
CX.CSTF	17		25/07 L	41/06	41/08	41/10	41/12	41/15	73/20
			41/05	41/07	41/09	41/11	41/14	41/16	76/09
CX.DAYF	41		25/41 L						
CX.DCTYP	24		25/26 L	71/27					
CX.FALB	34		25/34 L	87/14	87/35	92/11	92/29	92/42	
			87/12	87/30	87/43	92/13	92/37		
CX.FDIR	34		25/36 L	89/11	89/28	90/11			
CX.KLBD	14		25/04 L	42/35					
CX.LCAB	6		106/47 D						
CX.LCLAB	6		24/51 L	58/45	59/07	92/10	106/47		
			58/41	58/53	72/41	92/11			
CX.NULL	43		25/48 L	43/14	46/25	62/10			
CX.OPRS	3		24/48 L	39/19	39/33	39/49	40/11	40/27	42/08
			32/13	39/20	39/34	39/50	40/13	40/28	42/11
			32/33	39/21	39/35	39/51	40/14	40/29	42/16
			37/04	39/22	39/37	39/52	40/15	41/23	42/20
			37/08	39/23	39/39	39/53	40/16	41/24	42/24
			39/10	39/24	39/40	40/01	40/18	41/25	42/28
			39/11	39/25	39/41	40/02	40/19	41/26	42/32
			39/12	39/26	39/42	40/03	40/20	41/27	43/10
			39/13	39/27	39/43	40/04	40/21	41/28	43/14
			39/14	39/28	39/44	40/05	40/22	41/29	43/18
			39/15	39/29	39/45	40/06	40/23	41/30	44/06
			39/16	39/30	39/46	40/07	40/24	41/31	44/10
			39/17	39/31	39/47	40/09	40/25	41/32	44/14
			39/18	39/32	39/48	40/10	40/26	41/33	68/16
			25/40 L	75/24	76/16				
			25/38 L	72/15	73/02	75/51	106/50		
			106/50 D						
			25/42 L						

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CX.RALB	33	25/32 L	87/11	87/43	92/10	92/42			
CX.RDIR	33	25/33 L	88/22	90/09					
CX.RUN	16	25/06 L	42/36						
CX.SRCL	32	25/31 L	55/41	55/47	58/32	59/16	59/35	59/46	
CX.SBCLS	30	25/29 L	55/37	55/46	57/49	58/46	58/53	59/18	59/44
CX.SBCOD	24	25/24 L	55/11	61/44					
CX.SBDR	26	106/52 D							
CX.SBOP	27	25/28 L	49/24	58/46	58/53	59/02	59/10	63/40	
CX.SBSQR	31	25/30 L	56/07	57/16	61/43	66/14			
		56/04	56/12	59/17	66/12	66/35			
CX.SHTEV	15	25/05 L	46/15	65/29	65/31				
CX.SUBDR	26	25/27 L	62/10	62/26	62/37	62/47	75/17	106/52	
CX.SUBPD	25	25/26 L	55/13	57/07	58/24	61/42	62/40	62/45	66/26
CX.TEMP	0	24/45 L	50/28	56/46	62/23	72/15	73/05	86/13	89/11
		37/04	50/34	56/47	62/40	72/30	73/09	86/20	89/19
		37/08	50/34	57/16	62/45	72/31	73/17	87/11	89/39
		42/43	50/42	57/23	63/39	72/36	81/30	87/12	90/09
		43/15	50/50	57/32	66/12	72/37	81/37	87/14	90/14
		43/19	51/13	57/37	66/35	72/41	82/04	87/17	90/21
		46/15	51/48	57/49	66/42	72/42	82/38	87/30	91/11
		46/43	55/11	58/32	66/46	72/53	84/22	88/11	92/13
		46/46	56/04	59/07	69/21	73/01	85/06	88/22	92/16
		46/50	56/17	59/08	69/35	73/02	85/11	88/24	92/29
		46/50	56/30	61/30	70/17	73/03	85/40	88/27	
		49/23	56/33	62/11	72/12	73/04	86/06	89/01	
CX.TEMPD	35	25/37 L	70/17	72/30	72/37	73/15	73/25	75/48	107/01
		47/02	72/25	72/31	72/53	73/17	75/02	81/10	
CX.TMPO	35	107/01 D							
CX.TOBJ	1	107/02 D							
CX.TPBJ	1								
		24/46 L	72/53	73/02	73/09	86/18	81/29	107/02	
		43/10	72/53	73/04	73/10	86/20	82/02		
		43/18	73/02	73/04	73/15	81/25	82/39		
		25/23 L	46/21	46/21	61/41				
CX.TPRC	23								
CX.TTYF	20	25/20 L	61/45						
CX.TTYRQ	21	25/21 L	61/46						
CX.TTYRS	22	25/22 L	61/47						
C.ACAP	0	EXTERNAL*	12/09 D						
C.ACTIV	6		7/34 D						
C.ADDOPT	6	EXTERNAL*	12/08 D						
C.ADDORD	6	EXTERNAL*	12/07 D						
C.RADNWS	13		8/31 D						
C.RADSN	6		7/29 D						
C.RCPBLK	2		5/25 D						
C.RDAT	0	EXTERNAL*	12/15 D						
C.RDTBLK	2		5/24 D						
C.RGLFT	3		6/21 D						
C.RIGCNT	7		7/49 D						
C.RIGER	4		6/45 D						
C.RIGFIL	3		5/46 D						
C.RIGIX	2		5/20 D						
C.RIGORD	7		7/47 D						
C.RIGPAR	2		5/14 D						
C.RIGPCT	2		5/27 D						

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C•RIGPT	2		5/17 D
C•RIGQ	11		8/13 D
C•RIGSIZ	3		5/44 D
C•BLKCAP	5	EXTERNAL*	12/12 D 39/30
C•PLMISS	5		7/01 D
C•POTH	5		7/06 D
C•BUSY	6		7/31 D
C•CAGEN	0	EXTERNAL*	11/51 D
C•CAPIN	0	EXTERNAL*	11/47 D 39/12
C•CAPOUT	0	EXTERNAL*	11/48 D 39/13
C•CAPTY	7		7/43 D
C•CBLK	0	EXTERNAL*	11/19 D 39/26
C•CCC	0	EXTERNAL*	11/30 D 39/16
C•COLIST	0	EXTERNAL*	11/45 D 39/23
C•CEVCH	0	EXTERNAL*	11/35 D
C•CFILE	0	EXTERNAL*	11/17 D 39/15
C•CGEN	0	EXTERNAL*	11/52 D
C•CGONE	5		7/04 D
C•CHKBLK	0	EXTERNAL*	13/10 D 39/24
C•CHMPRO	0	EXTERNAL*	12/35 D
C•CHMPRW	0	EXTERNAL*	12/36 D
C•CLMOT	10		8/03 D
C•CLOCK	0		6/09 D
C•CLRIIS	0	EXTERNAL*	12/46 D
C•COMP	4		6/34 D
C•COPYOP	0	EXTERNAL*	12/05 D
C•CPROC	0	EXTERNAL*	12/19 D
C•CRGER	0		7/27 D
C•CSPPROC	0	EXTERNAL*	12/26 D 39/25
C•DELAB	0	EXTERNAL*	12/51 D
C•DELBLK	0	EXTERNAL*	11/20 D
C•DELCL	0	EXTERNAL*	11/46 D 39/22
C•DELFIL	0	EXTERNAL*	11/18 D 39/20
C•DESECH	0	EXTERNAL*	11/36 D 39/21
C•DIOERR	3		5/52 D
C•DISMAP	0	EXTERNAL*	12/38 D
C•DISPOP	0	EXTERNAL*	12/06 D
C•DISPST	0	EXTERNAL*	12/42 D
C•DISSSEN	0	EXTERNAL*	12/43 D
C•DLPROC	0	EXTERNAL*	12/20 D
C•DSFMAP	0	EXTERNAL*	12/39 D
C•DSPAB	0	EXTERNAL*	12/52 D
C•DSPCAP	0	EXTERNAL*	11/50 D 39/17
C•DSPCLX	0	EXTERNAL*	12/22 D
C•DSPSP	0	EXTERNAL*	12/27 D
C•ESMGEN	0	EXTERNAL*	12/40 D
C•ESMLOC	0	EXTERNAL*	12/41 D
C•ESTK	4		6/40 D
C•EXCLAM	3		6/06 D
C•FATSON	6		7/25 D
C•FIXC	0	EXTERNAL*	12/11 D
C•FIXD	0	EXTERNAL*	12/14 D
C•FRETUR	0	EXTERNAL*	12/30 D

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C•FROZ	3		6/16 D
C•FULL	3		6/13 D
C•FULSTK	4		6/37 D
C•GETE	0	EXTERNAL*	13/11 D 39/33
C•GETEVF	0	EXTERNAL*	11/39 D
C•HANG	0	EXTERNAL*	11/38 D 13/11
C•TFRET	4		6/43 D
C•TFROZ	3		6/17 D
C•TNMAPS	3		5/36 D
C•TNSTK	3		6/47 D
C•TOERR	3		5/47 D
C•TP0	7		7/41 D
C•TSRLK	3		5/35 D
C•TSDAE	1		8/26 D
C•IUMP	0	EXTERNAL*	12/28 D 39/35
C•LLEV	3		5/49 D
C•MACSZ	4		6/35 D
C•MANPAR	7		7/48 D
C•MAPER	5		7/05 D
C•MAPOF	13		8/34 D
C•MAPZRO	0	EXTERNAL*	12/37 D
C•MGETF	0	EXTERNAL*	11/41 D
C•MGETH	0	EXTERNAL*	11/40 D
C•VISMCH	3		5/38 D
C•MISSOB	0		8/04 D
C•MJRP	14		8/47 D
C•MKMPRO	0	EXTERNAL*	12/33 D 13/12
C•MKMPRW	0	EXTERNAL*	12/34 D 13/13
C•MKOPR	0	EXTERNAL*	12/03 D 39/29
C•MLDP	14		8/46 D
C•MODPC	0	EXTERNAL*	12/44 D 39/34
C•MCVBLK	0	EXTERNAL*	11/21 D
C•MPCHRO	0	EXTERNAL*	13/12 D 39/28
C•MPCHRW	0	EXTERNAL*	13/13 D 39/27
C•MVECAP		EXTERNAL*	11/49 D 39/14
C•NABR			5/81 D
C•NATH			6/02 D
C•NCAP			6/39 D
C•NEGIX			5/19 D
C•NEGSAR			5/13 D
C•NEGPCT			5/26 D
C•NEGPPT			5/16 D
C•NEQQ	2		8/12 D
C•NEGSIZ	1		5/43 D
C•NEWUN	3	EXTERNAL*	12/53 D 39/19
C•NLEAF	4		6/42 D
C•NOABLK	6		7/12 D
C•NOAUTH	10		8/05 D
C•NOBKD	3		5/40 D
C•NBLK	3		5/37 D
C•NBLLOC	3		6/33 D
C•NOCHAN	1		8/14 D
C•NOCLAM	3		6/10 D

C•NOCP	6		7/20 D
C•NODDS	6		7/30 D
C•NODEFIL	3		5/50 D
C•NODSK	3		7/17 D
C•NOECS	3		7/14 D
C•NOFATH	4		6/31 D
C•NOFIL	4		5/34 D
C•NOFIND	6		6/36 D
C•NOFUND	6		7/35 D
C•NOLFH	2		6/11 D
C•NOMOT	2		7/21 D
C•NOOP	2		7/42 D
C•NORES	2		7/19 D
C•NORLC	2		7/23 D
C•NORROOM	2		7/02 D
C•NOSLOT	2		7/15 D
C•NOSML	2		6/22 D
C•NOSWP	2		7/16 D
C•NOTANY	2		7/45 D
C•NOTCL	2		5/21 D
C•NOTDAE	2		6/29 D
C•NOTEMP	2		5/41 D
C•NOTPOW	2		5/45 D
C•NOXJ	3		6/44 D
C•NRROOM	3		6/23 D
C•NTIBLK	3		8/27 D
C•NW TMP	0	EXTERNAL*	11/31 D
C•PGONE	0	EXTERNAL*	7/03 D
C•PINT	0	EXTERNAL*	12/21 D
C•PRENT	0	EXTERNAL*	8/32 D
C•PROBE	0	EXTERNAL*	11/24 D 13/10
C•PS ANY	0	EXTERNAL*	7/44 D
C•READ	0	EXTERNAL*	11/22 D 39/10
C•REFNSHP	0	EXTERNAL*	11/25 D 39/18
C•RESTOR	0	EXTERNAL*	13/05 D
C•RESV	6		7/33 D
C•SETPAR	0	EXTERNAL*	12/31 D 39/31
C•RETURN	0	EXTERNAL*	12/29 D
C•ROOM	0		6/38 D
C•SAME	0		6/15 D
C•GAMNA	0		6/30 D
C•SAVE	0	EXTERNAL*	13/04 D
C•SENDE	0	EXTERNAL*	11/37 D 39/32
C•SETIIB	0	EXTERNAL*	12/45 D
C•SHCLAM	0		6/07 D
C•SHUT	0		6/20 D
C•STK	0		6/41 D
C•TIMDT	0	EXTERNAL*	13/06 D
C•TMA	0		5/53 D
C•TMD	0		6/01 D
C•TMGA	0		6/12 D
C•TMOPN	0		6/05 D
C•TRDB	0	EXTERNAL*	11/26 D

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C:UCAP	0	EXTERNAL*	12/10 D
C:UDAT	0	EXTERNAL*	12/13 D
C:UNCLE	3		6/18 D
C:USER	7		7/46 D
C:USRER	0	EXTERNAL*	12/32 D
C:WRFIL	13		8/38 D
C:WRGFL	13		8/33 D
C:WRITE	0	EXTERNAL*	11/23 D 39/11
C:ZLEV	3		6/63 D
DAYFBUF	500	PROGRAM*	38/25 L
DAYFPT	215	PROGRAM*	35/05 L
DAYFSZ	20		3/34 D 38/25
DCTYPIIND	2452	PROGRAM*	71/09 71/27 L
DEBUG	2246	PROGRAM*	63/68 64/05 L
DELDF	3557	PROGRAM*	83/13 83/18 L
DELDTR	3557	PROGRAM*	83/14 83/19 L
DELDNT	3574	PROGRAM*	83/12 83/27 L
DELINK	3402	PROGRAM*	83/25 83/29 L
DELINKOP	642	PROGRAM*	41/25 L 69/35
DELOWNOP	643	PROGRAM*	41/26 L 70/23 83/24
DELPREF	0	EXTERNAL*	90/06 90/24
DELSNT	3557	PROGRAM*	83/11 83/17 L
DELSPD	3557	PROGRAM*	83/15 83/20 L
DESTRYOP	646	PROGRAM*	41/29 L 91/11
DEFFLAG	210	PROGRAM*	33/24 L 100/28 S 100/50 S 101/18 102/11 S
			100/11 100/39 101/03 101/43
DEFATCH	0	EXTERNAL*	39/39
DEFATCH:	100553	PROGRAM*	39/39 D 100/49
DEFCAOF	0	EXTERNAL*	40/05
DEFCAOF:	100576	PROGRAM*	40/05 D 46/53 70/11
DEFCLBLK	0	EXTERNAL*	39/41
DEFCLBLK:	100555	PROGRAM*	39/41 D 56/33 56/47
DEFCLCLO	0	EXTERNAL*	39/46
DEFCLCLOS	0	EXTERNAL*	39/51
DEFCLCLOS:	100567	PROGRAM*	39/51 D 66/14 66/46
DEFCLCLO:	100562	PROGRAM*	39/46 D 101/26
DEFCLCLUP	0	EXTERNAL*	40/07
DEFCLCLUP:	100600	PROGRAM*	40/07 D 70/29
DEFDBLK	0	EXTERNAL*	39/42
DEFDBLK:	100556	PROGRAM*	39/42 D 56/46
DEFDSF	0	EXTERNAL*	39/43
DEFDSF:	100557	PROGRAM*	39/43 D 51/15
DEFDSUB	0	EXTERNAL*	40/04
DEFDSUB:	100575	PROGRAM*	40/04 D 46/46 59/44
DEFDTCH	0	EXTERNAL*	39/40
DEFDTCH:	100554	PROGRAM*	39/40 D 56/37 101/11
DEFMMRO	0	EXTERNAL*	39/52
DEFMMRO:	100570	PROGRAM*	39/52 D 57/33
DEFMMRW	0	EXTERNAL*	39/53
DEFMMRW:	100571	PROGRAM*	39/53 D 57/38
DEFOPPRO	0	EXTERNAL*	40/01
DEFOPPRO:	100572	PROGRAM*	40/01 D 50/41 57/32 62/39
DEFOPRW	0	EXTERNAL*	40/02

DF:OPRW: 100573	PROGRAM*	40/02 D	56/12	57/37				
DF:PROB 0	EXTERNAL*	40/03						
DF:PROB: 100574	PROGRAM*	40/03 D	50/42	56/30				
DF:RFAD 0	EXTERNAL*	39/44						
DF:READ: 100560	PROGRAM*	39/44 D	50/50	55/13	57/07	58/24	59/11	66/26
DF:WRIT 0	EXTERNAL*	39/45						
DF:WRIT: 100561	PROGRAM*	39/45 D	59/12					
DF:IXSEC 0	EXTERNAL*	40/06						
DF:IXSEC: 100577	PROGRAM*	40/06 D	65/21	70/26				
DIRCAP 236	PROGRAM*	36/24 L	75/11 S	75/25 S	75/67	81/25	82/15	83/24
		75/03 S	75/18 S	75/34	81/05	81/49	82/19	83/30
DISASC 3307	PROGRAM*	77/26	78/04 L					
DN:ICFLG 0	EXTERNAL*	40/16						
DN:ICFLG: 100607	PROGRAM*	40/16 D	73/10					
DN:ICLAO 0	EXTERNAL*	40/13						
DN:ICLAO: 100604	PROGRAM*	40/13 D	47/01					
DN:ICLAW 0	EXTERNAL*	40/15						
DN:ICLAW: 100606	PROGRAM*	40/15 D	70/12					
DN:CLDN 0	EXTERNAL*	80/19						
DN:CRDN 0	EXTERNAL*	41/23						
DN:ODDN1 0	EXTERNAL*	40/14	81/28					
DN:ODDN1: 100605	PROGRAM*	40/14 D	73/09					
DN:ODDN2 0	EXTERNAL*	80/17						
DR:ADPR 0	EXTERNAL*	41/32						
DR:CLDR 0	EXTERNAL*	40/10						
DR:CLDR: 100602	PROGRAM*	40/10 D	89/19	90/21				
DR:CRDR 0	EXTERNAL*	73/19						
DR:CRFI 0	EXTERNAL*	41/24						
DR:DSPN 0	EXTERNAL*	41/27						
DR:IDSTR 0	EXTERNAL*	41/29						
DR:HOLK 0	EXTERNAL*	40/11	41/22					
DR:HOLK: 100603	PROGRAM*	40/11 D	73/15					
DR:OPDR 0	EXTERNAL*	40/09						
DR:OPDR: 100601	PROGRAM*	40/09 D	67/02	62/26	72/25	88/24	89/39	90/14
DR:RMLK 0	EXTERNAL*	41/25						
DR:RMOE 0	EXTERNAL*	41/26						
DR:UACC 0	EXTERNAL*	39/48	41/28	76/08				
DR:UACC: 100564	PROGRAM*	39/48 D	62/37					
NSCRATCH 656	PROGRAM*	41/41 L	55/51	66/06				
NSPBUF 73	PROGRAM*	30/27 L	36/46					
NSPBUFSZ 13		3/35 D	30/27					
NSPOIROP 644	PROGRAM*	41/27 L	69/21	88/27				
NSPTPOIP 711	PROGRAM*	43/09 L	79/29	83/07				
NTCHBLK 4560	PROGRAM*	101/03 L	102/01					
NTCHBLK1 4563	PROGRAM*	101/05	101/08 L					
FC:CLASS 6		94/06 D	94/12					
FC:CRASH 4517	PROGRAM*	95/18	99/09 L	99/20				
FC:CTYPE 1757		84/11 D	84/26					
FC:BEADS 17		9/33 D						
FC:DIRCT 15		8/51 D	82/23	82/24				
FC:DYNTG 16		9/22 D						
FC:ACAP 0	EXTERNAL*	12/09						
FC:ADOP 0	EXTERNAL*	12/08						

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FC:ADOR	0	EXTERNAL*	12/07					
FC:BCAP	0	EXTERNAL*	12/12					
FC:BDAT	0	EXTERNAL*	12/15					
FC:CBLK	0	EXTERNAL*	11/19					
FC:CCAP	0	EXTERNAL*	11/52					
FC:CCL	0	EXTERNAL*	11/45	40/27				
FC:CCLS	0	EXTERNAL*	11/30	39/47	81/36			
FC:COLS: 100563		PROGRAM*	39/47 D	55/37				
FC:CCL: 100621		PROGRAM*	40/27 D	72/41				
FC:CEVC	0	EXTERNAL*	11/35					
FC:CFIL	0	EXTERNAL*	11/17					
FC:CHUN	0	EXTERNAL*	12/53					
FC:CIIB	0	EXTERNAL*	12/46					
FC:CIIN	0	EXTERNAL*	11/47					
FC:CLOCK	0	EXTERNAL*	12/22					
FC:COLOA	0	EXTERNAL*	41/30					
FC:CMRO	0	EXTERNAL*	12/35					
FC:CMRW	0	EXTERNAL*	12/36					
FC:COOPR	0	EXTERNAL*	12/63					
FC:COUT	0	EXTERNAL*	11/48	40/26				
FC:COUT: 100620		PROGRAM*	40/26 D	72/53	73/01	73/02	73/03	73/04
FC:CPRC	0	EXTERNAL*	12/19					73/05
FC:CRAB	0	EXTERNAL*	40/23					
FC:CRAB: 100615		PROGRAM*	40/23 D					
FC:CSUB	0	EXTERNAL*	12/26					
FC:DAB	0	EXTERNAL*	12/51	41/31				
FC:DRLK	0	EXTERNAL*	11/20	37/07				
FC:DCL	0	EXTERNAL*	11/46					
FC:DEVC	0	EXTERNAL*	11/36					
FC:DEFIL	0	EXTERNAL*	11/18					
FC:DOOPR	0	EXTERNAL*	40/20					
FC:DOOPR: 100612		PROGRAM*	40/20 D	86/20				
FC:DPRC	0	EXTERNAL*	12/20					
FC:DSAB	0	EXTERNAL*	12/52	40/21				
FC:DSAR: 100613		PROGRAM*	40/21 D					
FC:DSAM	0	EXTERNAL*	12/38					
FC:DSCP	0	EXTERNAL*	11/50	39/50	42/19	42/23	43/09	
FC:DSCP: 100566		PROGRAM*	39/50 D	51/13	62/11	88/11	101/34	
FC:DSFM	0	EXTERNAL*	12/39					
FC:DSOP	0	EXTERNAL*	12/06					
FC:DSSE	0	EXTERNAL*	12/27					
FC:DSSE	0	EXTERNAL*	12/43	44/13				
FC:DSST	0	EXTERNAL*	12/42					
FC:ESMA	0	EXTERNAL*	12/40					
FC:ESML	0	EXTERNAL*	12/41	42/10				
FC:FCAP	0	EXTERNAL*	12/11					
FC:FDAT	0	EXTERNAL*	12/14					
FC:FRET	0	EXTERNAL*	12/30					
FC:GEVF	0	EXTERNAL*	11/39					
FC:GEVH	0	EXTERNAL*	11/38	40/29				
FC:GEVH: 100623		PROGRAM*	40/29 D	70/31				
FC:GVMF	0	EXTERNAL*	11/41					
FC:GVMH	0	EXTERNAL*	11/40					

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FC:INTP	0	EXTERNAL*	12/21					
FC:JUMP	0	EXTERNAL*	12/28					
FC:MBLK	0	EXTERNAL*	11/21					
FC:MCAP	0	EXTERNAL*	11/49	40/25	43/13	43/17		
FC:MCAP: 100617		PROGRAM*	40/25 D	55/11	61/30	62/45	72/42	73/02
			46/21	59/07	62/10	72/15	72/53	73/04
FC:MCCA	0	EXTERNAL*	11/51					
FC:MMRO	0	EXTERNAL*	12/33	40/18				
FC:MMRO: 100610		PROGRAM*	40/18 D	57/43				
FC:MMRW	0	EXTERNAL*	12/34	40/19				
FC:MMRW: 100611		PROGRAM*	40/19 D	57/46				
FC:MOPR	0	EXTERNAL*	12/05					
FC:MVMT	0	EXTERNAL*	40/24					
FC:MVMT: 100616		PROGRAM*	40/24 D					
FC:MVSP	0	EXTERNAL*	40/22					
FC:MVSP: 100614		PROGRAM*	40/22 D					
FC:PROB	0	EXTERNAL*	11/24	37/03				
FC:READ	0	EXTERNAL*	11/22	42/15				
FC:RERR	0	EXTERNAL*	12/32	32/32				
FC:RPAR	0	EXTERNAL*	12/31	68/18				
FC:RSHP	0	EXTERNAL*	11/25					
FC:RSTR	0	EXTERNAL*	13/05	42/31	44/09			
FC:RTRN	0	EXTERNAL*	12/29	42/07				
FC:SAVE	0	EXTERNAL*	13/04	42/27	44/05			
FC:SETP	0	EXTERNAL*	12/44	32/12				
FC:SEV	0	EXTERNAL*	11/37	40/28				
FC:SEV: 100622		PROGRAM*	40/28 D	65/31	70/33			
FC:SIIB	0	EXTERNAL*	12/45					
FC:STMP	0	EXTERNAL*	11/31					
FC:TBLK	0	EXTERNAL*	11/26					
FC:TIME	0	EXTERNAL*	13/06					
FC:UCAP	0	EXTERNAL*	12/10					
FC:UDAT	0	EXTERNAL*	12/13					
FC:WRIIT	0	EXTERNAL*	11/23					
FC:TZRM	0	EXTERNAL*	12/37					
FDSPSTK	727	PROGRAM*	44/13 L	94/25				
ENTRY	740	PROGRAM*	24/33	45/09 L				
ENTVEC	753	PROGRAM*	45/14	45/17 L	45/24			
ENTVECSZ			45/15	45/24 D				
ENUM			94/07 D	94/13				
EN.BADNM			8/53 D					
EN.BGOC			9/27 D					
EN.BGOPT			9/09 D					
EN.BLOC			9/25 D					
EN.DUPNM			9/03 D	82/23				
EN.FDNT			9/26 D					
EN.FLOL			9/24 D					
EN.IMPOT			9/01 D					
EN.ISLCK	12		9/10 D					
EN.ISOWN	10		9/08 D					
EN.LOOP1	5		9/05 D					
EN.LOOP2	6		9/06 D					
EN.NOSPC	4		9/04 D	82/24				

FN.NTDIR	14		9/12 D					
FN.NTDSK	7		9/07 D					
FN.NTFD	20		9/16 D					
FN.NTIM	21		9/17 D					
FN.NTKEY	15		9/13 D					
FN.NTLCK	13		9/11 D					
FN.NTOP	4		9/28 D					
FN.NTOWN	2		9/02 D					
FN.OWNS	16		9/14 D					
FN.RSRV	17		9/15 D					
FREGS	126	PROGRAMS	30/32 L	44/06	44/10	99/09		
FRESTORE	725	PROGRAMS	44/09 L	95/02				
FRETURN	166	PROGRAMS	32/32 L	96/15 S	96/19	96/36 S	96/39 S	96/41
FRRPCALL	4943	PROGRAMS	45/07	94/10 L				
FRRPCALL1	4403	PROGRAMS	94/37	95/10 L				
FRRPCALL2	4415	PROGRAMS	94/29	94/30	95/10	95/18 L		
FRRPCCLASS	162	PROGRAMS	32/25 L	68/16	88/16 S	94/15 S	96/34	97/15 S
FRRPCN	161	PROGRAMS	32/23 L	94/23 S	97/19 S	97/47 S	98/16	97/36 S
FRRINFO1	164	PROGRAMS	32/28 L	57/02 S	66/21 S	68/05	68/08 S	99/10 S
FRRINFO2	165	PROGRAMS	32/29 L	57/04 S	66/23 S	68/09	68/12 S	99/12 S
FRRNEXT	157	PROGRAMS	32/21 L	94/45 S	97/23 S	97/49 S		
FRRNUMB	163	PROGRAMS	32/26 L	88/18 S	94/17 S	96/37	97/21 S	97/38 S
FRRRTAG	160	PROGRAMS	32/22 L	54/12 S	57/22 S	65/39 S	66/41 S	96/08
			50/24 S	56/03 S	58/31 S	66/11 S	94/53 S	97/13 S
								98/42
			52/13	89/44	93/06	98/15 L	98/44	99/14 S
FRRVEC	4476	PROGRAMS	98/20 L	98/28	98/31			
FRRVEC1	4500	PROGRAMS						
FRRVEC2	4504	PROGRAMS	98/20	98/30 L				
FRRVEC3	4505	PROGRAMS	98/21	98/33 L				
FRRVEC4	4506	PROGRAMS	98/26	98/35 L				
FRRXIT	4416	PROGRAMS	50/24	54/12	65/39	66/11	66/41	69/25
			50/24	59/47	65/39	66/15	66/41	69/36
			54/12	62/38	66/11	66/27	66/47	96/04 L
			96/07	96/23 L	96/25	96/33		
FSAVE	723	PROGRAMS	44/05 L	94/10	97/34	99/08		
FSTKBF	747	PROGRAMS	32/06 L	44/14	94/26	94/35	99/11	
FSTPC	753	PROGRAMS	32/12 L	94/47 S	94/48	95/11 S	95/12	
F.ABLLOCK	6		7/09 L	7/10	80/31	82/32	82/33	82/34
F.ACTIV	30		7/33 L					93/12
F.ARITH	1		5/06 L	5/07				
F.BADNWS	3		8/29 L					
F.BADSN	24		7/28 L					
F.BCPBLK	10		5/24 L					
F.RDTBLK	7		5/23 L					
F.PGLFT	51		6/20 L					
F.RIGCNT	10		7/48 L					
F.RIGER	16		6/44 L					
F.RIGFIL	12		5/45 L					
F.RIGIX	5		5/19 L					
F.RIGORD	6		7/46 L					
F.RIGPAR	1		5/13 L					
F.RIGPCT	12		5/26 L					
F.RIGPT	3		5/16 L					
F.RIGQ	1		8/12 L					

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F•RIGSZ	10	5/43 L					
F•PLMISS	0	6/52 L					
F•POTH	6	7/05 L					
F•BUSY	26	7/30 L					
F•CAPTY	2	7/42 L	82/25	88/17	93/13		
F•CGONE	4	7/03 L					
F•CHIP	0	5/02 L	5/03				
F•CLMOT	0	8/02 L					
F•CLOCK	37	6/07 L					
F•COMP	3	6/39 L					
F•CRGER	12	7/25 L					
F•CIOERR	27	5/51 L					
F•FSTK	11	6/39 L					
F•EVENT	11	8/09 L	8/10				
F•EXCLAM	35	6/05 L					
F•FATSON	11	7/24 L					
F•FILES	3	5/31 L	80/33	80/35	82/27	82/29	82/31
		5/32	80/34	82/26	82/28	82/30	89/45
F•FRGZ	45	6/15 L					
F•FULL	43	6/12 L	80/35	82/30			
F•FULSTK	6	6/36 L					
F•TFRRET	14	6/42 L					
F•TFROZ	46	6/16 L					
F•TNMARS	2	5/35 L	82/29				
F•TNSTK	14	6/46 L					
F•TOPRR	13	5/46 L					
F•TPO	0	7/40 L					
F•TSBLK	0	5/34 L					
F•TSDAE	0	8/25 L					
F•ULLEV	24	5/48 L					
F•MACSZ	4	6/34 L					
F•MANDPAR	7	7/47 L					
F•MADER	5	7/04 L					
F•MADOP	5	8/33 L					
F•MAPS	13	8/23 L	8/24				
F•MISCE	10	7/53 L	8/01	80/32			
F•MISMCH	4	5/37 L					
F•MISSOB	1	8/03 L	80/32				
F•MURP	1	8/46 L					
F•MLDP	0	8/44 L					
F•NABR	26	5/50 L					
F•NATH	32	6/01 L					
F•NCAP	10	6/38 L					
F•NEGIX	4	5/16 L					
F•NEGPAR	0	5/12 L					
F•NEGPCT	11	5/25 L					
F•NEGPT	2	5/15 L					
F•NEGG	0	8/11 L					
F•NEGSIZ	7	5/41 L					
F•NLEAF	13	6/41 L					
F•NOABLK	0	7/11 L	82/32	93/12			
F•NOAUTH	2	8/04 L					
F•NOBKD	5	5/38 L					

F•NOBLK	3	5/36 L			
F•NORLOC	2	6/31 L			
F•NOCHAN	2	8/13 L			
F•NOCLAM	46	6/09 L			
F•NOCP	6	7/19 L			
F•NOODS	25	7/29 L			
F•NODFIL	25	5/49 L	80/34	82/31	89/45
F•NODSK	4	7/16 L	82/34		
F•NOECS	1	7/12 L	80/31	82/33	
F•NOERR	12	8/17 L	8/16		
F•NOFATH	1	6/30 L			
F•NOFIL	1	5/33 L	80/33	82/26	
F•NOFIND	1	6/35 L			
F•NOFUND	1	7/34 L			
F•NOLFH	41	6/10 L	82/27		
F•NOMOT	7	7/20 L			
F•NOOP	1	7/41 L			
F•NORES	1	7/17 L			
F•NORLC	1	7/21 L			
F•NORROOM	1	7/01 L			
F•NOSLOT	1	7/14 L			
F•NOSML	1	6/21 L			
F•NOSWP	1	7/15 L			
F•NOTANY	4	7/44 L			
F•NOTCL	6	5/20 L			
F•NOTDAE	6	8/27 L			
F•NOTEMP	2	5/40 L			
F•NOTPOW	1	5/44 L			
F•NOXJ	1	6/43 L			
F•NRROOM	1	6/22 L			
F•NTIBLK	1	8/26 L			
F•OPER	1	7/38 L	7/39	82/25	88/14
F•DANIC	1	8/42 L	8/43		
F•DARMS	1	5/10 L	5/11		
F•PGONE	1	7/02 L			
F•PARENT	1	8/31 L			
F•PDOC	1	6/50 L	6/51		
F•PSANY	1	7/43 L			
F•PESV	1	7/31 L			
F•POOM	1	6/37 L			
F•SAME	44	6/13 L			
F•SAMNA	6	6/29 L			
F•SHCLAM	36	6/06 L			
F•SHUT	56	6/18 L			
F•STK	12	6/40 L			
F•SUBP	4	6/26 L	6/27		
F•TMA	36	5/52 L			
F•TMD	31	5/53 L			
F•TMGA	42	6/11 L			
F•TMOPN	34	6/03 L	82/28		
F•UNCLE	47	6/17 L			
F•USER	5	7/45 L			
F•WRFIL	4	8/36 L			

FWRGFL	5		8/32 L						
FZLEV	33		6/02 L						
FILETYPE	1577		50/30	84/10 D	84/24				
FINDOBA	3217	PROGRAM*	56/01	60/35	60/38	66/09	70/24 L		
FINDOBT	225	PROGRAM*	36/13 L	71/11 S	71/17	71/17	71/23 S	79/25 S	80/07 81/02
FL	0	EXTERNAL*	24/32	24/39					
FORAGAIN	3223	PROGRAM*	79/29 L	79/46					
FORCREATE	3416	PROGRAM*	79/27	79/45	81/02 L				
FORCRT1	3422	PROGRAM*	81/08	81/13 L					
FORCRT2	3503	PROGRAM*	81/26	81/52	82/15 L				
FORCRT3	3516	PROGRAM*	82/16	82/20 L					
FORERR	3356	PROGRAM*	79/28	79/42	79/46	79/49	79/51 L		
FORERR0	3246	PROGRAM*	79/48 L	80/09	80/29	81/11			
FORERR1	3347	PROGRAM*	79/50 L	80/35	82/25	82/27	82/29	82/31	82/33
			80/31	82/24	82/26	82/28	82/30	82/32	82/34
FORLOOP	3337	PROGRAM*	79/39 L	80/32	80/33	80/34	82/23		
FORLOOP0	3240	PROGRAM*	79/40 L	80/14					
FORLPCNT	240	PROGRAM*	36/26 L	79/40					
FSHAPE	226	PROGRAM*	36/15 L	81/42	81/44				
FTHRRUF	440	PROGRAM*	38/20 L						
GETCAPOP	647	PROGRAM*	41/30 L	87/14	92/13				
GETSPD	2107	PROGRAM*	55/08	62/09 L	66/05				
GETSPD1	2161	PROGRAM*	62/15	62/39 L					
GETSPD2	2167	PROGRAM*	62/20	62/44 L					
HDRFEND	400	PROGRAM*	24/40	38/15 L					
HDNPMPAR	6	PROGRAM*	27/07 L	45/13					
HEADBUF	300	PROGRAM*	24/40	24/40	38/14 L				
HIGHONES	655	PROGRAM*	41/40 L						
iNn	100000		3/11 D	39/19	39/29	39/41	39/51	40/09	40/21 50/42
			39/10	39/20	39/30	39/42	39/52	40/10	40/22 51/48
			39/11	39/21	39/31	39/43	39/53	40/11	40/23 56/30
			39/12	39/22	39/32	39/44	40/01	40/13	40/24 56/33
			39/13	39/23	39/33	39/45	40/02	40/14	40/25 65/31
			39/14	39/24	39/34	39/46	40/03	40/15	40/26 100/49
			39/15	39/25	39/35	39/47	40/04	40/16	40/27 101/11
			39/16	39/26	39/37	39/48	40/05	40/18	40/28 101/26
			39/17	39/27	39/39	39/49	40/06	40/19	40/29 103/48
			39/18	39/28	39/40	39/50	40/07	40/20	50/34 103/50
INFOPARS	7	PROGRAM*	27/09 D	28/05	28/21	28/33	28/44		
TNTT	765	PROGRAM*	45/17	46/04 L					
TNTTORG	147	PROGRAM*	31/08 D	42/17	42/17	42/17			
TNTTI	1613	PROGRAM*	46/22 L	47/05					
TNTT2	1523	PROGRAM*	46/26	46/29 L					
TS.CLASS	635	PROGRAM*	41/15 L	81/06					
TS.DAYF	632	PROGRAM*	41/11 L						
TS.DFEC	631	PROGRAM*	41/10 L						
TS.LCEC	630	PROGRAM*	41/09 L	70/31	70/33				
TS.NULAK	627	PROGRAM*	41/08 L	70/23	73/01	75/19	89/01	90/11	
			62/37	72/12	75/04	82/19	89/28	107/13	
TS.NULK	627	PROGRAM*	107/13 D						
TS.OPER	636	PROGRAM*	41/16 L						
TS.PROF	633	PROGRAM*	41/12 L						
TS.PUBAK	625	PROGRAM*	41/06 L	72/17	73/05	75/12	107/15		

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KLDRN	267	PROGRAM*	36/51 L	69/21	88/27	89/32	90/02 S
			69/15	88/08 S	88/33	89/36 S	
KLDR1	4162	PROGRAM*	88/28	89/45	89/51 L		
KLDR1ST	276	PROGRAM*	36/53 L	88/06 S	89/30	89/51	
KLDR10	4224	PROGRAM*	90/19	90/23	L		
KLDR11	4040	PROGRAM*	88/14	88/21	L		
KLDR2	4071	PROGRAM*	88/31	88/38	L		
KLDR3	4107	PROGRAM*	88/51	89/10	L		
KLDR4	4067	PROGRAM*	88/33 L				
KLDR5	4117	PROGRAM*	89/12 L	89/16			
KLDR6	4145	PROGRAM*	89/31	89/35	L		
KLDR7	4214	PROGRAM*	89/52	90/18	L		
KLDR8	4155	PROGRAM*	89/40	89/43	L		
KLDR9	4160	PROGRAM*	89/43	89/45	L		
IKUPEJMP	242	PROGRAM*	36/28 L	74/24 S	75/43		
IKUPERR	3236	PROGRAM*	75/32	75/35	75/41 L		
IKUPERR1	3234	PROGRAM*	75/32	75/38	L		
IKUPERR2	3240	PROGRAM*	75/40	75/43	L		
IKUPFAIL	3242	PROGRAM*	75/35	75/47	L		
IKUPFJMP	241	PROGRAM*	36/27 L	74/22 S	76/03		
IKUPFL1	3257	PROGRAM*	75/49	75/52	75/52	76/02 L	

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LOCALPXJ	2	46/15 D	55/37 D	58/04	65/21 D	70/35 D	73/03 D	85/06 D	89/28 D
		46/15 D	55/37	58/24 D	65/21	70/35 D	73/03 D	85/06 D	89/28 D
		46/15 D	55/41 D	58/24 D	65/25 D	70/35 D	73/03 D	85/06 D	89/28 D
		46/15	55/41 D	58/24 D	65/25 D	70/35	73/03	85/11 D	89/28
		46/21 D	55/41 D	58/24 D	65/25 D	70/36 D	73/04 D	85/11 D	89/39 D
		46/21 D	55/41	58/24 D	65/25	70/36 D	73/04 D	85/11	89/39 D
		46/21 D	55/46 D	58/24	65/26 D	70/36 D	73/04 D	85/40 D	89/39
		46/21	55/46 D	58/32 D	65/26 D	70/36	73/04 D	85/40 D	90/09 D
		46/25 D	55/46 D	58/32 D	65/26 D	71/17 D	73/04 D	85/40 D	90/09 D
		46/25 D	55/46	58/32 D	65/26	71/17 D	73/04 D	86/06 D	90/09 D
		46/25	55/46 D	58/32	65/29 D	71/17	73/04 D	86/06 D	90/09
		46/43 D	55/47 D	58/46 D	65/29 D	72/12 D	73/04	86/06	90/11 D
		46/43 D	55/47 D	58/46 D	65/29	72/12 D	73/05 D	86/13 D	90/11 D
		46/43 D	55/47 D	58/46 D	65/31 D	72/12 D	73/05 D	86/13 D	90/11
		46/43	55/47	58/46 D	65/31 D	72/12	73/05 D	86/13 D	90/11 D
		46/46 D	56/04 D	58/46	65/31 D	72/15 D	73/05	86/20 D	90/14 D
		46/46 D	56/04 D	58/53 D	66/12 D	72/15 D	73/09 D	86/20 D	90/14 D
		46/46	56/04 D	58/53 D	66/12 D	72/15	73/09 D	86/20 D	90/14
		46/50 D	56/04	58/53 D	66/12 D	72/15	73/09 D	87/11 D	90/21 D
		46/50 D	56/12 D	58/53 D	66/12	72/17 D	73/09 D	87/11 D	90/21 D
		46/50 D	56/12 D	58/53	66/14 D	72/17 D	73/10 D	87/11 D	90/21
		46/50	56/12	59/02 D	66/14 D	72/17	73/10 D	87/11	91/11 D
		46/53 D	56/17 D	59/02 D	66/14 D	72/25 D	73/10 D	87/12 D	91/11 D
		46/53 D	56/17 D	59/02 D	66/26 D	72/25 D	73/10 D	87/12 D	91/11
		46/53	56/17 D	59/02	66/26 D	72/25	73/15 D	87/12 D	92/10 D
		47/01 D	56/17	59/07 D	66/26 D	72/30 D	73/15 D	87/12	92/10 D
		47/01 D	56/30 D	59/07 D	66/26 D	72/30 D	73/15 D	87/14 D	92/10 D
		47/01	56/30 D	59/07 D	66/26 D	72/30 D	73/15	87/14 D	92/10
		47/02 D	56/30	59/07	66/26 D	72/30	73/17 D	87/14 D	92/11 D
		47/02 D	56/33 D	59/35 D	66/35 D	72/31 D	73/17 D	87/14 D	92/11 D
		47/02	56/33 D	59/35 D	66/35 D	72/31 D	73/17 D	87/17 D	92/11
		47/02	56/33	59/35 D	66/35 D	72/31 D	73/17 D	87/17 D	92/11 D
		49/30 D	56/33	59/35 D	66/35 D	72/31 D	73/17 D	87/17 D	92/11 D
		49/30 D	56/35 D	59/35	66/35 D	72/31 D	75/34 D	87/17	92/13 D
		49/30	56/34 D	59/44 D	66/46 D	72/36 D	75/34 D	87/30 D	92/13 D
		50/28 D	56/34	59/44 D	66/46 D	72/36 D	75/34 D	87/30 D	92/13 D
		50/28 D	56/37 D	59/44	66/46 D	72/36 D	75/34 D	87/30 D	92/13
		50/28	56/37 D	59/46 D	69/21 D	72/36	75/34 D	87/30	92/16 D
		50/34 D	56/37	59/46 D	69/21 D	72/37 D	75/34 D	87/35 D	92/16 D
		50/34	56/46 D	59/46	69/21 D	72/37 D	75/51 D	87/35 D	92/16
		50/34 D	56/46 D	61/30 D	69/21 D	72/37 D	75/51 D	87/35 D	92/29 D
		50/34	56/46 D	61/30 D	69/35 D	72/37	75/51 D	87/43 D	92/29 D
		50/50 D	56/46	61/30 D	69/35 D	72/41 D	75/51 D	87/43 D	92/29 D
		50/50 D	56/47 D	61/30 D	69/35	72/41 D	75/51 D	87/43 D	92/29
		50/50 D	56/47 D	61/30 D	70/11 D	72/41 D	81/25 D	87/43 D	92/37 D
		50/50 D	56/47 D	61/30	70/11 D	72/41 D	81/25 D	88/11 D	92/37 D
		50/50 D	56/47	62/10 D	70/11 D	72/42 D	81/25 D	88/11	92/42 D
		50/50	57/07 D	62/10 D	70/12 D	72/42 D	81/25	88/11	92/42 D
		51/13 D	57/07 D	62/10	70/12 D	72/42 D	81/49 D	88/22 D	92/42 D
		51/13 D	57/07 D	62/11 D	70/12	72/42 D	81/49 D	88/22 D	92/42
		51/13 D	57/07 D	62/11 D	70/17 D	72/53 D	81/49 D	88/22 D	100/26 D
		51/15 D	57/07 D	62/11	70/17 D	72/53 D	81/49 D	88/22	100/26 D
		51/15	57/07 D	62/23 D	70/17 D	72/53 D	82/19 D	88/24 D	100/26 D
		51/48 D	57/16 D	62/23 D	70/17	72/53	82/19 D	88/24 D	100/26

LOGON1	0	EXTERNAL*	51/48 D	57/16 D	62/23	70/23 D	72/53 D	82/19 D	88/24	100/49 D
LOGON2	0	EXTERNAL*	51/48	57/16 D	62/26 D	70/23 D	72/53 D	82/19 D	88/27 D	100/49 D
LOGOUT	2521	PROGRAM*	55/11 D	57/16	62/26 D	70/23 D	72/53 D	82/19 D	88/27 D	100/49 D
LOGOUTA	2567	PROGRAM*	55/11 D	57/32 D	62/26	70/23	72/53	82/19	88/27 D	100/49
LOGOUTB	2573	PROGRAM*	55/11 D	57/32 D	62/37 D	70/26 D	73/01 D	83/24 D	88/27	101/11 D
LOGOUTC	2564	PROGRAM*	55/11 D	57/32 D	62/37 D	70/26	73/01 D	83/24 D	89/01 D	101/11 D
LOGOUT1	0	EXTERNAL*	55/13 D	57/37 D	62/37 D	70/26	73/01 D	83/24 D	89/01 D	101/11 D
LOGOUT2	2564	PROGRAM*	55/13 D	57/37 D	62/45 D	70/29 D	73/02 D	83/30 D	89/01 D	101/26 D
LOOKUP	3155	PROGRAM*	55/13 D	57/49 D	62/45 D	70/29	73/02 D	83/30 D	89/11 D	101/26
LOOKUP1	3207	PROGRAM*	55/13 D	57/49 D	62/45 D	70/31 D	73/02 D	83/30	89/11 D	101/34 D
LOOKUP2	3220	PROGRAM*	55/32 D	57/49	63/44 D	70/31	73/02 D	84/22 D	89/11	101/34 D
LOOKUP3	3206	PROGRAM*	55/32 D	58/03 D	63/44 D	70/33 D	73/02 D	84/22 D	89/19 D	101/34
LOOKUP4	3175	PROGRAM*	55/32 D	58/04 D	63/44	70/33 D	73/02 D	84/22	89/19 D	101/34
LOOKUP5	3204	PROGRAM*	55/37 D	58/04 D	65/21 D	70/33	73/02	85/06 D	89/19	
LOWONES	653	PROGRAM*	63/18							
LPIRNM	5		63/19							
MAPCNT	217	PROGRAM*	63/17		70/06 L					
MAPCOUNT	217	PROGRAM*	70/26 L		70/27					
MINUSLRG	654	PROGRAM*	70/27		70/28 L					
MINUSO	652	PROGRAM*	70/14		70/23 L					
MINUS1	660	PROGRAM*	63/20							
MTOBJTMP	717	PROGRAM*	63/21		70/25 L					
MPLKCAP	100544	PROGRAM*	74/19 L		79/28		83/07			
MPCAPIN	100522	PROGRAM*	74/53		75/24 L					
MPCAPOUT	100523	PROGRAM*	75/07		75/15		75/22	75/33 L	79/46	
MPCBLK	100540	PROGRAM*	74/41		76/44		74/48	74/52	75/69 L	
MPCCC	100526	PROGRAM*	74/32		75/02 L					
MPCCLIST	100535	PROGRAM*	74/36		75/17 L					
MPCFILE	100525	PROGRAM*	41/35 L		62/19					
MCHKBLK	100536	PROGRAM*	36/06 D		36/07		36/49	89/11		
MCSPROC	100537	PROGRAM*	107/21 D							
MDELCL	100534	PROGRAM*	35/07 L		62/27		107/21			
MDELFIL	100532	PROGRAM*	41/39 L		63/21		70/26			
MDESECH	100533	PROGRAM*	41/37 L		56/04		66/12	73/17	87/12	89/11
			46/15		57/16		65/35	73/34	87/30	90/09
			50/34		61/30		70/17	75/51	87/43	92/10
			55/11		62/45		72/15	87/11	88/22	92/11
			41/43 L		65/25		65/26	70/35	70/36	72/30
			43/17 L		60/24		83/21		72/42	72/53
			39/30 D		59/02					
			39/12 D							
			39/13 D		58/32		59/35			
			39/26 D							
			39/16 D							
			39/23 D		55/41					
			39/15 D							
			39/24 D		50/34					
			39/25 D		55/46					
			39/22 D		59/46					
			39/20 D		85/40					
			39/21 D		86/06					
					86/13					

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M.DSPCAP	100527	PROGRAM*	39/17 D	50/28	65/29	71/17	72/17	84/22	87/17	92/16
M.FSON	13		25/03 L	46/43	46/50					
M.GETE	100547	PROGRAM*	39/33 D	59/14						
M.JUMP	100551	PROGRAM*	39/35 D	65/26	70/36					
M.MKOPR	100543	PROGRAM*	39/29 D	58/46	58/53					
M.MODPC	100550	PROGRAM*	39/34 D	65/25	70/35					
M.MPCHRO	100542	PROGRAM*	39/28 D							
M.MPCHRW	100541	PROGRAM*	39/27 D							
M.MVECAP	100524	PROGRAM*	39/14 D	56/04	66/35	72/36	87/12	88/22	92/10	92/42
			46/15	57/16	70/17	73/17	87/30	89/11	92/11	
			50/34	66/12	72/30	87/11	87/43	90/09	92/29	
M.NEWUN	100531	PROGRAM*	39/19 D	65/11						
M.PEAD	100520	PROGRAM*	39/10 D							
M.PEDSHP	100530	PROGRAM*	39/16 D	56/17	65/06					
M.RETPAR	100545	PROGRAM*	39/31 D	49/30	63/44					
M.SENDE	100546	PROGRAM*	39/32 D	59/13						
M.WRITE	100521	PROGRAM*	39/11 D							
MREFGS	106	PROGRAM*	30/30 L	42/28	42/32	59/25 S				
MULLRET	3477	PROGRAM*	81/63	82/08 L						
MULTMPIP	713	PROGRAM*	43/13 L	79/51	82/08					
OB.ACC	2		10/65 D	72/36	73/02	73/04				
OB.DSTRY	1		10/67 D	88/11						
OB.SDINT	4		10/66 D	46/21						
OLnORG	74	PROGRAM*	26/02 D							
OPENDF	4524	PROGRAM*	50/42	62/40	100/11 L					
OPENDF1	4526	PROGRAM*	100/12	100/15 L						
OPENDNT	3364	PROGRAM*	79/33	80/02 L						
OPENDNT1	3363	PROGRAM*	80/04 L							
OPENDNT2	3364	PROGRAM*	80/03	80/07 L						
OPENEV	3410	PROGRAM*	80/03	80/14	80/31 L					
OPENSNT	3407	PROGRAM*	79/34	80/28 L						
OPENFILEACK	3403	PROGRAM*	79/37	80/23 L						
OPENIDE	3403	PROGRAM*	79/35	80/24 L						
OPENEDIR	3403	PROGRAM*	79/26	80/22 L						
OPFRBCD	3274	PROGRAM*	74/50	76/18 L						
OPNDNTIP	3376	PROGRAM*	80/02	80/17 L	83/27					
OPNFILE	211	PROGRAM*	33/25 L	100/18 S	100/49	101/11	101/26			
OPTYPE	1677	PROGRAM*	84/14 D	84/32						
OUNIRIB	3262	PROGRAM*	75/31	76/08 L						
OWNCLSCD	752	PROGRAM*	32/69 L	46/17 S	94/27					
PARLIMIT	35	PROGRAM*	26/01 D	27/12 D	28/14 D	28/49 D	29/02			
PASSXIT	4442	PROGRAM*	95/30 L							
PBAKNUM	234	PROGRAM*	107/27 D							
PFSHFT	5		3/33 D							
POPR	4670	PROGRAM*	75/39	75/42	76/03	98/36	104/30 L			
PROFBUF	400	PROGRAM*	38/19 L							
PROFPPT	216	PROGRAM*	35/06 L							
PROFSZ	40		3/32 D	38/14	38/19	38/20				
PURAKNUM	234	PROGRAM*	36/22 L	72/17 S	82/19	107/27				
PURBCD	3275	PROGRAM*	72/32	74/42	76/19 L					
PURGE	1625	PROGRAM*	46/26	46/40 L	46/47					
PURGE1	1635	PROGRAM*	46/45 L	46/50						
PURGE2	1644	PROGRAM*	46/47	46/49 L						

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SETA	4650	PROGRAM*	103/19	103/21	103/24	103/27	103/30	103/36 L
SETAI	4652	PROGRAM*	103/40 L	103/49				
SETA2	4653	PROGRAM*	103/43 L	103/51				
SETA3	4655	PROGRAM*	103/37	103/48 L				
SETB	4647	PROGRAM*	103/32 L	103/36				
SETEMSK	663	PROGRAM*	42/10 L	45/09	95/03	95/13		
SHBUF	253	PROGRAM*	36/45 L	56/17	56/21	85/07	85/24	
			51/40	56/18	85/06	85/12		
			36/43 D	36/45	51/41	56/17	56/19	85/06 85/08
SHBUFSZ	5		28/35 L	46/10				
SHTDTM	7	PROGRAM*	30/35 L	46/13 S	65/31	107/34		
SHTDTMSV	146	PROGRAM*	107/34 D					
SHTDTMV	146	PROGRAM*						
SIZES	1251	PROGRAM*	51/20	51/33 L				
SPCLERR	6460	PROGRAM*	50/24	56/03	57/22	65/39	66/41	97/13 L
			54/12	56/21	58/31	66/11	69/25	
SPCLSZ	7		61/15	61/48 D				
SPCLTBL	2100	PROGRAM*	61/17	61/40 L	61/48			
SYSTXTBT	7		50/16 D	51/05				
S_CNTIM	221	PROGRAM*	35/09 L					
S_EXECS	222	PROGRAM*	35/10 L					
S_MOTS	223	PROGRAM*	35/11 L					
TEMPPBCD	3152	PROGRAM*	72/26	73/25 L				
TEMP1	71	PROGRAM*	30/25 L					
TEMP2	72	PROGRAM*	30/26 L					
TESTDF	4607	PROGRAM*	56/08	57/24	66/43	101/33 L		
TRAVEC	4672	PROGRAM*	45/15	48/08	63/06	105/11 L		
TRAVEC1	4675	PROGRAM*	105/12	105/13	105/17 L			
UNFEXERR	6523	PROGRAM*	45/10	50/34	63/30	70/17	72/41	80/04 89/11 95/13
			45/11	51/13	63/31	70/23	72/42	80/12 89/19 95/14
			46/05	55/11	63/45	70/27	72/53	80/25 89/29 95/15
			46/12	55/37	63/46	70/29	72/53	81/23 90/09 96/19
			46/15	56/04	64/07	70/31	73/01	81/35 90/14 96/20
			46/17	56/37	64/08	70/33	73/02	82/09 90/21 96/25
			46/21	56/46	65/22	70/35	73/02	82/19 92/10 96/41
			46/31	56/47	65/25	70/36	73/03	83/08 92/11 96/42
			46/44	57/16	65/26	71/17	73/04	83/22 92/16 97/35
			46/50	59/07	65/29	72/13	73/04	84/22 92/29 99/09
			46/53	59/44	65/31	72/15	73/05	87/11 92/38 99/19 L
			47/01	59/46	65/33	72/17	73/07	87/12 92/42 100/27
			47/02	61/30	66/12	72/23	73/09	87/17 94/11 100/49
			49/13	62/10	66/35	72/25	73/10	87/30 94/26 101/11
			49/14	62/11	68/14	72/30	73/15	87/36 94/49 101/26
			49/31	62/24	69/22	72/31	73/17	87/43 95/03 101/34
			49/32	62/26	70/11	72/36	73/30	88/11 95/04
			50/28	62/45	70/12	72/37	73/52	88/22 95/05
UNFEXFT	6465	PROGRAM*	107/44 D					

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IUNFXRTN	4465	PROGRAM*	45/10	55/11	59/03	66/12	72/30	80/12	87/36	95/03
			45/11	55/14	59/07	66/15	72/31	80/25	87/43	95/04
			46/05	55/33	59/36	66/27	72/36	81/22	88/11	95/05
			46/12	55/37	59/44	66/35	72/37	81/26	88/22	95/13
			46/15	55/42	59/46	66/47	72/41	81/35	88/25	95/14
			46/17	55/48	61/30	68/14	72/42	81/50	89/02	95/15
			46/21	56/04	62/10	69/22	72/53	81/52	89/11	96/19
			46/26	56/13	62/11	69/36	72/53	82/09	89/19	96/20
			46/47	56/18	62/24	70/11	73/01	82/19	89/29	96/25
			46/50	56/31	62/26	70/12	73/02	83/08	89/40	96/41
			46/53	56/35	62/38	70/17	73/02	83/22	90/09	96/42
			47/01	56/37	62/45	70/23	73/03	84/22	90/12	97/34 L
			47/02	56/46	63/30	70/29	73/04	85/07	90/14	97/35
			49/13	56/47	63/31	70/31	73/04	85/17	90/21	99/09
			49/14	57/08	63/45	70/33	73/05	85/20	92/10	100/27
			49/31	57/16	63/46	70/35	73/07	85/41	92/11	100/49
			49/32	57/33	64/07	70/36	73/09	86/07	92/16	101/11
			50/28	57/38	64/08	71/17	73/10	86/14	92/29	101/26
			50/34	58/05	65/25	72/13	73/15	86/21	92/38	101/34
			51/13	58/25	65/26	72/15	73/17	87/11	92/42	107/44
			51/16	58/33	65/29	72/17	79/30	87/12	94/11	
			51/40	58/47	65/31	72/23	79/52	87/17	94/26	
			51/49	59/01	65/33	72/25	80/04	87/30	94/49	
			36/21	L	60/25	65/13 S	70/13	72/19	107/45	
					55/52	60/31	66/07	70/19	74/30	
IISERSRV	0	EXTERNAL*	45/21							
IISPARCT	260	PROGRAM*	36/48	L	92/13					
IISPALK	11	PROGRAM*	28/47	L						
IISRONT	10	PROGRAM*	28/46	L						
IISRNAME	233	PROGRAM*	107/45	D						
IISRTYPE	7	PROGRAM*	28/45	L						

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YJLOC	35	PROGRAM#	30/05 L	51/47	57/36	63/43	70/30	73/02	85/40	89/39
			41/44	51/48	57/37	63/45	70/31	73/02	86/05	90/08
			42/45	55/10	57/48	65/20	70/32	73/02	86/06	90/09
			46/14	55/11	58/02 S	65/21	70/33	73/03	86/12	90/10
			46/15	55/12	58/04	65/24	70/34	73/03	86/13	90/11
			46/20	55/13	58/04	65/25	70/35	73/04	86/19	90/13
			46/21	55/27 S	58/23	65/25	70/35	73/04	86/20	90/14
			46/24	55/30 S	58/24	65/26	70/36	73/04	87/10	90/20
			46/25	55/31	58/31	65/28	71/16	73/04	87/11	90/21
			46/42	55/32	58/32	65/29	71/17	73/05	87/11	91/10
			46/43	55/36	58/45	65/30	72/11	73/08	87/12	91/11
			46/45	55/37	58/46	65/31	72/12	73/09	87/13	92/09
			46/46	55/40	58/52	66/11	72/14	73/09	87/14	92/10
			46/49	55/41	58/53	66/12	72/15	73/10	87/16	92/10
			46/50	55/45	59/01	66/13	72/16	73/14	87/17	92/11
			46/52	55/47	59/02	66/14	72/17	73/15	87/29	92/12
			46/53	56/03	59/06	66/25	72/24	73/16	87/30	92/13
			46/53	56/04	59/07	66/26	72/25	73/17	87/34	92/15
			47/01	56/11	59/34	66/34	72/29	75/33	87/35	92/16
			47/01	56/12	59/35	66/35	72/30	75/34	87/42	92/28
			47/02	56/16	59/43	66/45	72/30	75/50	87/43	92/29
			49/29	56/17	59/44	66/46	72/31	75/51	88/10	92/36
			49/31	56/29	59/45	69/20	72/35	81/24	88/11	92/37
			50/27	56/30	59/46	69/21	72/36	81/25	88/21	92/41
			50/28	56/32	61/29	69/34	72/36	81/48	88/22	92/42
			50/33	56/34	61/30	69/35	72/37	81/49	88/23	100/25
			50/34	56/36	62/09	70/10	72/40	82/18	88/24	100/26
			50/49	56/37	62/10	70/11	72/41	82/19	88/26	100/48
			50/50	56/45	62/10	70/11	72/41	83/23	88/27	100/49
			50/50	56/46	62/11	70/12	72/42	83/24	88/53	101/10
			50/51	56/46	62/22	70/16	72/52	83/29	89/01	101/11
			51/12	56/47	62/23	70/17	72/53	83/30	89/10	101/25
			51/13	57/06	62/25	70/22	72/53	84/21	89/11	101/26
			51/13 S	57/07	62/26	70/23	72/53	84/22	89/18	101/33
			51/14	57/15	62/36	70/25	72/53	85/05	89/19	101/34
			51/15	57/16	62/37	70/26	73/01	85/06	89/27	
			51/16	57/31	62/44	70/28	73/01	85/10	89/28	
			51/39	57/32	62/45	70/29	73/02	85/39	89/38	

ZERO 457 PROGRAM\* 41/42 L

12.25, RA. 5543 LINES PRINTED BY PRINTER DRIVER ON LP 2.