A B C D E F G H I J K L

0 1 2 3 4 5 6 7 8 9 10

INITIAL MEMORY ALLOCATION
BANK 0

FIXED LOW MEMORY
DRT* +
SYSTEM GLOBAL AREA
FIRMWARE AREA
SYSTEM GLOBAL AREA EXTENSION
DATA SEGMENT TABLE
CODE SEGMENT TABLE
CODE SEGMENT TABLE EXTENSION
ICS
PMBC +
ILT
DIT
DLT
RESOURCE TABLES
CST BLOCK TABLE
MEMORY MEASUREMENT INFORMATION*
VDSM TABLE
JOB PROCESS COUNT TABLE
PRIMARY/SECONDARY MSR*
PROCESS CONTROL BLOCK TABLE*
SWAP TABLE*
SPECIAL REQUEST TABLE*
JOB CUTOFF TABLE*
TIMER REQUEST LIST*
SYSTEM BUFFERS*
LOGICAL PHYSICAL DEVICE TABLE*
IOQ*
SIR*
MONITOR TABLE*
CORE RESIDENT CST'S IN CST ORDER
RESERVED REGION GLOBAL TRAILER
AVAILABLE REGION GLOBAL HEADER
AVAILABLE MEMORY
AVAILABLE REGION GLOBAL TRAILER

* These tables can move out of Bank 0 if necessary.
\+ Only on S64/68 if Privilege Mode Bounds Checking is enabled.

INITIAL MEMORY ALLOCATION
BANK 1

RESERVED REGION GLOBAL HEADER
CORE RESIDENT CST'S AND TABLES MARKED WITH "*" THAT DID NOT FIT IN BANK 0
RESERVED REGION GLOBAL TRAILER

SYSTEM DISC LAYOUT

Sector	Contents	
SECTOR 0	DISC LABEL	
1	DEFECTIVE TRACKS/SECTOR TABLE	
2	COLD LOAD CHANNEL PROG FOR HPIB	
3	MEM DUMP CHANNEL PROG FOR HPIB	
4		VARIABLE LENGTH
5		
6	CODE FOR INITIAL PROGRAMS	
7	"BOOTSTRAP" SEGMENT	
.		
.		
.		
	LOW CORE (CST PTR, QI, ZI PTR)	FOLLOWS
	TEMPORARY CST (INITIAL PROGRAM)	IMMEDIATELY
	INTERNAL INTERRUPT HALTS	AFTER
	BOOTSTRAP STACK	BOOTSTRAP
	REMAINDER OF SIO COLD LOAD PROG	SEGMENT
.		
.		
34	DISC COLD LOAD INFORMATION TAB	
35	DISC COLD LOAD INFORMATION TAB	
36	DISC COLD LOAD INFORMATION TAB	
37	SYSDUMP/INITIAL COMM RECORD	
40	DISC COLD LOAD INFO TABLE EXT	
41	DISC COLD LOAD INFO TABLE EXT	
42		
43		
.		
	SYSTEM DIRECTORY BITMAP	SYSDB 130 & 131 DIRBASE POINTER ← DIRBASE + 3
	SYSTEM DIRECTORY DATA	
	VIRTUAL MEMORY AREA	
	INITIAL PROGRAM SEGMENTS (EXCEPT BOOTSTRAP SEGMENT)	
	SYSTEM FILES (FROM COLD LOAD TAPE)	
	VOLUME TABLE	
	INITIAL PROGRAM STACK	
	REMAINING INITIAL CODE SEGMENTS	
	USER FILES	

DISC LABEL SYSTEM VOLUME
(SYSTEM 0 OF DISC)

Word	Contents	
0	0	WORDS 0-5 CONTAIN THE ASCII STRING "SYSTEM DISC" FOR THE SYSTEM DISC ONLY
1	0	
2	0	
3	0	
4	0	
5	0	
6	//////////// | DISC TYPE |SUBTYPE	
7	COLD LOAD ID	
10	"3" | "0"	
11	"0" | "0"	IF WORD 11 CONTAINS A "1" A FORMER SYSTEM VOLUME HAS BEEN SCRATCHED
12	VNAME 1ST CHAR | VNAME 2ND CHAR	
13	VNAME 3RD CHAR | VNAME 4TH CHAR	
14	VNAME 5TH CHAR | VNAME 6TH CHAR	
15	VNAME 7TH CHAR | VNAME 8TH CHAR	
16-24	//////////////////////////////	
25	CYLINDER	ICF UCS IMAGE POINTER
26	HEAD | SECTOR	
27-122	RESERVED	
123	CYLINDER	
124	HEAD | SECTOR	
125-170		
171	DISC FREE SPACE MAP OK FLAG	
172	DFS DESCRIPTOR TABLE CHECKSUM	
173	DSF DESCRIPTOR TABLE DIRTY FLAG	
174	DISC FREE SPACE DESCRIPTOR	
175	TABLE ADDRESS	
176	DISC FREE SPACE	
177	BITMAP ADDRESS	

DEFECTIVE TRACKS TABLE
(SECTOR 1 OF DISC) (NOT USED ON CS/80 DISC)

Word	Contents	
0	NUM OF DEFECTIVE TRACKS ENTRIES	
1	DEFECTIVE TRACK NUMBER |DTC	120
2	DEFECTIVE TRACK NUMBER |DTC	DEFECTIVE
3	DEFECTIVE TRACK NUMBER |DTC	TRACKS
	⋮	MAXIMUM
167	DEFECTIVE TRACK NUMBER |DTC	
170	DEFECTIVE TRACK NUMBER |DTC	
171-175	RESERVED FOR FUTURE USE	
176	NEXT AVAILABLE ALTERNATE TRACK	
177	LOGICAL DISC PACK SIZE (CYL)	

(14:2) Defective Tracks Code (DTC)
0 = suspect
1 = suspect alternate
2 = deleted
3 = reassigned

DEFECTIVE SECTOR TABLE
(SECTOR 1 OF DISC) (FOR DEVICE TYPE 3-CS/80 DISCS)

Word	Contents
0	NUMBER OF ENTRIES IN TABLE
1	INDEX TO THE FIRST ENTRY (6)
2	ENTRY SIZE (2)
3	MAXIMUM NUMBER OF ENTRIES (%75)
4	0 (RESERVED)
5	0 (RESERVED)
6	FIRST DEFECTIVE SECTOR ENTRY
7	DOUBLE WORD LOGICAL SECTOR ADDR
10	SECOND ENTRY
11	
12	THIRD ENTRY
13	
176	MAXIMUM DEFECTIVE
177	SECTOR ENTRY

Unlike the DIT, entries in the DSCT are not permanent. Once a suspect sector is handled by INITIAL, SDISC, or VINIT, its entry is removed from this table. Thus, this table contains only unprocessed suspect sectors.

DISC FREE SPACE MAP DESCRIPTOR TABLE

Word	Contents	
0	LARGEST SPACE	ENTRY FOR PAGE 0
1	STARTING SPACE	
2	ENDING SPACE	
0	LARGEST SPACE	ENTRY FOR PAGE 1
1	STARTING SPACE	
2	ENDING SPACE	
0	LARGEST SPACE	ENTRY FOR LAST PAGE
1	STARTING SPACE	
2	ENDING SPACE	

DISC FREE SPACE MAP DATA SEGMENT

Word	Contents
0	DS'LDEV
1	DS'DST
2-3	DS'DISC'SIZE
4	DS'LAST'PAGE'OF'MAP
5	DS'LAST'BUFFER'INDEX
6-7	DS'MAP'ADDRESS
10	DS'LOCK
11	DS'LOCK'COUNT
12	DS'QUEUE'HEAD
13	DS'QUEUE'TAIL
14	DS'DESCRIPTOR'TABLE
15	DS'BUFFER'PAGE'NUMBER
16	DS'BUFFER'DIRTY
17	DS'BUFFER'AREA
20	DS'FIRST'THRESHOLD'PAGE
21-22	DS'SIZE'OF'LAST'ALLOCATION
23	DS'LAST'PAGE'ALLOCATED'FROM
24	DS'NEXT'BUFFER'INDEX
25	DS'PAGE'NUMBER
26	DS'WORD'NUMBER
27	DS'BIT'NUMBER
30	DS'PAGE'POINTER
31	DS'STARTING'WORD'NUMBER
32	DS'STARTING'BIT'NUMBER
33-34	DS'NUMBER'OF'SECTORS
35	DS'BIT'COUNT
36	DS'ENTRY'TYPE
37	DS'BUFFER'INDEX
40-41	DS'DISC'ADDRESS
42	DS'ERROR'STATUS
	0 (DUMMY ENTRY - 3 WORDS)
	ENTRIES WHICH HAVE SAME FORMAT AS DESCRIPTOR TABLE
	0 (DUMMY ENTRY - 3 WORDS)
	BUFFER 0 ENTRY
	BUFFER 1 ENTRY
	LAST BUFFER ENTRY
	BUFFER 0 ENTRY
	BUFFER 1 ENTRY
	LAST BUFFER ENTRY
	BUFFER 0
	BUFFER 1
	LAST BUFFER

DISC COLD LOAD INFORMATION TABLE
(SECTORS 34-36)

Word	Contents	Name
0	POINTER TO TABLE INFORMATION	FAEFTR
1	POINTER TO TEMPORARY CST INFO	TCSTPTR
2	# ENTRIES TO READ ON DISC	NREAD
3	# OF CODE SEGMENTS IN INITIAL	NVTCST'
4	INITIAL'S DB VALUE	INITDB
5	INITIAL'S DL VALUE	INITDL
6	INITIAL'S Z VALUE	INITZ
7	INITIAL'S Q VALUE	INITQ
10	INITIAL'S S VALUE	INITS
11	|SYSDISC TYPE|SUBTYPE	DISCTST
12	COLD LOAD ID	COLD'LOAD'ID
13	LOG FILE NUMBER	LOG'FILE'NUM
14-15	DIRECTORY DISC ADDRESS	DIRADR
16-17	LDEV 1 VIRT. MEM. DISC ADDRESS	VIRMEMADDR
20	# LOG PROCS	
21	LOG ID'S	
22-23	RIN TABLE DISC ADDRESS	RINADR
24	DIRECTORY SIZE	DIRSECT
25	#SECT IN VIRT MEM REG OF LDEV 1	SECT'LDV1
26	UNUSED	
27	RIN TABLE SIZE	RINSECT
30	NUMBER OF LOCAL RINS	LRINS
31	# OF GLOBAL RINS	GRINS
32	|T|R|R	LOAD MODE
33	HIGHEST VOL # |# OF VOLUMES	H'VOL'
34	DISC COLD LOAD ENTRY POINT	DISCENTRY
35	SYSTEM DISC DRT NUMBER	SYSDISCDRT
36-37	JOB MASTER TABLE DISC ADDRESS	JMATLOC
40-41	IOD DISC ADDRESS	IODLOC
42-43	ODD DISC ADDRESS	ODDLOC
44-45	WELCOME MESS DISC ADDR. DST#47	LOGONLOC1
46-47	WELCOME MESS DISC ADDR. DST#48	LOGONLOC2
50-51	LOG ID ADDRESS	
52-53	LOG TAB ADDRESS	
54	LOG ID SIZE	
55	LOG TAB SIZE	
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *DRIVER TABLE	FAEFTR+0
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *CTAB0	FAEFTR+5
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *CTAB	FAEFTR+10
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *COMMUNICATION SUB-SYSTEM DRIVER TABLE	FAEFTR+15
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *COMMUNICATION SUB-SYSTEM DEFINITION TABLE	FAEFTR+20
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *COMMUNICATION SUB-SYSTEM TABLE	FAETR+25
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *LOGICAL-PHYSICAL DEVICE TABLE	FAEFTR+30
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *LOGICAL-DEVICE TABLE	FAEFTR+35
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *DEVICE CLASS TABLE	FAEFTR+40
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *VOLUME TABLE	FAEFTR+45
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *LOGICAL DEVICE TABLE EXTENSION	FAEFTR+50
	STACK SIZE / MEMORY ADDRESS / DISC ADDRESS — *INITIAL'S STACK	FAEFTR+55
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *DEVICE CLASS TABLE HEADER	FAEFTR+60
	SIZE IN WORDS / MEMORY ADDRESS / DISC ADDRESS — *TERMINAL DESCRIPTOR TABLE	FAEFTR+65
	SEGMENT SIZE / MEMORY ADDRESS / DISC ADDRESS — *INITIAL/SYSDUMP COMMUNICATION TABLE	FAEFTR+70
	SEGMENT SIZE / MEMORY ADDRESS / DISC ADDRESS — *DEFDATA TABLE LOOKUP BUFFER	FAEFTR+75
	(INITIAL'S SEGMENTS)	FAEFTR+80

INITIAL Program CST Map

LOGICAL CST#	PHYSICAL CST#	SEGMENT NAME
0	1	ININ
1	2	BOOTSTRAP
2	3	RESIDENT
3	4	MAINSEG1
4	5	MAINSEG1A
5	6	CONFIGURE
6	7	DEFCTRACKS
7	10	SETUP
10	11	TAPEIO
11	12	FILEIO
12	13	DISCSPACE
13	14	DIRECTORY1
14	15	DIRECTORY2
15	16	SL PROGRAM
16	17	PROCESS
17	20	MAINSEG1B
20	21	MAINSEG2
21	22	MAINSEG3
22	23	MAINSEG4

SYSDUMP/INITIAL COMMUNICATIONS RELOAD
(SECTOR 37)

Word	Contents	
0	MIT VERSION	
1	MIT UPDATE	
2	MIT FIX	
3	VERSION	
4	UPDATE	
5	FIX	
6	EXP SYSTEM NR	
7	HIGHEST DRT	
10	HIGHEST LDEV	
11	HIGHEST VOLUME/NUMBER OF VOLS	
12	NUMBER OF ADDITIONAL DRIVERS	
13	COLD LOAD COUNT	
14	FILES DUMPED	
15	SERIAL DISC LOAD |F|D|S	
16	TAPE RECORD SIZE	
17	DISC COLD LOAD ENTRY	
20	MAXIMUM INITIAL SEGMENT SIZE	
21-23	SPARE	
24	DEVICE CLASS TABLE SIZE	
25	TERMINAL DESCRIPTOR SIZE	
26	OLD VOLUME TABLE SIZE	
27	OLD INFO SIZE	
30	CS TABLE SIZE	
31	TABLE LOOKUP BUFFER SIZE	
32	SYSTEM TAPE LDEV NUMBER	
33-34	SPARE	
35	CONVERSION BITS WORD 1 |M	DIT8
36	CONVERSION BITS WORD 2	
37	CONVERSION BITS WORD 3	
40	CONVERSION BITS WORD 4	
41-46	SPARE	
47	LOG FILE NUMBER	

WORD 15 (13:1) F = Set if FOS sysdump
(14:1) D = Set if future date sysdump
(15:1) S = Set if serial disc sysdump

WORD 35 (15:1) M = MPE version
0 - MPE (G.00.00)
1 - MPE (G.01.00)

COLD LOAD INFORMATION TABLE EXTENSION
(SECTORS 40-41)

Word	Contents
0-20	RESERVED FOR FUTURE SYSTEM USE
21	SYSTEM LOGGING FILE NUMBER
22	NETWORK MANAGEMENT LOGGING FNUM
23	NETWORK MANAGEMENT TRACE FILE #
24	FULL/PARTIAL COMMAND DUMP DATE
25	
26-255	NOT CURRENTLY ASSIGNED

CONFDATA FILE
RECORD 0 OF CONFDATA FILE (CTAB0)

Word	Contents
0	CHECKSUM OF CTAB
1	CURRENT VERSION OF CTAB
2	STANDARD STACK SIZE
3	CORESIZE IN K WORDS
4	TERMINAL BOUND PRIORITY
5	NORMAL PRIORITY
6	CPU BOUND PRIORITY
7	NUMBER OF SECONDS TO LOG-ON
10	LOG FILE RECORD SIZE (SECTORS)
11	LOG FILE SIZE (RECORDS)
12	//////////////////////////////
13-17	LOG BITS (ONLY 11 USED)*
20	DEFAULT JOB/SESS CPU TIME LIMIT
21-33	//////////////////////////////
34	MAXIMUM OPEN SPOOL FILES
35	//////////////////////////////
36-37	MAX # OF SPOOLFILES (K SECTORS)
40	//////////////////////////////
41	# SECTORS PER SPOOL EXTENT

*Defines what is being logged

RECORD 1 OF CONFDATA FILE (CTAB)

Word	Contents
0	# OF CST ENTRIES
1	# OF DST ENTRIES
2	# OF PCB ENTRIES
3	# OF IOQ ENTRIES
4	# OF TERMINAL BUFFERS
5	# OF CST EXTENSION ENTRIES
6	INTERRUPT CONTROL STACK SIZE
7	# OF UCOP REQUEST QUEUE ENTRIES
10	# OF BREAKPOINT ENTRIES
11	# OF TRL ENTRIES
12	# OF RINS
13	# OF GLOBAL RINS
14	# OF SYSTEM BUFFERS
15	# OF CONCURRENT PROGRAMS
16	LOADER SEGMENT SIZE
17-23	//////////////////////////////
24	SIZE OF VIRTUAL MEMORY
25	DIRECTORY SIZE (SECTORS)
26-35	//////////////////////////////
36	MAXIMUM CODE SEGMENT SIZE
37	MAX # OF CODE SEGMENTS/PROCESS
40	MAXIMUM STACK SIZE (MAXDATA)
41	MAXIMUM EXTRA DATA SEGMENT SIZE
42	MAX # OF XDS PER PROCESS
43-47	//////////////////////////////
50	MAXIMUM # OF RUNNING SESSIONS
51	MAXIMUM NUMBER OF RUNNING JOBS
52	NUMBER LOG PROCESSES
53	LOG ID's
54	# OF DISC REQUEST TABLE ENTRIES
55	# OF SPECIAL REQ. TABLE ENTRIES
56	# OF PRIMARY MSG TABLE ENTRIES
57	# OF SWAP TABLE ENTRIES
58	# OF SECONDARY MSG TAB. ENTRIES

DEFDATA. PUB. SYS
TABLE LOOKUP FILE

Word	Contents	
0	CHECKSUM	
1	VERSION	HEADER
2	TOTAL TABLE SIZE IN WORDS	FORMAT
3	ENTRY SIZE (1)	
4	NUMBER OF TABLE ENTRIES	
0-7	DEVICE NAME	
10	TOTAL DEVICE ENTRY SIZE (WORDS)	
11	# DEV CLASSES FOR THIS DEV (1)	
12	DEVICE CLASS NAME LIST POINTER	
13	TERM DESCRIPTOR FILE NAME PNTR	
14	DEF OUTPUT DEV OR PTR DEVCLASS	
15	CS LDTX ENTRY POINTER (0)	
16	RESERVED	ENTRY
17	DEVICE ID CODE	FORMAT
20	RESERVED	
21	RESERVED	
22	DEVICE TYPE|SUBTYPE|J|A|I|D|SPS	
23	CHAN |C|D|S|C|A| RECORD WIDTH	
24	DEF TERM TYPE|A| RESERVED	
25	TERM SPEED	
26	RESERVED	
27	RESERVED	
30	DNAME 1ST CHAR | DNAME 2ND CHAR	
31	DNAME 3RD CHAR | DNAME 4TH CHAR	DRIVER
32	DNAME 5TH CHAR | DNAME 6TH CHAR	NAME
33	DNAME 7TH CHAR | DNAME 8TH CHAR	
34	FNAME 1ST CHAR | FNAME 2ND CHAR	TERMINAL
35	FNAME 3RD CHAR | FNAME 4TH CHAR	DESCRIPTOR
36	FNAME 5TH CHAR | FNAME 6TH CHAR	FILE
37	FNAME 7TH CHAR | FNAME 8TH CHAR	NAME
40	GNAME 1ST CHAR | GNAME 2ND CHAR	TERMINAL
41	GNAME 3RD CHAR | GNAME 4TH CHAR	DESCRIPTOR
42	GNAME 5TH CHAR | GNAME 6TH CHAR	GROUP
43	GNAME 7TH CHAR | GNAME 8TH CHAR	NAME
44	ANAME 1ST CHAR | ANAME 2ND CHAR	TERMINAL
45	ANAME 3ND CHAR | ANAME 4TH CHAR	DESCRIPTOR
46	ANAME 5TH CHAR | ANAME 6TH CHAR	ACCOUNT
47	ANAME 7TH CHAR | ANAME 8TH CHAR	NAME
50	ONAME 1ST CHAR | ONAME 2DN CHAR	OUTPUT
51	ONAME 3RD CHAR | ONAME 4TH CHAR	DEVICE
52	ONAME 5TH CHAR | ONAME 6TH CHAR	CLASS
53	ONAME 7TH CHAR | ONAME 8TH CHAR	NAME
54	CNAME 1ST CHAR | CNAME 2ND CHAR	DEVICE
55	CNAME 3RD CHAR | CNAME 4TH CHAR	CLASS
56	CNAME 5TH CHAR | CNAME 6TH CHAR	NAME
57	CNAME 7TH CHAR | CNAME 8TH CHAR	
	RESERVED	
	⋮	
0-7	DEVICE NAME	
10	TOTAL DEVICE ENTRY SIZE (WORDS)	
11	# DEV CLASSES FOR THIS DEV (1)	
12	DEVICE CLASS NAME LIST POINTER	
13	TERM DESCRIPTOR FILE NAME PNTR	
14	DEF OUTPUT DEV OR PTR DEVCLASS	
15	CS LDTX ENTRY POINTER (0)	
16	RESERVED	ENTRY
17	DEVICE ID CODE	FORMAT
20	RESERVED	
21	RESERVED	
22	DEVICE TYPE|SUBTYPE|J|A|I|D|SPS	
23	CHAN |C|D|S|C|A| RECORD WIDTH	
24	DEF TERM TYPE|A| RESERVED	
25	TERM SPEED	
26	RESERVED	
27	RESERVED	
30	DRIVER NAME	
33		
34	TERMINAL DESCRIPTOR FILE NAME	
37		
40	TERMINAL DESCRIPTOR GROUP NAME	
43		
44	TERMINAL DESCRIPTOR ACCT NAME	
47		
50	OUTPUT DEVICE CLASS NAME	
53		
54	DEVICE CLASS NAME	
57		
	RESERVED	

DEFDATA TABLE ENTRY DESCRIPTIONS

WORD 22 (10:1) J = Job accepting
(11:1) A = Data accepting
(12:1) I = Interactive
(13:1) D = Duplicative
(14:2) S = Spool state

WORD 23 (3:1) C = Core resident
(4:1) D = DS device
(5:1) S = Spool queue
(6:1) C = Indicates whether the output device is given
(7:1) A = Default auto increment (DRT or Unit)

WORD 24 (7:1) A = Auto reply

DEVDATA. PUB. SYS

Word	Contents	
0	CHECKSUM	
1	VERSION	
2	NEXT RECORD	PARAMETER
3	HIGHEST LOGICAL DEVICE	RECORD
4	HIGHEST DRT	
5	NUMBER OF ADDITIONAL DRIVERS	
100	RECORD NUMBER	DVR TABLE
101	LENGTH	
102	RECORD NUMBER	LPDT
103	LENGTH	
104	RECORD NUMBER	LDT
105	LENGTH	
106	RECORD NUMBER	LDTX
107	LENGTH	
110	RECORD NUMBER	DCTH
111	LENGTH	
112	RECORD NUMBER	CLASS
113	LENGTH	
114	RECORD NUMBER	TERM DEF
115	LENGTH	
116	RECORD NUMBER	ADD'L DVR
117	LENGTH	
120	RECORD NUMBER	CS DEF
121	LENGTH	
122	RECORD NUMBER	CS TABLE
123	LENGTH	
124-200	UNUSED	

VIRTUAL DISC MANAGEMENT TABLE
(SYSGLOB 26) (DST 47)

Word	Contents	
0	NUMBER OF WORD IN VDSMT	
1	NUM OF SYSTEM VOL WHICH HAVE VM	
2	INDEX OF NXT ENT. TO ALLOC FROM	VDSMTAB
3	VIRTUAL MEMORY PAGE SIZE (#512)	ENTRY 0
4	NUMBER OF SECTORS/V.M. PAGE (4)	FORMAT
5	OFFSET FROM ENT. TO BITMAP (20)	
6	TOTAL # VM PAGES CONFIG. IN SYS	
7	LEAST # VM PAGES EVER AVAILABLE	
10-17	UNASSIGNED	
0	INDEX OF NEXT ENTRY IN CIR LIST	
1	LOGICAL DEVICE NUMBER	
2	STARTING SECTOR OF DEVICE'S	VDSMTAB
3	VIRTUAL MEMORY REGION	GENERAL
4	NUMBER OF SECTORS IN DEVICE'S	ENTRY
5	VIRTUAL MEMORY REGION	FORMAT
6	NUMBER OF PAGES IN VM REGION	
7	# PAGES AVAIL IN DEV'S VM REG.	
10	# VALID WORDS IN DEV'S BITMAP	
11	SIZE OF SMALLEST RECENT MISS	
12	SMALLEST # PAGES EVER AVAILABLE	
13-20	UNASSIGNED	
	DEVICE'S VIRTUAL MEMORY BITMAP	
0	INDEX OF NEXT ENTRY IN CIR LIST	
1	LOGICAL DEVICE NUMBER	
2	STARTING SECTOR OF DEVICE'S	VDSMTAB
3	VIRTUAL MEMORY REGION	GENERAL
4	NUMBER OF SECTORS IN DEVICE'S	ENTRY
5	VIRTUAL MEMORY REGION	FORMAT
6	NUMBER OF PAGES IN VM REGION	
7	# PAGES AVAIL IN DEV'S VM REG.	
10	# VALID WORDS IN DEV'S BITMAP	
11	SIZE OF SMALLEST RECENT MISS	
12	SMALLEST # PAGES EVER AVAILABLE	
13-20	UNASSIGNED	
	DEVICE'S VIRTUAL MEMORY BITMAP	

COMMENT: A bit set in a device's Virtual Memory Bit Map indicates virtual memory page is free

VOLUME TABLE
(DST 35)

Word	Contents	
0	NUM OF ENTRIES |ENTRY SIZE (16)	
1	COLD LOAD ID	ENTRY 0
2	SYSTEM VOLUME NUMBER	FORMAT
3	VIRTUAL MEMORY INTEGRITY NUMBER	
4-15	UNUSED	
0-3	VOLUME NAME	
4-7	0	TYPICAL SYSTEM VOLUME ENTRY
10-11	STARTING SECTOR OF VOL'S VM	
12-13	# SECT. RESERVED FOR VM ON VOL.	
14	LDEV NUMBER | |V|U|N|S	
15	0	
0-3	VOLUME NAME	
4-7	GROUP NAME	TYPICAL PRIVATE VOLUME ENTRY
10-13	ACCOUNT NAME	
14	LDEV NUMBER | |V|U|N|S	
15	0	

VOLUME TABLE ENTRY FIELD DESCRIPTIONS

WORD 14 (12:1) = Virtual Memory Supporting
(13:1) = Unreadable / Unformatted
(14:1) = Non-System Domain
(15:1) = Scratch

MPE DIRECTORY
SYSTEM GLOBAL AREA

Word	Contents
130	ABSOLUTE DISC ADDRESS OF
131	DIRECTORY BASE

DIRECTORY BITMAP

Word	Contents	
0	DEFINES AVAILABLE / USED SPACE IN THE DIRECTORY	DIRBASE
	BITMAP = 3 SECTORS IF DIRECTORY SIZE IS <= 6112, ELSE 32 SECTORS	OR DIRBASE
29 / 2 OR 31	NTH BIT = 1 IS AVAILABLE / NTH BIT = 0 IS IN USE	
		DIRBASE + 3

SYSTEM ACCOUNT INDEX BLOCK

Word	Contents	
0	1|P|0|1|0|XSIZE |BSIZE	
1	NUMBER OF INDEX POINTERS	
2	NUMBER OF ACCESSORS	INDEX
3	ENTRY TOTALS	BLOCK
4	0|P|0|1|0|EXSIZE |BSIZE	PREFIX
5	INDEX POINTER OF FATHER	
6-11	NAME OF FATHER	
12-15	FIRST NAME OF ENTRY BLOCK	FIRST
16	POINTER TO ENTRY BLOCK	INDEX
17	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY
	:	
	FIRST NAME OF ENTRY BLOCK	LAST
	POINTER TO ENTRY BLOCK	INDEX
	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY

SYSTEM DIRECTORY BLOCK SIZES

System account index block size = 3 sectors
Account user index block size = 1-3 sectors
Account group index block size = 1-3 sectors
Group file index block size = 2 sectors
Group volume set definition index block size = 1 sector

Account entry block size = 3 sectors
User entry block size = 2 sectors
Group entry block size = 2 sectors
File entry block size = 2 sectors
Volume set definition entry block size = 1 sector

INDEX BLOCK PREFIX FIELD DEFINITIONS

INDEX BLOCK INFORMATION

WORD 0 (1:1) = Purge flag
(2:3) = Type 0=file
1=group
2=acct
3=user
4=vset
(5:7) = Index size
(12:4) = Block size

ENTRY BLOCK INFORMATION

WORD 4 (1:1) = Purge flag
(2:3) = Type
(5:7) = Entry size
(12:4) = Block size

WORD 5 PINDEXP = Dirbase relative pointer to the father. points to the previous index block.

DIRECTORY DATA SEGMENT
(DST 24)

Word	Contents	Name	
0 : 177	SECTOR BUFFER 200 WORDS		
200	ADJUST (DB-DL)		
201	XTYPE (INPUT PARM)		
202	| XMVTABX		
203	XINDEXP (FINAL INDEX POINTER)		
204	XANAME (DB RELATIVE ADDRESS)		
205	XGUNAME (DB RELATIVE ADDRESS)		
206	XFNAME (DB RELATIVE ADDRESS)		
207	XASEC (ACCOUNT SECURITY)		
210-211	XGSEC (GROUP SECURITY)		
212	SIRRETURN (FROM GETSIR)		
213	LDEV | DIRECTORY BASE	DIRECTORY	
214	ADDRESS OF PAGE IN BUFFER	POINTER	
215	DIRECTORY PAGE IN BUFFER	AREA DA	
216	DB ADDRESS OF FIRST IN BUFFER		
217	STARTING ADDRESS OF BUFFER		
220	NUMBER VALID PAGES IN BUFFER		USED BY INDEXES AND ENTRIES
221	B| |D	D=DIRTY FLAG B=BAD ELEMENT	
222	ELEMENT SIZE		
223	NUMBER OF WORDS USED IN BLOCK		
224	BLOCK SIZE (SECTOR)		
225	BLOCK SIZE (WORDS)		
226	MAX NUMBER ELEMENTS PER BLOCK		
227	I|P|TYP|ELEMENT SIZE | BSIZE	MISCWD	
230	NUMBER OF ELEMENTS	XCOUNT	
231	NUMBER OF ACCESSORS	BWSIZE	USED BY INDEX ENTRIES ONLY
232	ENTRY TOTAL	ETOTAL	
233	0|P|TYP| ENTRY SIZE | BSIZE	EMISCWD	
234	FATHER POINTER	PINDEXP	
235-240	FATHER NAME	PNAME	
241	LDEV | DIRECTORY BASE	DIRECTORY	
242	ADDRESS OF PAGE IN BUFFER	POINTER	
243	DIRECTORY PAGE IN BUFFER	AREA DB	
244	DB ADDRESS OF FIRST IN BUFFER		
245	STARTING ADDRESS OF BUFFER		
246	NUMBER VALID PAGES IN BUFFER		USED BY INDEXES AND ENTRIES
247	B| |D		
250	ELEMENT SIZE	XSIZE	
251	NUMBER OF WORDS USED IN BLOCK	USED	
252	BLOCK SIZE (SECTOR)	BSIZE	
253	BLOCK SIZE (WORDS)	BWSIZE	
254	MAX NUMBER ELEMENTS PER BLOCK	BFACTOR	
255	1|P|TYP|ELEMENT SIZE | BSIZE	MISCWD	
256	NUMBER OF ELEMENTS	XCOUNT	
257	NUMBER OF ACCESSORS	BWSIZE	USED BY INDEX ENTRIES ONLY
260	ENTRY TOTAL	ETOTAL	
261	0|P|TYP| ENTRY SIZE | BSIZE	EMISCWD	
262	FATHER POINTER	PINDEXP	
263-266	FATHER NAME	PNAME	
267	SYS ACCOUNT INDEX BLOCK SIZE		
270	LDEV | DIRECTORY		
271	BASE DISC ADDRESS		
272	PRIVATE VOLUME DIRECTORY SIZE		
273-305	//////////////////////////////		
306	DISTRIBUTION FACTOR		
307	GOODPERCENT = .85		
310	BASE		
311	DA AREA		
	WORK AREA (SIZE OF LARGEST ENTRY)		
1145	DB AREA		

DIRECTORY SPACE DATA SEGMENT
(DST 25)

Word	Contents	Name
0	LOGICAL DEVICE | BIT MAP BASE	DS'BASE
1	SECTOR ADDRESS	
2	PRT TO LAST AVAIL WORD IN BUFF	DS'LAST
3	PRT TO FIRST WORD IN BUFFER	DS'FIRST
4	SIZE IN SECTORS OF DIRECTORY	DS'DIR'SIZE
5	D|E|S|P|	DS'FLAGS
6	FIRST CURRENT SECTOR IN BUFFER	DS'CUR'SECTOR
7	DISC ADDRESS OF CURRENT PART	DS'ADDR
10	OF BIT MAP IN THE BUFFER	
11	SIZE OF BUFFER IN WORDS	DS'SIZE
12	NEXT REQUESTED SECTOR	DS'REQ'SECTOR
13	LAST SECTOR IN BITMAP	DS'LAST'SECTOR
14	SYSTEM SAVED POINTER TO LAST	DS'SYS'LAST
15	SYSTEM SAVED POINTER TO FIRST	DS'SYS'FIRST
16	SYSTEM SAVED CURRENT SECTOR	DS'SYS'CUR
17	SAVED DIRECTORY SIZE	DS'SYS'SIZE
20	LDEV THAT LAST ERROR OCCURRED	DS'ERROR'LDEV
21	TYPE OF ERROR THAT OCCURED	DS'ERROR'TYPE
	THIS SECTION OF THE BITMAP DST IS OCCUPIED BY UP TO 3 SECTORS OF BIT MAP. IT IS SWAPPED IN 3 SECTORS AT A TIME AS NEEDED. DS'FIRST'WORD IS UPDATED TO SEARCH FOR SPACE IN THE BIT MAP. WHEN IT REACHES DS'LAST'WORD FOR THE SECOND PASS, THE NEXT 3 SECTORS OF BIT MAP WILL BE SWAPPED IN.	

DIRECTORY SPACE DATA SEGMENT FIELD DESCRIPTIONS

WORD 5 (0:1) D = DS'DIRTY
This bit is set if the bit map sectors in the buffer have been modified in any way.
(1:1) E = DS'ERR'IN'PROG
A directory space management error is currently in progress.
(2:1) S = DS'DIR'DISABLED
If this bit is on, the directory allocation and deallocation is off and only a WARMSTART will turn the bit off.
(3:1) P = DS'PERM'DISABLED
If this bit is set, then directory allocation/deallocation is permanently disabled. This bit should not be set.

WORD 21 (0:16) DS'ERROR'TYPE

0 : no error
1 : I/O error on a write
2 : I/O error on a read
3 : attempting to deallocate space that is already deallocated
4 : directory space management is already disabled

ACCOUNT ENTRY BLOCK

Word	Contents	Name
0-3	ACCOUNT NAME	ANAME
4	ACCOUNT GROUP INDEX POINTER	AGIPNTR
5	ACCOUNT USER INDEX POINTER	AUIPNTR
6-7	CAPABILITIES	ACAP
10-11	LOCAL ATTRIBUTES	ALATTR
12-15	ACCOUNT PASSWORD	APASS
16-17	DISC FILE SPACE COUNT (SECTORS)	ADFSCOUNT
20-21	DISC FILE SPACE LIMIT	ADFSLIMIT
22-23	CPU TIME COUNT (SECONDS)	ACPUCOUNT
24-25	CPU TIME LIMIT (SECONDS)	ACPULIMIT
26-27	CONNECT TIME COUNT (MINUTES)	ACONTIMECOUNT
30-31	CONNECT TIME LIMIT (MINUTES)	ACONTIMELIMIT
32	FILE SECURITY FLAGS	ASECW
33	S|A|//////////|MAX JOB PRIORITY	
34	COMMAND FILE RECORD # (ACCOUNT)	
35	COMMAND FILE RECORD # (SYS)	
0-3	ACCOUNT NAME	
4	ACCOUNT GROUP INDEX POINTER	
5	ACCOUNT USER INDEX POINTER	
6-7	CAPABILITIES	
10-11	LOCAL ATTRIBUTES	
12-15	ACCOUNT PASSWORD	
16-17	DISC FILE SPACE COUNT (SECTORS)	
20-21	DISC FILE SPACE LIMIT	
22-23	CPU TIME COUNT (SECONDS)	
24-25	CPU TIME LIMIT (SECONDS)	
26-27	CONNECT TIME COUNT (MINUTES)	
30-31	CONNECT TIME LIMIT (MINUTES)	
32	FILE SECURITY FLAGS	
33	S|A|//////////|MAX JOB PRIORITY	
34	COMMAND FILE RECORD # (ACCOUNT)	
35	COMMAND FILE RECORD # (SYS)	
	:	
	LAST ACCOUNT ENTRY IN ENTRY BLOCK	

ACCOUNT ENTRY FIELD DESCRIPTIONS

WORD 32 (0:1) P = Purge Flag
(4:1) R = Read any user
(5:1) R = Read account user
(6:1) A = Append any user
(7:1) A = Append account user
(8:1) W = Write any user
(9:1) W = Write account user
(10:1) L = Lock any user
(11:1) L = Lock account user
(12:1) X = Execute any user
(13:1) X = Execute account user
(14:1) S = Save any user = 0
(15:1) S = Save account user = 1

WORD 33 (0:1) S = If 1, system level UDC's exists (only in "SYS" account)
(1:1) A = If 1, account level UDC's exists

XDD INPUT DEVICE DIRECTORY
(DST 56) OUTPUT DEVICE DIRECTORY (DST 56)

Word	Contents	
0	MAXIMUM SIZE |CURRENT SIZE	SECTORS
1	HEAD ENTRY SIZE|SUBENTRY SIZE	WORDS
2	SUBENTRY AREA POINTER (SEG REL)	
3	D|NEXT AVAILABLE OFID	ENTRY 0
4	////////////////////////|FENCE	
5-7	//////////////////////////////	
0	DEVICE OUTFENCE|//////////////	TYPICAL HEAD ENTRY
1	HEAD POINTER	
2	TAIL POINTER	
3	LOGICAL DEVICE	
0	/|ST |OUTPRI |C|//////////////	
1	TYP|JOB NUMBER	
2-5	USER NAME	
6-11	ACCOUNT NAME	
12-15	JOB NAME	
16-21	FILE NAME	
22	I|DEVICE FILE ID	
23	F|D|/|XDD HEAD INDEX	TYPICAL SUB ENTRY
24	LOG DEV OR DEV CLASS TABLE INDX	
25	VIRTUAL DEV # OF OPEN SPOOLFILE	
26	VOL TABLE INDEX|	
27	SECTOR ADDRESS OF SPOOFLE LABEL	
30	# OF EXTENTS |//////////////	
31	LAST EXTENT SIZE (SECTORS)	
32	S|/|R|F|S|A|/|NUMBER OF COPIES	
33	SEG REL LNK TO NXT ENTRY,ELSE 0	
34-35	NUMBER OF RECORDS IN SPOOLFILE	
36	YEAR MOD 100 |JULIAN DAY/2	
37	D|HOUR (24)|MINUTE |SEC/4	

XDD FIELD DESCRIPTIONS

ENTRY 0

WORD 3 (0:1) = If 0, this is the IDD
If 1, this is the ODD

WORD 4 (12:4) = If ODD, the system wide outfence
If IDD, the jobfence

TYPICAL SUBENTRY

WORD 0 (1:2) = State of subentry
0 : active
1 : ready
2 : open
3 : locked
(7:1) = If 1, word 24 is a class index into the Device Class Table
If 0, word 24 is the ldev associated with the subentry

WORD 1 (0:2) = Describes environment which created subentry
0 : session (spook)
1 : session
2 : job
3 : job (spook)

WORD 22 (0:1) = If 1, output dfid
If 0, input dfid

WORD 23 (0:1) = One or more forms message exists for spoolfile
(1:1) = Spoolfile created via :DATA command

WORD 32 (0:1) = If 1, squeeze (purge) spoolfile extents as they are being printed (obsolete as of CIPER)
If 0, purge only when final copy is printed
(2:1) = Restart job when warmstarting
(3:1) = If 1, there are non-standard forms on the device
(4:1) = Spaced out bit. File system could not acquire new extent when creating spoolfile
(5:1) = This is the $STDLIST of an aborted job

CI STACK DEFINITION

Word	Contents
DB+0	BCOMIMAGE (BYTE PTR TO COMMAND)
DB+1	COMMAND IMAGE (#280 BYTES)
DB+215	LINELENSTACK (#30 WORDS)
DB+253	NEXTMSG (NOT CURRENTLY USED)
DB+254	THIS IS SPARE (NOT USED)
DB+255	UDC 0
DB+256	UDC 1
DB+257	UDC 2
DB+260	UDC 3
DB+261	UDC 4
DB+262	IFNESTING
DB+263	IFSKIP
DB+264	ELSESEEN
DB+265	CIFLAGS
DB+266	CONTINUE STATE STACK
DB+270	PENDINGCOMLEN
DB+271	BLASTCOMIMAGE (BYTE PTR)
DB+272	LAST COMMAND IMAGE (#280 BYTES)

CI STACK FIELD DESCRIPTIONS

WORD DB+255 = Holds the DST # of the UDC definitions
WORD DB+256 = Holds the old S register value for UDC's
WORD DB+257 (0:1) = Flushudc, used by :SETCATALOG
WORD DB+260 (0:1) = OPTION LIST=1
(1:1) = OPTION LOGON=1
(2:1) = OPTION NOHELP=1
(3:1) = OPTION NOBREAK=1
WORD DB+261 (0:1) = UDC fatal CI error
(1:1) = UDC EXITBREAK
(2:1) = UDC BREAKDETECTED
(3:1) = UDC NOPRINT
(4:1) = UDC IMAGEADJUST
(10:6) = UDC NESTLEVEL
WORD DB+265 (13:1) = SEQUENCED: Line numbers at rear
(15:1) = Not REDOable (last command)
WORD DB+266 = If 0, no :CONTINUE
= If 1, just seen
= If 2, in effect

TIMER REQUEST LIST
(SYSGLOB 12) (DST 23)

Word	Contents	
0	NUMBER OF ENTRIES	HEADER
1	ENTRY SIZE (4)	ENTRY 0
2	FREE LIST POINTER	
3	NUMBER OF DAYS SINCE LAST START	
4	QUANTUM / 100 MS	
5	TIME OF DAY	ENTRY 1
6		
7	YEAR | JULIAN DAY	
10	POINTER TO MOST ACTIVE REQUEST	
11	TRACE WORD	ENTRY 2
12	0	
13	0	
14	A| CODE |INDEX OF NEXT ENTRY	ASSIGNABLE
15	REQUEST	ENTRY 3
16	TIME TO SERVICE AFTER REQUEST	
17	IN FRONT (UNIT = 100 MS)	
20	A| CODE |INDEX OF NEXT ENTRY	ASSIGNABLE
25	REQUEST	ENTRY 4
26	TIME TO SERVICE AFTER REQUEST	
27	IN FRONT (UNIT = 100 MS)	

TIMER REQUST LIST ENTRY FIELD DESCRIPTIONS

WORD 7 (0:7) = Julian year
(7:9) = Julian day

WORD 14 (0:1) A = Active request queue flag
0 : inactive request
1 : active request
(1:5) CODE = used to indicate type of request

WORD 15 (0:16) REQUEST = used to indicate type of request

CODE	REQUEST	TYPE
0	DITP	Hangup
1	DITP	Carrier failure
2	DITP	202 turnaround
3	DITP	Read
4	DITP	Logon
5	PCB Index	Delay
6	DITP	LP not ready
7	DITP	2640
10	Port Mask	MSG Port timeout
11	DITP	Block mode read timeout (30 secs)
12	PCB Index	Watch dog timer for process

The list of pending requsts is kept ordered by time with later entries at the tail.

20-37 DITP SIO device timeout : DIT8 (code_1 on expiration, cleared on Timer Request)

GROUP INDEX BLOCK

Word	Contents	
0	1|P|0|0|1|XSIZE |BSIZE	
1	NUMBER OF INDEX POINTERS	
2	NUMBER OF ACCESSORS	INDEX
3	ENTRY TOTALS	BLOCK
4	0|P|0|0|1|EXSIZE |BSIZE	PREFIX
5	INDEX POINTER OF FATHER	
6-11	NAME OF FATHER	
12-15	FIRST NAME OF ENTRY BLOCK	FIRST
16	POINTER TO ENTRY BLOCK	INDEX
17	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY
	:	
	FIRST NAME OF ENTRY BLOCK	LAST
	POINTER TO ENTRY BLOCK	INDEX
	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY

USER INDEX BLOCK

Word	Contents	
0	1|P|0|1|1|XSIZE |BSIZE	
1	NUMBER OF INDEX POINTERS	
2	NUMBER OF ACCESSORS	INDEX
3	ENTRY TOTALS	BLOCK
4	0|P|0|1|1|EXSIZE |BSIZE	PREFIX
5	INDEX POINTER OF FATHER	
6-11	NAME OF FATHER	
12-15	FIRST NAME OF ENTRY BLOCK	FIRST
16	POINTER TO ENTRY BLOCK	INDEX
17	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY
	:	
	FIRST NAME OF ENTRY BLOCK	LAST
	POINTER TO ENTRY BLOCK	INDEX
	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY

MOUNTED VOLUME TABLE
(DST 65)

Word	Contents	
0	ENTRY SIZE | MAX ENTRIES	
1	NUMBER OF MOUNTED VOLUME SETS	
2	LDEV NUMBER | DIRBASE OF	
3	SYSTEM VOLUME SET	
4-24	0	
0	1|CYCL | DIRCSIZE/32	ENTRY 1 (MVTABX=1)
1	HVOL | NVOL | UCNT	
2	LDEV NUMBER |	ENTRY 0 (MVTABX=0)
3	DIRBASE OF VOLUME SET	
4	GENERATION NUMBER	
5	LDEV NUMBER | VTABX	VOLUME ENTRY 0 (DOUBLE)
6	DBMS | VCNT	
	:	
19	LDEV NUMBER | VTABX	VOLUME ENTRY 7 (DOUBLE)
	////////////// | VCNT	
	ENTRY N (MVTABX=N)	

MOUNTED VOLUME TABLE DESCRIPTIONS

ENTRY 1 -> N

WORD 0 (1:3) = Cyclical volume index for disc space allocation

WORD 1 (0:4) = Highest volume index
(4:4) = Number of volumes mounted
(8:8) = Number of users having mounted the volume set

WORD 6 (0:8) = Directory bit map size

PRIVATE VOLUME USER TABLE
(DST 66)

Word	Contents	
0	TABLE SIZE (WORDS)	
1	NUMBER OF ENTRIES	
2	BITMASK OF MVTABX'S REPRESENTED	TABLE HEAD
3	MAXIMUM TABLE SIZE (WORDS)	
4	AVAILABLE POINTER	
5	OPMASK | MVTABX	
	MAX USERS	ENTRY
	NUMBER OF PINS	HEAD
	CURRENT SIZE OF ENTRY	
	PV FLAGS |OP	
	VMASK	VOLUME SET ENTRY 1 MVTAB=J
	PIN	
	USER BIND COUNT	
	USER MOUNT COUNT	USER
	SYSTEM BIND COUNT	ENTRY 1
	SYSTEM MOUNT COUNT	
	BIND NAMES COUNT	
	DST # OF BIND NAMES SEGMENT	
	VMASK	
	PIN	USER
		ENTRY 2
	VMASK	
	PIN	
	USER BIND COUNT	
	USER MOUNT COUNT	USER
	SYSTEM BIND COUNT	ENTRY N
	SYSTEM MOUNT COUNT	
	BIND NAMES COUNT	
	DST # OF BIND NAMES SEGMENT	
	OP MASK | MVTABX	VOL SET ENTRY 2 MVTAB=K
	AVAILABLE	

BIND NAMES DATA SEGMENT

Word	Contents	
0	MAXIMUM SEGMENT LENGTH	ENTRY 0
1	CURRENT SEGMENT LENGTH	
2-10	0	
0	BIND COUNT	ENTRY 1
1-4	GROUP NAME	
5-10	ACCOUNT NAME	
0	BIND COUNT	ENTRY N
1-4	GROUP NAME	
5-10	ACCOUNT NAME	

GROUP ENTRY BLOCK

Word	Contents	Name
0-3	GROUP NAME	GNAME
4	GROUP FILE INDEX POINTER	GFIPNTR
5-10	GROUP PASSWORD	GPASS
11-12	DISC FILE SPACE COUNT (SECTORS)	GDFSCOUNT
13-14	DISC FILE SPACE LIMIT (SECTORS)	GDFSLIMIT
15-16	CPU TIME COUNT (SECONDS)	GCPUCOUNT
17-20	CPU TIME LIMIT (SECONDS)	GCPULIMIT
21-22	CONNECT TIME COUNT (MINUTES)	GCONTIMECOUNT
23-24	CONNECT TIME LIMIT (MINUTES)	GCOUNTIMELINIT
25	P|/|	P=PURGE FLAG
26	GROUP SECURITY	GSEC
27	GROUP CAPABILITIES	GCAPABILITY
30	P|//////////////| MVTABX	GLINKAGE
31	GROUP VOL SET DEFN INDEX PNTR	GVSDIPNTR
32-35	HOME VOL SET ACCT NAME (DEF'S)	GHVSANAME
36-41	HOME VOL SET GROUP NAME (DEF'S)	GHVSGNAME
42-45	HOME VOL SET VOL SET NAME(DEFS)	GHVSVSNAME
46	SAVE CELL FOR GFIPNTR	GSAVEFIPNTR
47	GROUP BIND COUNTER	GMOUNTREFCNTR
50	0	
	:	
	LAST GROUP ENTRY IN ENTRY BLOCK	

GROUP ENTRY FIELD DESCRIPTIONS

WORD 25 (0:1) P = Purge flag
(2:1) R = Read any user
(3:1) R = Read account user
(4:1) R = Read account librarian
(5:1) R = Read group user
(6:1) R = Read group librarian
(7:1) A = Access any user
(8:1) A = Access account user
(9:1) A = Access account librarian
(10:1) A = Access group user
(11:1) A = Access group librarian
(12:1) W = Write any user
(13:1) W = Write account user
(14:1) W = Write account librarian
(15:1) W = Write group user

WORD 26 (0:1) W = Write group librarian
(1:1) L = Lock any user
(2:1) L = Lock account user
(3:1) L = Lock account librarian
(4:1) L = Lock group user
(5:1) L = Lock group librarian
(6:1) X = Execute any user
(7:1) X = Execute account user
(8:1) X = Execute account librarian
(9:1) X = Execute group user
(10:1) X = Execute group librarian
(11:1) S = Save any user
(12:1) S = Save account user
(13:1) S = Save account librarian
(14:1) S = Save group user
(15:1) S = Save group librarian

USER ENTRY BLOCK

Word	Contents	Name
0-3	USER NAME	UNAME
4-5	USER CAPABILITY	UCAP
6-7	USER ATTRIBUTES	ULATTR
10-13	USER PASSWORD	UPASS
14-17	HOME GROUP (MAY BE NULL)	UHGROUP
20	LOG COUNT (# USERS LOGGED ON)	ULOGCOUNT
21	P|U|0 |MAX JOB PRI	UMAXJOBW
22	COMM FILE REC #	
	:	
	LAST USER ENTRY IN ENTRY BLOCK	

USER ENTRY FIELD DESCRIPTIONS

WORD 4 (0:1) SM = System Manager
(1:1) AM = Account Manager
(2:1) AL = Account Librarian
(3:1) GL = Group Librarian
(4:1) DI = Diagnostician
(5:1) OP = System Supervisor
(6:1) CV = Create Volumes
(7:1) UV = Use Volumes
(8:1) LG = User Logging
(9:1) SP = System Process Handling
(10:1) PS = Programmatic Sessions
(11:1) NA = Network Administrator
(12:1) NM = Node Manager
(13:1) CS = Communications
(14:1) ND = Non-sharable Devices
(15:1) SF = Save Files

WORD 5 (7:1) BA = Batch Access
(8:1) IA = Interactive Access
(9:1) PM = Privleged Mode
(12:1) MR = Multiple Rins
(14:1) DS = Extra Data Segments
(15:1) PH = Process Handling

WORD 21 (0:1) P = Purge flag
(1:1) U = UDC exist flag

SUMMARY OF PROCEDURAL FLOW FOR THE INITIATION OF A NON-CACHED, NON-MEMORY MANAGEMENT DISC I/O REQUEST

EXECUTES ON THE USER STACK

```
<< user process causes an I/O request to the File System       >>
<< File System checks the validity and calls ATTACHIO          >>
ATTACHIO << determines that this is a non-cached disc request  >>
         << and then calls P'ATTACHIO                          >>
  P'ATTACHIO << gets and formats DRQ entry, calls              >>
             << QUEUEDISCREQ to queue it up on the DIT         >>
    QUEUEDISCREQ << queues DRQ entry on DIT, checks if this    >>
                 << is the first entry, if so call AWAKEIO     >>
      AWAKEIO << gets the MONITOR PLABEL (SIODM) from DLT      >>
        SIODM << checks the DIT state, the state is equal to   >>
              << zero and the controller is not busy, it gets  >>
              << the DRIVER PLABEL form the DLT                >>
          DRIVER INITIATOR << fills in the I/O program in ILT  >>
                           << calls procedure to start I/O     >>
            STARTIO / START'HPIB << does an assemble SIO/SIOP  >>
              (SIO / SIOP INSTRUCTION) << start I/O or         >>
                                       << channel program      >>
            STARTIO / START'HPIB << exits                      >>
          DRIVER INITIATOR << returns, DIT in state %13        >>
        SIODM << exits                                         >>
      AWAKEIO << exits                                         >>
    QUEUEDISCREQ << exits                                      >>
  P'ATTACHIO << determines of the request is done, if blocked  >>
             << I/O call WAIT, if no-wait I/O return           >>
    WAIT << if block I/O                                       >>
  P'ATTACHIO << when AWAKEned, the I/O will be complete,       >>
             << return                                         >>
ATTACHIO << exits back to the File System                      >>
<< File System >>
<< user process >>
```

SUMMARY OF PROCEDURAL FLOW FOR THE COMPLETION OF A NON-CACHED, NON-MEMORY MANAGEMENT DISC I/O

EXECUTES ON THE ICS

```
<< external interrupt invokes the interrupt handler             >>
GIP / GIP'HPIB << determines the device that interrupted        >>
  AWAKEIO << gets the monitor PLABEL from the DLT               >>
    SIODM << checks the state of the the DIT, if state = %13    >>
          << gets the driver completor PLABEL from the DLT      >>
      DRIVER COMPLETOR << does error processing , and           >>
                       << finishes off the request              >>
    SIODM << if request completed and not memory management     >>
          << I/O call SIODM'REQUESTDONE                         >>
      SIODM'REQUESTDONE << marks DRQ entry complete, and        >>
                        << calls AWAKE to awake the process     >>
        AWAKE << performs an assemble DISP instruction if       >>
              << required                                       >>
          (DISP INSTRUCTION) << DISPATCHER requested if         >>
                             << necessary                       >>
        AWAKE << exits                                          >>
      SIODM'REQUESTDONE << exits                                >>
    SIODM << must select the next DRQ entry for the device      >>
          << and the next DIT to service; if the next DIT       >>
          << to service is not the current DIT, SIODM calls     >>
          << AWAKEIO who then calls SIODM again on behalf of    >>
          << the other DIT                                      >>
      DRIVER INITIATOR << fills in the I/O program in ILT       >>
        STARTIO / START'HPIB << initiate the next I/O program   >>
          (SIO / SIOP INSTRUCTION) << start I/O instruction     >>
        STARTIO / START'HPIB << exits                           >>
      DRIVER INITIATOR << exits                                 >>
    SIODM << exits                                              >>
  AWAKEIO << exits                                              >>
GIP / GIP'HPIB << IXITs off the ICS                             >>
```

FILE INDEX BLOCK

Word	Contents	
0	1|P|0|0|0|XSIZE |BSIZE	
1	NUMBER OF INDEX POINTERS	
2	NUMBER OF ACCESSORS	INDEX
3	ENTRY TOTALS	BLOCK
4	0|P|0|0|0|EXSIZE |BSIZE	PREFIX
5	INDEX POINTER OF FATHER	
6-11	NAME OF FATHER	
12-15	FIRST NAME OF ENTRY BLOCK	FIRST
16	POINTER TO ENTRY BLOCK	INDEX
17	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY
	:	
	FIRST NAME OF ENTRY BLOCK	LAST
	POINTER TO ENTRY BLOCK	INDEX
	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY

VOLUME SET DEFINITION INDEX BLOCK

Word	Contents	
0	1|P|1|0|0|XSIZE |BSIZE	
1	NUMBER OF INDEX POINTERS	
2	NUMBER OF ACCESSORS	INDEX
3	ENTRY TOTALS	BLOCK
4	0|P|1|0|0|EXSIZE |BSIZE	PREFIX
5	INDEX POINTER OF FATHER	
6-11	NAME OF FATHER	
12-15	FIRST NAME OF ENTRY BLOCK	FIRST
16	POINTER TO ENTRY BLOCK	INDEX
17	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY
	:	
	FIRST NAME OF ENTRY BLOCK	LAST
	POINTER TO ENTRY BLOCK	INDEX
	NUMBER OF ENTRIES IN ENT BLOCK	ENTRY

FILE ENTRY BLOCK

Word	Contents	
0	1ST CHAR FNAME | 2ND CHAR FNAME	
1	3RD CHAR FNAME | 4TH CHAR FNAME	FIRST
2	B| 5TH CHAR FN | 6TH CHAR FNAME	FILE
3	7TH CHAR FNAME | 8TH CHAR FNAME	ENTRY
4	VOL TAB INDEX |	
5	FILE LABEL DISC ADDRESS	
0	1ST CHAR FNAME | 2ND CHAR FNAME	
1	3RD CHAR FNAME | 4TH CHAR FNAME	SECOND
2	B| 5TH CHAR FN | 6TH CHAR FNAME	FILE
3	7TH CHAR FNAME | 8TH CHAR FNAME	ENTRY
4	VOL TAB INDEX |	
5	FILE LABEL DISC ADDRESS	
	:	
	LAST ENTRY IN FILE ENTRY BLOCK	

FILE ENTRY FIELD DESCRIPTIONS

WORD 2 (0:1) B = Bad file label
0 : not defective
1 : defective

VOLUME SET ENTRY BLOCK

Word	Contents	
0-3	VOLUME SET NAME	VOLUME SET
4	0|A|////////////|MVTABX	DEFINITION
5	VOL CNT|////////|VMASK	ENTRY
6-11	MEMBER VOLUME NAME	VOLUME
12	//////////////////////////////|M	ENTRY 0
13	PSEUDO SUBTYPE |VOL TABLE INDEX	
14	VOLUME ENTRIES (1-6)	
57	:	
60-63	MEMBER VOLUME NAME	VOLUME
64	//////////////////////////////|M	ENTRY 7
65	PSEUDO SUBTYPE |VOL TABLE INDEX	
66	DEFINITION REFERENCE COUNTER	
67	0	
	:	
0-3	VOLUME CLASS NAME	
4	1| ////////////////////////////	
5	VOL CNT|////////| VMASK	VOLUME SET
6-11	ACCOUNT OF PARENT DEFINITION	CLASS ENTRY
12-15	GROUP OF PARENT DEFINITION	
16-21	VSNAME OF PARENT DEFINITION	
22-67	0	
	:	
	LAST ENTRY IN VOLUME SET BLOCK	

VOLUME SET DEFINITION ENTRY FIELD DESCRIPTIONS

WORD 4 (0:1) T = TYPE
0 : Volume Set Definition entry
1 : Volume Set Class entry
(1:1) A = Allocating Flag
0 : Not initially allocating, not first user of the set
1 : First user of the set allocating resources (transitional)
(8:8) MVTABX = Mounted Volume Table index
0 if the volumeme set not logically mounted

WORD 5 (0:4) VOL CNT = Number of volumes
(8:8) VMASK = Volume Mask
(8:1) = Volume 7
(9:1) = Volume 6
(10:1) = Volume 5
(11:1) = Volume 4
(12:1) = Volume 3
(13:1) = Volume 2
(14:1) = Volume 1
(15:1) = Volume 0

0 : Not mounted or non-member
1 : Mounted or member

WORD 12 (15:1) M = Member Mounted flag
0 : Not mounted
1 : Mounted

FILE LABEL

Word	Contents	Name
0	FNAME 1ST CHAR | FNAME 2ND CHAR	FLLOCNAME
1	FNAME 3RD CHAR | FNAME 4TH CHAR	
2	FNAME 5TH CHAR | FNAME 6TH CHAR	
3	FNAME 7TH CHAR | FNAME 8TH CHAR	
4	GNAME 1ST CHAR | GNAME 2ND CHAR	FLGRPNAME
5	GNAME 3RD CHAR | GNAME 4TH CHAR	
6	GNAME 5TH CHAR | GNAME 6TH CHAR	
7	GNAME 7TH CHAR | GNAME 8TH CHAR	
10	ANAME 1ST CHAR | ANAME 2ND CHAR	FLACCTNAME
11	ANAME 3RD CHAR | ANAME 4TH CHAR	
12	ANAME 5TH CHAR | ANAME 6TH CHAR	
13	ANAME 7TH CHAR | ANAME 8TH CHAR	
14	CNAME 1ST CHAR | CNAME 2ND CHAR	FLUSERID
15	CNAME 3RD CHAR | CNAME 4TH CHAR	
16	CNAME 5TH CHAR | CNAME 6TH CHAR	
17	CNAME 7TH CHAR | CNAME 8TH CHAR	
20	LWORD 1ST CHAR | LWORD 2ND CHAR	FLLOCKWORD
21	LWORD 3RD CHAR | LWORD 4TH CHAR	
22	LWORD 5TH CHAR | LWORD 6TH CHAR	
23	LWORD 7TH CHAR | LWORD 8TH CHAR	
24	SECURITY MATRIX	FLSECMX
25		
26	FILE LANG ATTR |////////////|S|S	
27	CREATION DATE	FLCREATE
30	LAST ACCESS DATE	FLLASTACC
31	LAST MODIFICATION	FLLASTMOD
32	FILE CODE	FLFILECODE
33	C|//////|MVTABX | VMASK	FLPVINFO
34	S|R|L|X|SUBTYPE| DISC TYPE |R/W	FLLOCK
35	# USER LAB WRIT|# USER LAB AVAL	FLUSERLBL
36	FILE LIMIT IN BLOCKS	FLFLIM
37		
40	FCB VECTOR	FLFCBVECT
41		
42	CHECKSUM	FLCHECKSUM
43	COLD LOAD ID	FLCLID
44	FOPTIONS	FLFOPTIONS
45	RECORD SIZE IN BYTES	FLRECSIZE
46	BLOCK SIZE IN WORDS	FLBLKSIZE
47	SECTOR OFFSET | |# EXTENTS-1	
50	LAST EXTENT SIZE IN SECTORS	FLLASTEXTSIZE
51	EXTENT SIZE IN SECTORS	FLEXTSIZE
52	END OF DATA POINTER	FLEOF
53		
54	VOL TABLE INDEX| HODA	FLEXTTMAP
55	1ST EXTENT LODA ADDRESS	
56	VOL TABLE INDEX| HODA	
57	2ND EXTENT LODA ADDRESS	
	:	
	VOL TABLE INDEX| HODA	
	LAST EXTENT LODA ADDRESS	
	:	
154	FILE ALLOCATION TIME	FLALLOCTIME
155		
156	FILE ALLOCATION DATE	FLALLOCDATE
157	//////////////////////////////	
160	START OF FILE BLOCK NUMBER	FLSTART
161		
162	BLOCK NUMBER OF END OF FILE	FLEND
163		
164	NUMBER OF OPEN AND CLOSE	FLNUMOPENCLSREC
165	RECORDS (MESSAGE FILES)	
166	LAST FILE MODIFICATION TIME	FLMODTIME
167		
170-173	//////////////////////////////	
174	DNAME 1ST CHAR |DNAME 2ND CHAR	FLDEVNAME
175	DNAME 3RD CHAR |DNAME 4TH CHAR	
176	DNAME 5TH CHAR |DNAME 6TH CHAR	
177	DNAME 7TH CHAR |DNAME 8TH CHAR	

FILE LABEL FIELD DESCRIPTIONS

FLAB 26 (14:1) FLSRREALEASE = Store / Restore released bit
(15:1) FLSECURE = File secure bit

FLAB 33 (0:1) FLCLASSFLG = Class flag bit
(4:4) FLMVTABX = Mounted Volume Table Index
(8:8) FLVMASK = Volume Mask

FLAB 34 (0:1) FLSTORE = File being Stored
(1:1) FLRESTORE = File being Restored
(2:1) FLLOAD = File loaded
(3:1) FLEXCL = Exclusive access
(4:4) FLSUBTYPE = Device subtype
(8:6) FLDTYPE = Device type
(14:2) FLSTATUS = Read / Write status
0 : no accessors
1 : read
2 : write
3 : read / write

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MPE V/E SYSTEM TABLES DIAGRAM

Part No. 32033-90043 E0285

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CAUTION

The normal checks and limitations that apply to the standard MPE users are bypassed in Privileged Mode. It is possible for a Privileged Mode program to destroy file integrity including the MPE operating system software itself. Upon request Hewlett-Packard will investigate and attempt to resolve problems resulting from the use of Privileged Mode code. This service is available on a time and materials billing basis. However, Hewlett-Packard will not support, correct, or attend to any modifications of the MPE operating system software.

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A

SYSTEM GLOBAL AREA (SYSGLOB 0) (DST 5)

0 SYSGLOB
1 CST BASE | CST
2 DST BASE | DST
3 PCB BASE | PCB
4 SWAPTAB BASE | SLL
5 IOQ BASE | IOQ
6 SBUF BASE | BUF
7 ICS QI | ICS
10 LPDT BASE | LPDT
11 SMON BASE | SMON
12 TRL BASE | TRL
13 JCUT BASE | SIR
14 SIR BASE | SDCTAB
15 JPCNT BASE | JPCNT
16 TBUF BASE | BUF
17 DISC REQUEST BASE | DRQ
20-21 FIRST FREE MEMORY ADDRESS
22-23 TIME OF LAST CYCLE
24 RESERVED
25 BREAK POINT FLAG | BPTF
26 VDSMTAB BASE | VDSMTAB
27 STATIC FENCE
30 CURRENT CST BLOCK INDEX | CSTBX
31 MEASIO BASE | MEASIO
32 DISPLACEMENT TO CODE | DFC
33 DISPLACEMENT TO SHAREABLE | DFS
34 SMON INDEX
35 ABS ADDRESS (SYSDIT (8)) | DIT8
36 RESERVED
37 ABS ADR OF PMBC TABLE
40 RESERVED FOR INITIAL (VDSENTRY)
41 RESERVED FOR INITIAL (VDSMAP)
42 SRTTAB BASE | SRTTAB
43 SPECQ HEAD | SPECQHEAD
44 NUMBER OF AVAILABLE REGIONS | HOLECOUNT
45 NUMBER OF PAGES IN LARGEST CURRENTLY AVAILABLE REGION | MAXAVAILREG
46 MAKE OVERLAY CANDIDATE INFO | MOCINFO
47 # OF MEMORY BANKS CONFIG - 1
50 SCHEDULER TO AWAKE MESSAGE | SCHEDTOAWAKEMSG
51 POINTER TO CSTBLK TABLE | CSTXBLKPOINTER
52 AWAKE TO SCHEDULER MESSAGE | AWAKETOSCHEDMSG
53 WAIT TO SCHEDULER MESSAGE
54 CURRENT ACTIVITY'S PRIORITY | CURACTPRI
55 BUSY TABLE POINTER | BUSY
56 HEAD TABLE POINTER | HEAD
57 TAIL TABLE POINTER | TAIL
60 # OF SIO PROGRAMS EXECUTING | SIOCOUNT
61 PARITY ERROR FLAG (MEM PE) | PARITY
62 IMPEDED QUEUE HEAD - MESS BUFF | IOMSGPIN
63 I/O MESSAGE SYSTEM ERROR FLAGS | IOLOGQX
64 NUMBER OF TERMINALS READING | RDCOUNT
65 NUMBER OF TERMINALS WRITING | WRTCOUNT
66 DSET B | CRIO
67-70 LAST TIMER | CRIO
71 HIGHEST DRT NUMBER | HSYSDRT
72 POWERFAIL | POWERFAIL
73 SYSTEM UP FLAG | SYSUP
74 SYS CONSOLE LOGICAL DEV NUMBER | CONSLDEV
75 COLD LOAD COUNT | CLOADID
76 SHARED FCB DST | SHFCBDST
77 MONITORING FLAGS
100-101 MAX # OF SPOOL SECTORS | MAXSSECT
102-103 CURRENT # SPOOL KILOSECTORS | NUMSSECT
104 # SECTOR/SPOOFLE EXTENT | EXTSSECT
105 MAX CODE SEGMENT SIZE
106 MAX # OF CODE SEGMENTS/PROCESS
107 MAX STACK SIZE (MAXDATA)
110 DEFAULT STACK SIZE
111 MAX EXTRA DATA SEGMENT SIZE
112 MAX # EXTRA DATA SEG/PROCESS
113 DST NUMBER FOR MESSAGE BUFFERS
114 UPDATE LEVEL | UPDATEL
115 FIX LEVEL | FIXL
116 VERSION LEVEL | VERSION
117 DEFAULT CPU TIME LIMIT
120 NUMBER OF SECONDS TO LOGON
121 JOBSYNCH BITS (13:3)
122 EXTERNAL PLABEL OF INITIATE
123 INTERNAL PLABEL OF INITIATE
124 MAXSYSDST
125 MAXSYSCST
126 LDEV SL.PUB.SYS|HODA SL.PUB.SYS
127 LODA SL.PUB.SYS
130-131 DIRECTORY DISC ADDRESS
132 SPOOLINDEX
220 MAPPING FIRMWARE FLAG
221 BANK AND ADDRESS OF MAPPING DST | LSTT BANK
222 INITIALIZED BY DISPATCHER DURING LAUNCHING A PROCESS | LSTT ADDRESS
223 TOT SEG # OF CURRENT PROCESS
224 TOT FREE PHYSICAL CST ENTRIES
225 HEAD OF FREE PHYSICAL CST LINK
226 XLST DST NUMBER
227-247 RESERVED
250 HOLE LIST HEAD (BANK) | HLHEAD
251 HOLE LIST HEAD (ADDRESS)
252 HOLE LIST TAIL (BANK) | HLTAIL
253 HOLE LIST TAIL (ADDRESS)
254 CURRENT WORD COUNT | XDSCOUNT
255 BUFFER SIZE | BUFFSIZE
256 MAG TAPE LOGICAL DEVICE NUMBER | LDEV
257 TRACE SEGMENT EXTERNAL LABEL | TLABEL
260 STMON
261 MEASINFOTABPTR
262 MEASMNT STATISTICS CLASS MASK | GCLASSENABLED
263 CLASS 0 STATISTICS BANK NUMBER | MEASSTATXDSBANK
264 CLASS 0 STATISTICS ADDRESS | MEASSTATXDSBASE
265-266 SCAN POINT | T=TAPE ERROR BIT, E=EOT MONITOR TAPE, B=BUFFER FLIP/FLOP, M=MONITOR ENABLED
267 MEASFLAGS |T|E|B|M
270 HEWLETT PACKARD DATA BASE(HPDB)
271 INDEX OF PCB AT HEAD OF DISPQ | SYSDISPQHEAD
272 INDEX OF PCB AT TAIL OF DISPQ | SYSDISPQTAIL
273 DST # OF CDT TABLE (CACHING)
274 BANK # OF CDT TABLE (CACHING)
275 ADDRESS OF CDT TABLE (CACHING)
276 HELP LOGICAL DEVICE NUMBER
277 CURRENT LOGON DST | DSTLOGON
350 M| |S | M=MEM PRESSURE, S=SOFTDEATH FLAG
351-352 LAST CYCLE DURATION
353-354 CYCLE THRESHOLD
355 BUG CATCH ENABLE CELL
356 MONITOR BUFFER | TIMESTAMP | MONBUFT0
357 MONITOR BUFFER | TIMESTAMP | MONBUFT1
360 DSBREAK PLABEL
361 BANK OF LAST MEMORY WORD | LAST MEMORY
362 BASE OF LAST MEMORY WORD | ADDRESS
363 PVPROC PIN
364 PV RECOGNITION COUNT
365 VMOUNT FLAGS |A|A|O | A=AUTO, A=ALL, O=ON
366-370 RESERVED FOR PRIVATE VOLUMES
371 MSG CAT. LDEV|
372 MESSAGE CATALOG DISC ADDRESS
373 MSG DST
376 SLEVEL UDC'S FLAG(1=UDC EXISTS)
377 SYSDB RELATIVE POINTER TO SYSGLOB EXTENSION
400 CPU NUMBER (SET BY FIRMWARE)
401-422 CPU REGISTERS USED FOR DUMP

SYSGLOB EXTENSION

0 SWAP QUEUE DELAY (100 ms) | SWAPQDELAY
1 BANK OF 1ST REGION LINKED MEM | FIRST MEMORY REGION
2 BASE OF 1ST REGION LINKED MEM
3 GARBAGE COLLECTION ENABLE FLAG | GARBCOLLENAB
4 MOVE THRESHOLD (IN PAGES) | MOVETHRESH
5 MAIN MEMORY PAGE SIZE (WORDS)
6 VDS PAGE SIZE
7-10 LAST MAKE ROOM TIME
11 MEM PRESSURE DURATION THRESHOLD
12 NATIVE LANGUAGE TABLE DST | NLT
13 RESERVED FOR NATIVE LANG SUP
14 BAUD RATE OF THE SYSTEM CONSOLE
15 ////////////////////////////////
16 PLABEL FOR REMOTE'MPE
17 PLABEL FOR GETDS'NODENAME
60 PLABEL USERLOG (EXTERNAL)
61 PLABEL USERLOG (INTERNAL)
62 PLABEL RECLOG (EXTERNAL)
63 PLABEL RECLOG (INTERNAL)
64 PLABEL RESTART (EXTERNAL)
65 PLABEL RESTART (INTERNAL)
66 PMBC LOW CORE BANK # (USER)
67 PMBC LOW CORE ADDRESS (USER)
70 RESERVED FOR IMAGE
71 RESERVED FOR MEASIO 12|MIOCNT
72 LOADER CACHE SEGMENT NUMBER
73 PLABEL 3270 (EXTERNAL)
74 MIT VERSION
75 MIT UPDATE
76 MIT FIX
77 # OF TAPE CNTLLRS USING MEASIO
100 PORT DATA SEGMENT NUMBER
101 RESERVED FOR 2ND PORT DATA SEG
102 SYSTEM FPMAP OPTION FLAG | SYSFPMAP
103-110 GLOBAL ALLOW MASK
111-117 RESERVED
120 SYS PORT PROCESS PCB REL INDEX
121 GLOBAL AFT DST NUMBER
122 INITIAL/PROGEN COMM DSEG NUMBER
123 INITIAL SYSTEM STARTUP OPTION
124 PORT'MAX'SIR'COUNTER
125-127 UNASSIGNED
130-144 DS, NETWORK, MANAGEMENT APPLICATION SERVICES
145-150 RES FOR SPL PATH FLOW ANALYZER
151-200 UNASSIGNED

B

FIXED LOW MEMORY

0 CSTB (BASE OF CST TABLE)
1 XCSTB (BASE OF CSTX TABLE)
2 DSTB (BASE OF DST TABLE)
3 0
4 CPCB (CURRENT PCB INDEX) | PCB RELATIVE
5 QI (INITIAL Q FOR ICS)
6 ZI (INITIAL Z FOR ICS)
7 SYSTEM INTERRUPT MASK WORD
10 DRT BANK (BANK OF DRT TABLE)
11 DRT ADDRESS (BASE OF DRT TABLE)
12 DBBANK (FOR INITIAL'S STACK)
13 DB (FOR INITIAL'S STACK)
14-20
21 LR (INTERRUPT INTERVAL)
22 TEMPLR (TEMPORY STORAGE OF LIMIT REGISTER)
23 LR (SYS CLOCK LIMIT REG)
24 ////////////////////////////////
25 TR (TIME SINCE LAST SOFT TIMER INTERRUPT)
26 SCST (SYSTEM CLOCK STATUS)
27 SCLC (SYSTEM CLOCK LAST COUNT)
30-37

NOTE: All pointers are absolute addresses

CODE SEGMENT TABLE (FLM 0) (SYSGLOB 1) (DST 1)

0 NUMBER OF CONFIGURED ENTRIES | CST ENTRY 0 FORMAT
1 ENTRY LENGTH (4)
2 NUMBER OF AVAILABLE ENTRIES
3 TAB REL INDEX TO 1ST FREE ENTRY
CST ENTRY #1 (FIRST SEGMENT)

0 %100000 | CST FREE ENTRY FORMAT
1 TAB REL OFFSET TO NEXT FREE ENT
2 TAB REL OFFSET TO PREV FREE ENT
3 ////////////////////////////////

0 A|M|R|T| SIZE / 4 | FIRMINFO
1 /|R|I|/|/|/|S|C|/ (R O M, I C I, S Y S, C O R E) | FLAGS | *
2 BANK | MMBANK
3 BASE | MMBASE

0 A|M|R|T| SIZE / 4 | FIRMINFO
1 /|R|I|/|/|/|S|C|/ (R O M, I C I, S Y S, C O R E) | FLAGS | **
2 LDEV# | HODA | MMBANK
3 LODA | LODA

* CST Entry for a present SL or CSTX Segment
** CST Entry for an absent SL or CSTX Segment

CODE SEGMENT TABLE EXTENSION (FLM 1) (DST 4)

0 UNUSED | CSTX ENTRY 0 FORMAT
1 UNUSED
2 NUMBER OF AVAILABLE ENTRIES
3 TAB REL INDX TO 1ST FREE ENTRY

0 M = NUMBER OF CST'S IN BLOCK | OVERHEAD FOR PROGRAM BLOCK #1
1 VALIDITY = %125252
2 NUMBER OF USERS SHARING BLOCK
3 0
4 A|M|R|T| SIZE / 4 | FIRMINFO
5 /|R|I|/|/|/|S|C|/ | FLAGS | PROGRAM SEGMENT #1 (PRESENT)
6 BANK | MMBANK
7 BASE | MMBASE
:
PROG SEGMENT n HAS CST FORMAT | PROGRAM SEGMENT #n

0 M = NUMBER OF CST'S IN BLOCK | OVERHEAD FOR PROGRAM BLOCK #2
1 VALIDITY = %125252
2 NUMBER OF USERS SHARING BLOCK
3 0
PROGRAM SEGMENT #1 | PROGRAM SEGMENT #1
PROGRAM SEGMENT #2 | PROGRAM SEGMENT #2
:
PROGRAM SEGMENT #n | PROGRAM SEGMENT #n

CST BLOCK TABLE (DST 43)

0 NUMBER OF ENTRIES IN TABLE
1 ANY UNASSIGNED ENTRY = -1
2 CSTX BLOCK INDEX (DST RELATIVE)
3 REMAINING CSTBLK ENTRIES

NOTE : All pointers are DST relative. Abs addr = CSTX BLOCK INDEX + DST BASE

DATA SEGMENT TABLE (FLM 2) (SYSGLOB 2) (DST 2)

0 NUMBER CONFIGURED ENTRIES | DST ENTRY 0 FORMAT
1 ENTRY LENGTH (4)
2 NUMBER AVAILABLE ENTRIES
3 TAB REL INDEX TO 1ST FREE ENTRY
DST #1 (FIRST DATA SEGMENT)

0 %100000 | DST FREE ENTRY FORMAT
1 TAB REL OFFSET TO NEXT FREE ENT
2 TAB REL OFFSET TO PREV FREE ENT
3 ////////////////////////////////

0 A|O|R| SIZE / 4 | FIRMINFO
1 D|R|I|S|M|F|S|C|W (C O M T O W Y O D, V C I K D I S R, P E) VMALLOC | +
2 BANK
3 BASE

0 A|O|R| SIZE / 4 | FIRMINFO
1 D|R|I|S|M|F|S|C|W (C O M T O W Y O D, V C I K D I S R, P E) VMALLOC | ++
2 LDEV # | HODA
3 LODA

\+ DST Entry for a present Data Segment
\++ DST Entry for a absent Data Segment

SEGMENT TABLE ENTRY FIELD DESCRIPTIONS

WORD 0 (0:1) A = 1 = segment is absent
(1:1) M = 1 = segment is privileged
(2:1) R = 1 = segment has been referenced
(3:1) T = 1 = segment has been traced

WORD 1 (0:1) DCV = 1 = disc copy is valid
(1:1) ROC = 1 = segment is a recoverable overlay candidate
(2:1) IMI = 1 = segment is in motion in
(3:1) STK = 1 = segment is a stack
(4:1) MOD = 1 = a segment modication is pending
(5:1) FWIP = 1 = a forced write of this segment is in progress
(6:1) SYS = 1 = segment is a system segment
(7:1) CORE = 1 = segment is core resident
(8:1) WD = 1 = write disabled
(8:7) VMALLOC = number of virtual memory pages allocated to this segment

FIXED DST ENTRY ASSIGNMENTS

0 Entry 0 Format
1 Code Segment Table
2 Data Segment Table
3 Process Control Block Table
4 Code Segment Table Extension
5 System Global Area
6 Fixed Low Memory
7 Interrupt Control Stack
10 System Buffers
11 UCOP Request Queue
12 Process-process Communication Table
13 I/O Queue
14 Terminal Buffers
15 Logical Physical Device Table
16 Logical Device Table
17 Driver Linkage Table
20 I/O Resource Table
21 Secondary Message Table
22 Loader Segment Table
23 Timer Request List
24 Directory
25 Directory Space
26 Rin Table
27 Swaptable (SLL)
30 Job Process Count Table
31 Job Master Table
32 Tape Label Table
33 Log Table
34 Reply Information Table
35 Volume Table
36 Breakpoint Table
37 Log Buffer 1
40 Log Buffer 2
41 Log ID Table
42 Associate Table
43 CST Block Table
44 Job Cutoff Table
45 System Job Information Table
46 Special Request Table
47 Virtual Disc Space Management Table
50 Device Class Table
51 Reserved for Kernel
52 Interrupt Linkage Table
53 Sir Table
54 File Multiaccess Vector Table
55 Input Device Directory
56 Output Device Directory
57 Welcome Message #1
60 Welcome Message #2
61 CS Date Segment
62 Process Job Cross Reference
63 System Job Directory Table
64 Command Logon DST
65 Mounted Volume Table
66 Private Volume User Table
67 Reserved for Kernel
70 Disc Request Table
71 Message Harbor Table
72 Primary Message Table
73 Measurement Information Table
74 First Free DST

OBJECT INDENTIFIER

TYPE | CST BLOCK INDEX
OBJECT NUMBER

OBJID 0 (0:4) TYPE = 0 - Object is a Data Segment
1 - Object is a SL Segment
2 - Object is a Program Segment
3 - Object is a Cache Domain

OBJID 0 (4:12)==> Program index into CSTXBLK
OBJID 1 (0:16)==> Number field: DST, CST, CSTX, or CDT number

C

ICS GLOBAL (FLM 5) (SYSGLOB 7) (DIS 7)

QI-#63 RESERVED
#50
#49 CANDPIN
#48 LAST WEIGHT
#47-46 PAUSE TIME
#45 LISTSTATE
#44 CUREFILTER
#43 CURDFILTER
#42 CWTNUM
#41 CWTDENOM
#40 CURCEFILTER
#39 MAXCFILTER
#38 MINCFILTER
#37 ESCHEDBASE
#36 DSCHEDBASE
#35 CSCHEDBASE
#34 WORSTEPRI
#33 WORSTDPRI
#32 WORSTCPRI
#31 MISC. BOUNDS FLAGS
#30 SYSTEM MEM BOUND
#29 XDS UPPER BOUND
#28 DL INITIAL
#27-22 RESERVED
#21-20 PAUSETIME | MPE III ONLY
#19 PAUSECODE
#18 DISAP
#17 RESERVED
#16 SDST
#15 PSTA
#14 PADDR
#13 TRACE FLAG
#12 PFAIL
#11 JCUT
#10 XP
#9 PCBX
#8 Z
#7 DL
#6 S
#5 SBANK
#4 STDB
#3 0
#2 P | DISPATCH STACK MARKER
#1 STATUS
QI 0 P| 0
+1 DB BANK RETURN | FOR DISPATCH
2 DB RETURN
3 D| PARM

QI-0 : P = Pseudo-Disabled and DISP instruction executed
QI+3 : D = Dispatcher Interrupted

QI-19: PAUSECODE (MPE III ONLY):
0 = System not paused 2 = Paused for swap
1 = Paused for disc 3 = System idle

ICS GLOBAL CELLS WITH INITIAL VALUES

QI-4 : STDB = absolute address of the currently running process's stack
QI-5 : SBANK = bank address for process's stack
QI-6 : S = stack DB relative S
QI-7 : DL = stack DB relative DL
QI-8 : Z = stack DB relative Z
QI-9 : PCBX = absolute stack address
QI-10: XP = PCB table relative pointer to word 0 of the running process's PCB

THE ABOVE CELLS ARE TO BE INITIALIZED FOR PROGENITOR.

CPCB = Fixed Low Memory 4, is an absolute version of XP. If CPCB is zero, then the above cells are invalid. This will never be the case in a process. CPCB should also be set by INITIAL.

QI-16: SDST = DST number for the running process's stack
QI-11: JCUT = the bank 0 absolute address of the JCUT
QI-14: PADDR = PB relative address for the procedure PSEUDOIT
QI-15: PSTA = Status value for PSEUDOINT, %140000+CST#
QI-18: DISAP = PSDB counter, initially 0

INITIAL sets the above as described.

CODE SEGMENT

PB
CODE
P→
M M| STT # | SEG #
:
N+3 M| STT # | SEG # | EXTERNAL
N+2 M| STT # | SEG # | LABELS
N+1 M| STT # | SEG #
N |U| ADDRESS
:
3 |U| ADDRESS | LOCAL
2 |U| ADDRESS | LABELS
1 |U| ADDRESS
PL 0 # LOCAL LABELS | # OF LABELS

M = Mapping Flag
U = Uncallable Bit

PROCESS CONTROL BLOCK TABLE (SYSGLOB 3) (DST 3)

0 NUMBER OF CONFIGURED ENTRIES | PCB ENTRY 0
1 ENTRY LENGTH (%25)
2 NUMBER OF UNASSIGNED ENTRIES
3 TAB REL INDX 1ST UNASSIGNED ENT
4 TAB REL INDEX LAST FREE ENTRY
5 HIGH WATER MARK
6 # PRIMARY CONFIGURED ENTRIES
7 HEAD IMPEDED QUEUE PCB REL INDX
10 TAIL IMPEDED QUEUE PCB REL INDX
11 # CURRENTLY IMPEDED PROCESSES
12 NUMBER MAX IMPEDED PROCESSES
13 CUMULATIVE # IMPEDED PROCESSES
14-24 0

0 000000 | UNASSIGNED PCB ENTRY FORMAT
1 TABLE RELATIVE INDEX TO NEXT UNASSIGNED ENTRY
2-23 0
24 177777

PCB00 S|B|C|H|P|H|I|P|D|L|S|T|U|H|S|R (A F R S I S P C S W W R S I P T, R I I O P E O O F T E D P B, T R V R X P I Q R I A K) | RESABORTINFO
PCB01 SLL RELATIVE ADDRESS OF PROCESS SEGMENT LOCALITY LIST | SLLPTR
PCB02 A|/ D|/ B|/ XDS DST NUMBER | DBXDSINFO
PCB03 A|S O|C STACK DST NUMBER | STKINFO
PCB04 M|R|R|M|B|I|U|J|T|M|S|F|I|S|I|M (G L A I O C N I S O A M I I E, O P K M G N P R M M) | WAKEMASK
PCB05 FATHER'S PCB INDEX | FATHERINFO
PCB06 SON'S PCB INDEX | SONINFO
PCB07 BROTHER'S PCB INDEX | BROTHERINFO
PCB10 PSIM |WSOFT| 0 A |DEAD|FAC| ////////////// | PIINFOIMPPIN
PCB11 LIV | BMS | PPC | STOV | PTYPE | S|H|S|S|H|C|B (I K K T B Y K) | PROCSTATE
PCB12 EVENT FLAGS |W | EVENTFLAGS
PCB13 SEGIDENTIFIER OF LAST | LASTREFSWAPSEG
PCB14 REFERENCED SWAPPABLE CODE SEG
PCB15 D|L|C|D|E|I|C|A (I Q N O S P R O T R S E E Q R R T) PRIORITY | QUEUEINGINFO
PCB16 BLKINX | PBX
PCB17 LSTT DST NUMBER | MAPDST
PCB20 PIMP PCB INDEX | PIMPPIN
PCB21 NIMP PCB INDEX | NIMPPIN
PCB22 BPTLINK | BPTLINK
PCB23 PCB INDEX NEXT PCB ENTRY QUEUED | NQPTR
PCB24 PCB INDEX PREV PCB ENTRY QUEUED | PQPTR

SOME PCB ASSIGNED ENTRY FIELD DESCRIPTIONS

PBC0 (0:1) SAR = Scheduling Attention Required
(1:1) BF = Bounds Flag - priv mode bounds check
(2:1) CRIT = Process is critical
(3:1) HSIR = Process has a SIR
(4:1) PIOVR = Pending PI, process critical
(5:1) HSPRI = Hold SIR priority
(6:1) IPEXP = Incore protect expired
(7:1) PC = Preempt Capability
(8:1) DSOFT = Delayed Soft interrupt porcessing
(9:1) LW = Long Wait
(10:1) SW = Short Wait
(11:1) TRW = Terminal Read Wait
(12:1) USEDQ = Used a quantum since transaction began
(13:1) HIPRI = Hold impeded priority
(14:1) STOVA = Processing abort due to stack overflow
(15:1) RITBRK

PCB02 (0:1) ADB = Set if DB pointing to an absolute address
(2:14) XDS = DST entry number of XDS to which DB is set

PCB03 (0:1) AO = Stack overflow is already allocated
(1:2) SC = Set if executing system code
(2:14) STK = DST number of process' stack

PCB04 (0:1) M = Mourning wait
(1:1) RG = Global RIN wait
(2:1) RL = Local RIN wait
(3:1) MA = Mail wait
(4:1) BIO = Block for IO wait
(5:1) IO = IO wait
(6:1) UCP = UCOP wait and RIT wait
(7:1) JNK = Junk wait
(8:1) TIM = Timer wait
(9:1) MSG = File system basic IPC message wait
(10:1) SON = Son wait
(11:1) FA = Father wait
(12:1) IMP = Process waiting to be unimpeded
(13:1) SIR = Process waiting for a SIR
(14:1) TIM = Process waiting for a time out
(15:1) MEM = Process waiting for a memory

PCB10 (0:3) PSIM = Pseudo - interrupt mode
1 : hard kill
2 : soft kill
3 : stop
4 : hibernate
5 : escape
6 : break
7 : normal
(3:1) WSOFT = OK for soft interrupt to wake process
(4:2) OA = Origin of Activation
0 : other source
1 : father
2 : son
3 : reply done on a RIT wait
(6:1) DEAD = Set during expiration
(7:1) FAC = Father activated on process termination

PCB11 (0:1) LIV = LIVE, if set process is alive
(1:2) BMS = Block Mail, valid if MA set
0 : send to father
1 : rec from father
2 : send to son
3 : rec from son
(3:2) PPC = Process to process communication, set with respect to son
0 : null
1 : son to father
2 : father to son
3 : blocked
(5:1) STOV = Stack overflow bit
(6:3) PTYPE = Process type
0 : user
1 : user, son of main
2 : user, main
3 : user, main, task
4 : system
5 :
6 : system, UCOP
7 :
(9:1) SI = Set when the DISPATCHER (and PSEUDOINT) should be aware of a pending soft interrupt

PCB12 (0:15) EVENT FLAGS : one for each wait class in PCB04
(15:1) WS = Wake up waiting switch set if an awake is missing

D

RIN TABLE (DST 26)

INDEX OF FIRST FREE ENTRY
(# LOCAL + GLOBAL RINS) *3
////////////////////////////////
RT | INDEX OF NEXT FREE
0
0
RT | INDEX OF NEXT FREE
0
0
1 1| | FILE RIN LOCKED
PIN OF HOLDER
HEAD OF WAITING LIST(P) | → ++
JIT (53) RIN PTR →
0 1| INDEX OF NEXT RIN | LOCAL RIN #1 UNLOCKED
0
0
0 1| INDEX OF NEXT RIN | LOCAL RIN #2 UNLOCKED
0
0
0 1| 0 (EOL) | LOCAL RIN #3 (LAST) LOCKED
PIN OF HOLDER (P)
HEAD OF WAITING LIST(P) | → ++
1 0| INDEX OF PASS & USER ** | GLOBAL RIN LOCKED
PIN OF HOLDER
HEAD OF WAITING LIST(P) | → ++
FREE LIST POINTER | SECONDARY TABLE *
TOTAL NUMBER OF ENTRIES | HEADER
NUMBER OF FREE ENTRIES | ENTRY
RESERVED
0 PTR TO NXT FREE| | FREE ENTRY
1
11
0-3 RIN PASSWORD ** | ASSIGNED
4-11 USER NAME & ACCOUNT NAME | ENTRY

WORD 0 (0:2) RT = Rin Type (when allocated)
1 : Local Rin 2 : Global Rin 3 : File Rin

++ PCB number of the waiting processes linked through PCB impeded queue (PCB number pointers)
* Secondary Table of 12 word entries used for Global Rins only
** Index of password = relative to base of the Secondary table

SIR TABLE (SYSGLOB 14) (DST 53)

0-3 0 | FREE (NOT LOCKED)
0 PCB INDEX OF HOLDER | SIR LOCKED NO IMPEDED PROCESSES
1-3 0
0 PCB INDEX OF HOLDER | SIR LOCKED IMPEDED PROCESSES +
1 SIR QUEUE LENGTH
2 HEAD OF IMPEDED LIST (PCB REL) → *
3 TAIL OF IMPEDED LIST (PCB REL) → *

\+ SIR QUEUE LENGTH - number of processes queued for this SIR
* Waiting processes linked through PCB impeded queue

SIR ALLOCATION SIR ORDERED BY SIR NUMBER

SIR#	RANK	SIR NAME
1	10	LOAD PROCESS
2	335	CACH CONTROL
3	91	IDD
4	92	ODD
5	50	PROCESS TREE STRUCTURE
6	60	SCHEDULING QUEUE
7	70	CST ENTRIES
8	80	SYSTEM DIRECTORY
9	90	LPDT
10	95	LDT
11	110	STORAGE OVERLAY AREA
13	130	JPCNT
14	140	JCUT
15	27	JMAT
16	5	FMAVT
17	22	LOADER SEGMENT TABLE
18	180	VDD
19	190	SPOOL
20	200	MESSAGE CATALOG
21	210	RIT
22	220	VOLUME TABLE
23	230	WELCOME MESSAGE SIR
24	240	ASSOCIATION TABLE
25	250	CS ALLOCATE
26	260	LOGGING BUFFER
27	83	PV MVTAB
28	280	MEASSIR
29	290	PV USER TABLE
30	300	IMAGE
31	310	KSAM
32	320	USER LOGGING
33	330	DEBUG BREAKPOINT TABLE
34	340	PCB
35	350	SUB-QUEUE MAPPING TABLE
36	360	CILOG
37	25	FILE INTEGRITY
38	380	RIN
39	390	TAPE LABELS
40	87	DEVICE CLASS TABLE
41	400	HORIZON
42	401	COLD LOAD SIR
43		1ST JOB (JIR)
44		2ND JOB (JIR)
.	.	.

SWAP TABLE (SYSGLOB 4) (DST 27)

0 NUMBER OF ENTRIES CONFIGURED
1 ENTRY SIZE %(6)
2 NUMBER AVAILABLE ENTRIES
3 TAB REL INDEX OF 1ST FREE ENTRY
4 TAB REL INDEX OF LAST FREE ENTR | SWAPTAB
5 HIGH WATER MARK | ENTRY
6 NUMBER PRIMARY ENTRIES (0) | 0 FORMAT
7 HEAD OF IMPEDED QUEUE PCB REL
10 TAIL OF IMPEDED QUEUE PCB REL
11 # CURRENTLY IMPEDED PROCESSES
12 MAX NUMBER IMPEDED PROCESSES
13 CUMULATIVE # IMPEDED PROCESS
14-21 :

0 100000 | SWAPTAB UNASSIGNED ENTRY FORMAT
1 TABLE REL INDEX NEXT FREE ENTRY
2 TABLE REL INDEX PREV FREE ENTRY
3-5 0

0 100000 | SWAPTAB UNASSIGNED ENTRY FORMAT
1 TABLE REL INDEX NEXT FREE ENTRY
2 TABLE REL INDEX PREV FREE ENTRY
3-5 0

0 S|H|I|P|S|S (W A N A T W, A S T R R I, R M L T T P, E E O I O, Q M C N V) IOCNT | SLL HEADER FORMAT | SCHEDTOIOMSG
1 TABLE REL INDEX 1ST ENTRY LIST | FIRSTINX
2 ////////////////////////////////
3 TABLE REL INDEX MEM REQ. ENTRY | MEMREQINX
4 NUMBER ENTRIES IN PROCESS' SLL | SEGCOUNT
5 ////////////////////////////////

0 PCB REL INDEX NEXT IMPEDED PIN | NEXTIMPPIN
1 TAB REL INDEX NEXT ENT IN LIST | NEXTINX
2 TAB REL INDEX PREV ENT IN LIST | PREVINX
3 TYPE | CST BLOCK INDEX | SLL'OBJDESC
4 OBJECT NUMBER | SLL'OBJNUM
5 M|S|D|L|F|S|T|F|L|D PRE FETCH COUNT | SLL'FLAGS | SLL LIST ENTRY FORMAT

0 PCB REL INDEX NEXT IMPEDED PIN
1 TAB REL INDEX NEXT ENT IN LIST
2 TAB REL INDEX PREV ENT IN LIST
3-4 OBJECT IDENTIFIER
5 M|S|D|L|F|S|T|F|L|D|PRE-FETCH

0 PCB REL INDEX NEXT IMPEDED PIN
1 TAB REL INDEX NEXT ENT IN LIST
2 TAB REL INDEX PREV ENT IN LIST
3-4 OBJECT IDENTIFIER
5 M|S|D|L|F|S|T|F|L|D|PRE-FETCH

0 PCB REL INDEX NEXT IMPEDED PIN
1 TAB REL INDEX NEXT ENT IN LIST
2 TAB REL INDEX PREV ENT IN LIST
3-4 OBJECT IDENTIFIER
5 M|S|D|L|F|S|T|F|L|D|PRE-FETCH | SLL'FLAGS

SLL HEADER ENTRY FIELD DESCRIPTIONS - SCHEDTOIOMSG

(1:1) SWEQ = Swap required flag
(2:1) HASMEM = Has memory flag
(3:1) INTLOC = Initialize locality to minimum
(4:1) PARTIN = Process partially swapped in
(5:1) STRTOV = Start swap over flag
(6:1) SWIP = Swap in progress flag
(8:8) IOCNT = Segment read completion until awake

SLL LIST ENTRY FIELD DESCRIPTIONS - SLL'FLAGS

(0:1) MAPSEG = Process CST mapping segment (LSTT)
(1:1) STK = Process' stack entry
(2:1) DISCIOSEG = Disc IO pending on this segment
(3:1) LOCKED = Segment locked in memory
(4:1) BLKLK = Request of blocked lock
(5:1) FROZE = Segment frozen in memory
(6:1) SLLIMI = Process queued for this segment
(7:1) TOSS = Toss this entry
(8:1) FRZREQ = Request segment to be frozen
(9:1) LKREQ = Request to lock segment in memory
(10:1) DECCNTFLAG
(11:1) PREFETCHCOUNT

LOGICAL SEGMENT TRANSFER TABLE

NUMBER OF LOGICAL SEGMENTS
LENGTH OF LSTT
PHYSICAL SEGMENT NUMBER | LOGICAL SEGMENT 1
POINTER TO STT LIST
PHYSICAL SEGMENT NUMBER | LOGICAL SEGMENT 2
POINTER TO STT LIST
:
PHYSICAL SEGMENT # | LOGICAL SEGMENT N (MAX #255)
POINTER TO STT LIST
M| STT # | SEG # | EXTERNAL LABELS FROM LOGICAL SEGMENT 1 (IF NEEDED)
:
M| STT # | SEG #
M| STT # | SEG #
M| STT # | SEG #
TOTAL # STT'S FOR THIS SEGMENT
M| STT # | SEG # | EXTERNAL LABELS FROM LOGICAL SEGMENT N (IF NEEDED)
:
M| STT # | SEG #
M| STT # | SEG #
M| STT # | SEG #
TOTAL # STT'S FOR THIS SEGMENT

E

LOGICAL DEVICE TABLE (DST 16)

0 HIGHEST ENTRY NUMBER | ENTRY 0 FORMAT
1 ENTRY SIZE (7)
2 STREAMS DEVICE NUMBER
3-6 ////////////////////////////////

0 FILE USE COUNT | TYPICAL ENTRY FORMAT
1 VOL TABLE.INDEX IF DEV TYPE < 8 ELSE MAIN PROCESS PIN NUMBER OR SPOOLER PROCESS PIN NUMBER
2 RECORD WIDTH |C|F|DEVICE TYPE
3 SS |S|D|D|T|H|C|S|DEV DEP. INFO
4 ///// XDD HEAD INDEX | XDD
5 CONTROL Y PIN
6 DEFAULT OUTPUT DEVICE OR DEFAULT CLASS INDEX

LOGICAL DEVICE TABLE ENTRY FIELD DESCRIPTIONS

WORD 2 (8:1) C = communication system device if set
(9:1) F = If set, special forms mounted on device

WORD 3 (0:2) SS = spool state of device
0 : not spooled
1 : owned by input spooler
2 : owned by output spooler
(2:1) S = device is available to system
(3:1) D = device is available to diagnostics
(4:1) D = :DOWN requested, honored when use count=0
(5:1) T = if set, trailers are disabled
(6:1) H = if set, headers are disabled headers/trailers generated in pairs or not at all
(7:1) C = if 1/0, WORD 6 is the Device Class Table index/LDEV number of the default output class/device associated with this device
(8:1) S = spooling has been enabled for this device

LOGICAL DEVICE TABLE EXTENSION (DST 16)

0 HIGHEST ENTRY | ENTRY 0 FORMAT
1 ENTRY SIZE (5)
2-4 ////////////////////////////////

0 0|0|0|0|0|RESERVED | TBRC | TERMINAL ENTRY
1 TERMINAL DESCRIPTOR TAB OFFSET
2 W|
3-4 ////////////////////////////////

0 0|1|0|0|0|RESERVED |//////////// | SERIAL OR FOREIGN DISC ENTRY
1 SDISC : XDS# FOR VAR, GAP TABLE FDISC : 1
2 SDISC : 1=DATA BUF XDS ACQURIED FDISC : NOT USED
3 SDISC : PCB INDEX WHEN WAITING FDISC : NOT USED
4 ////////////////////////////////

0 0|0|0|0|1|RESERVED | TBRC | DATACOMM ENTRY
1 FLAG WORD
2-4 ////////////////////////////////

0 0|0|1|1|0|0|RESERVE|D|//////////// | CIPER ENTRY
1 CIPER DEV CNT DATA SEG# (CDCDS)
2 D|CTM INDEX FOR THIS DEV (CTMI)
3-4 ////////////////////////////////

0 S|0|0|1|1|0|RESERVED |//////////// | SYSTEM OR PV DISC ENTRY
1 ////////////////////////////////
2 DISC FREE SPACE DST # (DFSDST)
3 DISC FREE SPACE ERROR STATUS
4 ////////////////////////////////

TERMINAL ENTRY FIELD DESCRIPTIONS

WORD 0 (10:6) TBRC = Terminal baud rate code
WORD 1 = offset from the base of the Terminal Descriptor Table; a minus one indicates no TDT entry exists for this terminal
WORD 2 (0:1) WS = this terminal is connected to a workstation configurator port

DS ENTRY FIELD DESCRIPTIONS

WORD 0 (10:6) TBRC = Terminal baud rate code
WORD 1 = Flag word defined by IND Datacomm Lab

CIPER ENTRY FIELD DESCRIPTIONS

WORD 0 (8:1) D = if 1, then debugging in effect
WORD 2 (0:1) D = if 1, then CIPER facility has been disabled for this device because of an error
(1:15) CTM = Control Table Map index, an index into the Control Table, which is located in the CDCDS

SYSTEM OR PV DISC ENTRY FIELD DESCRIPTIONS

WORD 0 (0:1) S = seek ahead enable/disable flag (system and PV disc only)
WORD 2 = Disc Free Space DST number (system or PV)
WORD 3 = Disc Free Space error number (system or PV)

DEVICE CLASS TABLE (DST 50)

0 TOTAL TABLE (SEGMENT) SIZE
1 ENTRY SIZE (VARIABLE, SET TO 1)
2 NUMBER OF DEVICE CLASS ENTRIES | HEADER
3 POINTER TO FIRST DEVICE CLASS ENTRY (SEGMENT RELATIVE) | ENTRY FORMAT
4 # OF TERM. DESCRIPTOR ENTRIES
5 POINTER TO FIRST TERMINAL DESCRIPTOR ENTRY (SEG RELATIVE)

0-3 CLASS NAME (ASCII)
4 /|CYCLICAL PTR |S|T|ACCESS TYPE | TYPICAL
5 NUMBER OF DEVICES IN CLASS (N) | ENTRY
6 LOGICAL DEVICE #1 | FORMAT
7 LOGICAL DEVICE #2
:
N+5 LOGICAL DEVICE #N

0-3 FILE NAME
4-7 GROUP NAME
10-13 ACCOUNT NAME | TERMINAL
14 NUMBER OF DEV. IN USING FILE N | DESCRIPTOR
15 LOGICAL DEVICE #1 | TABLE
16 LOGICAL DEVICE #2
:
N+14 LOGICAL DEVICE #N

JOB MASTER TABLE (DST 31)

0 MAX SIZE | CURSIZE
1 VMOUNT INFO | ENTRY SIZE
2 ENTRY POINTER (46)
3 SCHEDULING HEAD POINTER
4 SCHEDULING TAIL POINTER
5-6 TY | SCOUNTER | ZEROTH
7-10 TY | JCOUNTER | ENTRY
11 L|SEC|//////////|SFENCE |JOBFNCE
12 SLIMIT
13 SNUM
14 JLIMIT
15 JNUM
16 JMATSCHEDHEAD
17-45 WORKAREA (#23 WORDS)

0 STATE |D|I|G|A|U|C| INPRI
1 TY |JOB/SESSION NUMBER
2 JOB/SESSION # CONT FOR HPE
3-6 USER NAME
7-12 ACCOUNT NAME
13-16 JOB NAME
17-22 GROUP LOGON NAME
23 JIN DEVICE | JMAT
24 JLIST DEVICE | ENTRY
25 JULIAN DATE (CALENDAR)
26-27 TIME (CLOCK)
30 LANGUAGE | XPRI
31 MAIN PIN
32 CPU LIMIT (0 DEFLT, -1 NO LIM)
33 S|R|N|FT |OUTPRI | NUMCOPIES
34 ORIGJIN
35 ORIGJLIST / SCHEDLINK
36 JMAT CREATOR PIN
37 P|W|N|
40-43 RESERVED
44-45 UNUSED

JMAT HEADER FIELD DESCRIPTIONS

WORD 11 (0:1) L = LG=1, logoff in progress
(1:2) SEC = JOBSECURITY, 0 = high, 3 = low

JMAT ENTRY FIELD DESCRIPTIONS

WORD 0 (0:6) STATE = 0 = Free entry
1 = Introduced, in STARTDEVICE
%70 = Scheduled, in Scheduled Job Queue
%40 = Waiting, Job in Wait Queue
%60 = Initial, UCOP has created JSMP
2 = Executing, JSMP finished initial
3 = Terminating
4 = Suspended
(6:1) D = Duplicative
(7:1) I = Interactive
(8:1) G = Group password*, 1 = Quiet Mode if state = 2
(9:1) A = Account password*, 0 = SAVESTDLIST if state = 2
(10:1) U = User password*
(11:1) C = JLIST is a device class

* = for passwords flags, 0 = password validated or none (STARTDEVICE), 1 = INITJSMP must prompt

WORD 1 (0:2) TY = Type, 1 = session, 2 = job
WORD 33 (0:1) S = ORIJIN is spooled
(1:1) R = Restart
(2:1) N = Sequenced
(3:2) FT = Funny terminal
WORD 35 ORIGJLIST = is used as a scheduling link by UCOP for Wait Queue (state = %40) and used for Scheduled Job Queue (state = %70). This DB relative pointer contains a zero in the last entry.
WORD 37 (0:1) P = Programatic logon
(1:1) W = Waitillion
(2:1) N = Nowait

JOB PROCESS COUNT TABLE (SYSGLOB 15) (DST 30)

0 TOT CONFIGURED # JOB+SESSIONS
1 TOTAL NUMBER OF FREE ENTRIES
2 BITMAP REL INDX NXT FREE ENTRY
3 UNUSED
4 BIT MAP (#64 WORDS LONG)
103 | FREE ENTRY = 1, ALLOCATED = 0

A JPCNT entry must be allocated before the main PIN can be procreated.

The job sir (PXGJSIR) is = base of SIR table + JPCNT index.

The JPCNT is completely bit oriented with each entry consisting of one bit. Entries are taken from the available pool on a "first found" basis. A "1" found in the bit map indicates a free entry. A "0" found in the bit map indicates an allocated entry.

Word 2 of this table is the index of the word in the bit map where the next free entry resides. At system start up, Word 2 is set to "0". Entries are assigned by scanning from bit 0 to bit 15 of the bit map word pointed to by Word 2 for the first free entry. When all the entries in the bit map word are allocated, Word 2 is incremented to point to the next word in the bit map.

F

DEVICE REFERENCE TABLE (FLM 10-11)

0 SIOP
1 DBI | DRT
2 PI | ENTRY
3 CHANNEL FLAGS

INTERRUPT LINKAGE TABLE

0 CHANNEL | ICPVA0
1 PROGRAM | ICPVA1
2 VARIABLE | ICPVA2
3 AREA (ICPVA) | ICPVA3
4 DMA ABORT | ICPVA4
5 ADDRESS | ICPVA5
6 0 | ISRQL/ICPGM
7 M|CHANQ | | CHAN | DEV | ICNTRL
10 SYSDB REL PTR TO CHAN PROG AREA | ISIOP
11 SYSDB REL PRT TO STATUS RETURN | ISTAP
12 UNIT EXTRACT INSTRUCTION | IUNIT
13 SYSDB REL PTR TO CURRENT DIT | ICDP
14 SIOPSIZE | CQUEN | IQUEUE
15 R|W|I|S|S| | HCUNIT | IFLAG
16 SYSDB REL DIT POINT FOR UNIT 0 | IDITP
SYSDB REL DIT POINT FOR UNIT N | IDITPN
PROGRAM STATUS RETURN AREA POINTED TO BY ISTAP
SEEKMASK (DISC ONLY)
I/O PROGRAM AREA

INTERRUPT LINKAGE TABLE FIELD DESCRIPTIONS

ILT 7 (0:1) M = If set, the controller is sharing a software channel resource in order to limit bandwidth.

ILT 15 (0:1) R = RW - Runwait flag. An idle channel program should be started when there are no active requests to process.
(1:1) W = WP - Waitprog flag. An idle channel program has been started for this controller. this bit is reset by an interrupt.
(2:1) I = IG - Ignorehi flag. An HIOP instruction has been issued against this controller, but the channel program in a wait statement. Therefore, ignore the interrupt generated by the channel code when this program halts.
(3:1) S = SC - Start channel flag. When set along with IG flag, GIP will start a previously attempted SIOP on this device.
(4:1) S = SQ - Start channel program "queued" flag. When SC bit is set, this bit will determine if the call to START'HPIB will have a logical parameter QUEUED true or false.

LOGICAL PHYSICAL DEVICE TABLE (SYSGLOB 10) (DST 15)

0 NUMBER OF ENTRIES IN TABLE | ENTRY 0
1 ENTRY SIZE (4) | FORMAT
2 DEVREC SERVICE REQUEST COUNT
3 ////////////////////////////////

0 0|////////////////////////////
1 DEV OWN STA|J O B|D U T|D I P|I N T| EOF | | |A U T|: DEV :SUB- :TYPE :0: | TYPICAL DEVICE ENTRY
2 SYSDB RELATIVE DIT POINTER
3 ///|A|////////////////////////

0 0|////////////////////////////
1 DEV OWN STA|J O B|D A T|B U T|D I P|I N T| EOF | |A R|D U|: DEV :SUB- :TYPE :0: | DEVICE ENTRY FOR TAPES
2 SYSDB RELATIVE DIT POINTER
3 ///|A|////////////////////////

0 1| POINTER TO XDD SUBENTRY | DEVICE ENTRY FOR VIRTUAL DEVICES
1 | | | | | | | | | |
2 ////////////////////////////////
3 I|//////////////////////////////

0 0|////////////////////////////
1 DEV OWN STA|J O B|D A T|C L A|D P Y|I N T| EOF |B R K|L O G|DEVICE SUBTYPE | DEVICE ENTRY FOR TERMINALS
2 SYSDB RELATIVE DIT POINTER
3 ////////////////////////////////

0 0|////////////////////////////
1 DEV OWN STA|J O B|D A T|N S P|M T V|R | EOF |S F|F R|A: DEV :SUB- :TYPE :0: | DEVICE ENTRY FOR DISCS
2 SYSDB RELATIVE DIT POINTER
3 /|S|//////////////////////////

TYPICAL DEVICE ENTRY FIELD DESCRIPTIONS

WORD 1 (0:2) = Device Ownership State :
0 : Not owned by any process.
1 : Owned by a process.
2 : Service requested. Set by driver for unexpected interrupt, then wakes DEVREC.
3 : Service granted. Set by DEVREC. Logon sequence is 0-2-3-1.
3 : Device reserved (alternate use). Set during STARTSPOOL, spooler process sets to 1 when it gets started.
(2:1) = Device is Job/Session accepting if true.
(3:1) = Device is is Data accepting if true.
(5:1) = Device is Duplicative if true.
(6:1) = Device is Interactive if true.
(7:3) = End of File condition:
0 : No EOF detected.
1 : Hardware EOF (e.g.,tape mark)
2 : :DATA record read
3 : :EOD record read
4 : :HELLO record read
5 : :BYE record read
6 : :JOB record read
7 : :EOJ record read
(12:4) = Device subtype

WORD 3 (2:1) = Device is Auto Reply

DISC DEVICE ENTRY FIELD DESCRIPTIONS

WORD 1 (0:2) = Device Ownership State. May not be a 1 (owned) for shared device (system or private volume). Serial and foreign discs are non-shareable and may be owned.
(4:1) = If true, the disc is a non-system domain (private volume, serial disc or foreign disc) disc drive.
(5:1) = If true, disc is a mounted private volume.
(6:1) = If true, the disc is a reserved volume used to satisfy the requirements of a multiple-volume private volume set.
(10:1) = If true, the disc is a physically and logically mounted serial or foriegn disc.
(11:1) = If bit 10 is true, then 1 = foreign disc, 0 = serial disc.

WORD 3 (1:1) = If true, the device is currently being used as a serial disc (that is, it is allocated to a user as a serial disc).

VIRTUAL DEVICE ENTRY FIELD DESCRIPTIONS

WORD 0 (0:1) = 1 for a virtual device, 0 for a real device.
WORD 1 = Fields are the same, as applicable, as for real device represented by a given virtual device.

TERMINAL-LIKE DEVICE ENTRY DESCRIPTIONS

WORD 1 (4:1) = CONTROL-Y is allowed and has been detected.
(10:1) = BREAK has been detected or ignore BREAK if the C.I. is running.
(11:1) = Terminal is logging on. This bit is set by PROGEN and DEVREC when the logon sequence starts. If the bit is off when polled by INITJSMP, the terminal has disconnected.

TAPE DRIVE DEVICE ENTRY DESCRIPTIONS

WORD 1 (4:1) = BOT. Tape is at load point or no tape mounted. Recording density may only be switched when this bit is true.
(11:1) = If true, DEVREC is performing AVR on a tape or PVPROC is is doing the same on a serial disc, or AVR is to be suppressed on job or data accepting devices.
(12:1) = Part of Device Subtype field. If true device is allocated automatically when opened. If false , operator must allocate.

WORD 3 (2:1) = Device is Auto Reply.

JOB DIRECTORY TABLE

0 MAXIMUM SEGMENT SIZE (WORDS)
1 POINTER TO JDSD
2 POINTER TO JTFD
3 POINTER TO JFEQ
4 POINTER TO JLEQ
5 POINTER TO JJCW
6 POINTER TO FREESPACE
7 WORK AREA #15 WORDS
25
26 TY | JOB NUMBER | JDSJNUM
27 JOB SESSION MAIN PROCESS NUMBER

4 | 1 | JOB DATA SEGMENT DIRECTORY ENTRY
SEGMENT ID
EXTRA DATA SEGMENT DST INDEX
NUMBER OF PROCESSES ACCESSING

ENTRY SIZE(WDS)|NAME SIZE (WDS) | JOB TEMPORARY FILE ENTRY
NAME ACTUAL FILE DESIGNATOR*
VOLUME POINTER |
FILE LABLE POINTER

ENTRY SIZE (WD)|NAME SIZE (WDS) | FILE EQUATION TABLE ENTRY
NAME FORMAL DESIGNATOR*
PMASK (2 WORDS)
NAME LEN (BYTE)|DEV LEN (BYTES)
NAME ACTUAL DESIGNATOR*
DEVICE / CLASS NAME (MAY NOT BE PRESENT)
0|0|0|0|C|N|M A|I|EXC|D|M|ACC TYP | FOPTIONS
0|0|F T|0|0|L|C|R F|D DES|A|DOM | AOPTIONS
NUMBER BUFFERS |INIT ALLO|D|T|S | D=DEL, T=TEMP, S=SAVE
RECORD SIZE
EXTENTS|/////|BLOCK FACTOR
FILE
SIZE
FILE CODE
OUTPRI | NUMCOPIES |
REF COUNT | NUM OF USER LABELS
LANG (NATIVE LANGUAGE SUPPORT)
LENGTH FORMS=/LABEL=
FORMS / LABEL ARRAY

ENTRY SIZE(WDS)|DESIG SIZE(WDS) | JOB LINE EQUATION ENTRY
FORMAL LINE DESIGNATOR(1-4 WDS)
0 PMASK1
1 REF CNT |P| PMASK2
2 NAME LENGTH |DEV LENGTH
3-6 NAME (END OF LEQ IF NONBLANK)
7-12 DEVICE
13 PMASK3
14 DRIVER NAME LEN|
15-20 DRIVER NAME
21 LIST POINTER
22 COPTIONS
23 AOPTIONS
24 DOPTIONS
43 MISCELLANEOUS MISC ARRAY POINTER

NAME SIZE-BYTES| | JOB CONTROL WORD ENTRY
NAME 1-255 CHARACTERS
TY | MODIFIER

FREE SPACE

* The name is a concatenation of up to 3 subnames. Bit 0 of the first character of each subname is 1.

G

DEVICE INFORMATION TABLE UNIT 0

0 T|D|A|R|S|M|O|I|I|N|S|N| STATE
1 SYSDB REL PTR TO DIT OF NXT DEV | DLINK
2 SYSDB REL PTR TO 1ST IOQ IN LST | DIOQP
3 LOGICAL DEVICE NUMBER | LDEV
4 SYSDB REL PTR TO DVR LINK TABLE | DDLTP
5 SYSDB REL PTR TO INT LINK TABLE | DILTP
6 CONTROLLER HARDWARE STATUS | DSTAT
7 HARDWARE ERROR STATUS | DSERR
10 DEVICE DEPENDENT AREA | DTIME
11 DEVICE DEPENDENT AREA | DTRQX
12 IOT|//////////|PHYSICAL UNIT #
13 DRIVER DEPENDENT DIT AREA

DEVICE INFORMATION TABLE UNIT 1

0 T|D|A|R|S|M|O|I|I|N|S|N| STATE
1 SYSDB REL PTR TO DIT OF NXT DEV | DLINK
2 SYSDB REL PTR TO 1ST IOQ IN LST | DIOQP
3 LOGICAL DEVICE NUMBER | LDEV
4 SYSDB REL PTR TO DVR LINK TABLE | DDLTP
5 SYSDB REL PTR TO INT LINK TABLE | DILTP
6 CONTROLLER HARDWARE STATUS | DSTAT
7 HARDWARE ERROR STATUS | DSERR
10 DEVICE DEPENDENT AREA | DTIME
11 DEVICE DEPENDENT AREA | DTRQX
12 IOT|//////////|PHYSICAL UNIT #
13 DRIVER DEPENDENT DIT AREA

DEVICE INFORMATION TABLE UNIT N

0 T|D|A|R|S|M|O|I|I|N|S|N| STATE
1 SYSDB REL PTR TO DIT OF NXT DEV | DLINK
2 SYSDB REL PTR TO 1ST IOQ IN LST | DIOQP
3 LOGICAL DEVICE NUMBER | LDEV
4 SYSDB REL PTR TO DVR LINK TABLE | DDLTP
5 SYSDB REL PTR TO INT LINK TABLE | DILTP
6 CONTROLLER HARDWARE STATUS | DSTAT
7 HARDWARE ERROR STATUS | DSERR
10 DEVICE DEPENDENT AREA | DTIME
11 DEVICE DEPENDENT AREA | DTRQX
12 IOT|//////////|PHYSICAL UNIT #
13 DRIVER DEPENDENT DIT AREA

DIT FIELD DESCRIPTIONS

WORD 0 (0:1) = set if device is a terminal
(1:1) = set if device is a disc
(2:1) = ACTIVE BIT, 1 implies a monitor currently servicing this device
(3:1) = REQUEST BIT, 1 implies service requested while monitor is active
(4:1) = special interrupt handler
(5:1) = set if multiple unit controller
(7:1) = set if channel program currently executing
(8:1) = set if an interrupt or response has occurred
(9:1) = set if device is not ready or operator wait
(10:1) = set if an idle channel program should be started for this device
(11:1) = do not short wait this dicc
(12:4) = Current driver state as defined by monitor
0 : start request
1 : not used (but reserved)
2 : call driver initiator
3 : call driver completor
4 : not used (but reserved)
5 : complete request
6 : unexpected interrupted occured
7 : start operator intervention wait
10 : waiting (on operator) restart at 0
11 : waiting (data MAKEPRESENT/FREEZE)
12 : waiting (initiator code MAKEPRESENT/FREEZE)
13 : waiting (for completor interrupt)
14 : waiting (for dev controller availability)
15 : not used (but reserved)
16 : waiting (initiator code MAKEPRESENT)
17 : waiting (completor code MAKEPRESENT)

DRIVER LINKAGE TABLE

0 QUEUE NUMBER |D|M|C| | |O|MTY | DPROC
1 MONITOR PLABEL | DMNTR
2 DRIVER INITIATOR PLABEL | DINIT
3 DRIVER COMPLETOR PLABEL | DCOMP
4 INTERRUPT HANDLER PLABEL | DINTP
5 DIT SIZE | DEVICE TYPE | DTYPE
6 CS DRIVER EDITOR PLABEL
7 INITIALIZATION PLABEL

DLT 0 (0:8) = QNUMB, contains the I/O process request queue number for type 2 drivers. Zero for all other types.
(8:1) = DRVRFRZN, driver code frozen. Set by MAM when the driver code segment has been made present and frozen from a request from SIODM.
(9:1) = MAMERRORC, MAM error on code MAKEPRESENT
(10:1) = CORERES, if set both initiator and completor code are core resident.
(14:2) = DRVRTYPE = DRIVER / MONITOR TYPE
0 = not used
1 = driver can be executed on any stack
2 = driver can be executed in the user processor in the I/O process identified by IOUMB.
3 = run only in process whose PCB number is IDNUMB.

CS'80 DEVICE INFORMATION TABLE

0 T|D|A|R|C|O|O|I|I|N|S|O| STATE | DFLAG
1 SYSDB REL PTR TO DIT OF NXT DEV | DLINK
2 CURRENT REQUEST INDEX | DCURREQP
3 LOGICAL DEVICE NUMBER | DLDEV
4 SYSDB REL PTR TO DVR LINK TABLE | DDLTP
5 SYSDB REL PRT TO INT LINK TABLE | DILTP
6 DSTAT IS -1 WHEN SYS POWERFAIL | DSTAT
7 HARDWARE STATUS ERROR | DSERR
10 INDEX OF 1ST REQUEST IN QUEUE | DQHEAD
11 INDEX OF LAST REQUEST IN QUEUE | DQTAIL
12 IOT|//////////| PHYS UNIT NUM | DUNIT
13 TAB REL INDX TO SYS BUF ELEMENT | DSBUFADDR
14 HIGH ORDER SECT ADDR OF BAD BLK | DBADBLK1
15 LOW ORDER SECT ADDR OF BAD BLK | DBADBLK2
16 BYTE XFER LEFT WHEN BAD BLOCK | DBADXFER
17 HW LOGGED ERROR STATUS - CPVA 0 | DLOGERROR
20 CHANNEL PROG ABORT REL OFFSET | DSIOPSTOP
21 DISC STATUS (20 BYTES) | DSTATUS
LOGGED ON STATUS ERROR
33 L|I|M| |SUBSTAT | DMISC
34 R|D|D|E| |L STATE | RPSWORD1
35 T1 | T2 | RPSWORD2

CS'80 DIT FIELD DESCRIPTIONS

WORD 33 (0:0) = LOCK'FLAG, denoting unload status of the disc volume.
0 = allow operator unload to the volume.
1 = deny operator unload of the volume.
(1:1) = IGNORE'INT'FLG, ignore unexpected interrupts.
(12:4) = SUBSTATE, indicates the state of the idle channel program.
0 = normal idle channel program wait.
1 = idle request being serviced.

WORD 34 (0:1) = Read version code done. Set if read code level is done.
(1:1) = RPS revision code. Set if controller is "PEP"ed.
(2:1) = RPS is desirable. Set if RPS is desirable.
(3:1) = RPS enabled. Set if default value for RPS is enabled.
(12:4) = LOCAL STATE, state of the local request made by the driver.
0 = no local request is being processed
1 = reading rev code
2 = setting default RPS

WORD 35 (0:8) = T1, time to target (hundreds of microseconds).
(8:8) = T2, window size in hundreds of microseconds.

JOB CUTOFF TABLE (SYSGLOB 117) (DST 36)

0 NUMBER OF REAL ENTRIES
1 ENTRY SIZE (3) | JCUT
2 FREE HEAD | HEADER
3 POINTER TO LAST ENTRY (0) | ENTRIES
4 //////////////////////////////// | (2)
5 ////////////////////////////////

0 JCUTCPUL - TIME LIMIT (SECONDS) | IN
1 JCUTCPUC - TIME COUNT (MSEC) | USE
2 | ENTRY

0 PTR TO NEXT FREE ENTRY (0=END) | FREE
1 //////////////////////////////// | ENTRY
2 ////////////////////////////////

0 | LAST
1 | ENTRY
2

JOB INFORMATION TABLE

0 JIT DST
1 6 | NOT USED
2 POINTER TO JOB INFO (7)
3 POINTER TO ACCOUNT INFO (60)
4 POINTER TO RESERVED AREA (73)
5 ASSOCIATION TABLE INDEX
6 ////////////////////////////////|F
7 TY | JOB NUMBER
10
11 7
12 JITMAXP |EOF|//////////
13 JITMPN
14 DS DATASEG
15 JITASEC
16-17 JITGSEC (GROUP SECURITY)
20-23 JITHAN (ACCOUNT NAME)
24-27 JITHGN (HOME GROUP)
30-33 JITLGN (LOG-ON GROUP)
34-37 JITUN (USER NAME)
40 POINTER TO JITAIP (65)
41 P|M| POINTER TO JITGIP (67)
42-43 LOCAL ATTRIBUTES
44-45 PASSED FILE POINTER
46-47 USER CAPABILITY
50 RESERVED FOR NETWORK SERVICES
51-52 ////////////////////////////////
53 LOCAL RIN POINTER
54-57 JITJN (JOB NAME)
60 ACCOUNTING INFO 3
61 JITREC (NUMBER OF CREATIONS)
62-63 JITCPUC (CPU MILLISECONDS)
64 NOT USED | HIPRI
65 | JITAIP1
66 JITAIP (ACCOUNT INDEX POINTER) | JITAIP2
67 0 | JITGIP1
70 JITGIP (GROUP INDEX POINTER) | SYS VOL SET
71 0 | MVTAB INDEX
72 JITGIP (PV GROUP INDEX POINTER) | MOUNTED PV
73 1
74 0
75 ALLOW MASK
102

JOB INFORMATION TABLE FIELD DESCRIPTIONS

JIT 6 (15:1) = FPMAP, job/session wide FPMAP option flag.
JIT 7 (0:2) = TY, 1 = session, 2 = job
JIT 12 (8:2) = EOF, used by FCLOSE to tell CI that a $STDIN(X) file was closed without encountering an EOF. (0:1) = $STDIN, (1:1) = $STDINX
JIT 41 (0:1) = P, group's home volume is private volume.
(1:1) = M, private volume mounted (ie, group bound to home volume set, JITGIP = 71)

H

I/O TABLE (SYSGLOB 5) (DST 13)

0 TOTAL NUMNER OF ENTRIES | I/O
1 ENTRY SIZE | QUEUE
2 NUMBER OF PRIMARY ENTRIES | HEAD
3 IMPEDED PROCESS PCB
4 FREE ENTRY LIST HEAD POINTER | THEAD
5 FREE ENTRY LIST TAIL POINTER | TTAIL
6 MAXIMUM ENTRIES EVER USED | TUSED
7 CURRENT ENTRIES IN USE
10 NUMBER OF OVERFLOWS | TOVRFL
11 TOTAL OF ALL REQUESTS | TRQSTS
12
////////////////////////////////

0 REQUEST DEPENDENT FLAGS | QFLAG
1 IOQ POINTER | QLINK
2 LOGICAL DEVICE NUMBER | QLDEVN
3 MISCELLANEOUS | QMISC
4 S| DATA SEGMENT DST NUMBER | QDSTN
5 OFFSET TO TARGET DATA BUFFER | QADDR
6 UNIT | FUNCTION | QFUNC
7 COUNT / XLOG / CONTROL RETURNS | QWBCT
10 P1 | QPAR1
11 P2 | QPAR2
12 //////////////|QUALIFIER|STATS | QSTAT
13 F| PCB INDEX | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 2 (FREE ENTRY)
1| | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 3 (2ND REQUEST UNIT 0)
F| PCB INDEX | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 4 (FREE ENTRY)
1| | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 5 (3RD REQUEST UNIT 0)
F| PCB INDEX | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 6 (1ST REQUEST UNIT 1)
F| PCB INDEX | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 7 (FREE ENTRY)
1| | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 8 (FREE ENTRY)
1| | QPCBN

REQUEST DEPENDENT FLAGS | QFLAG
IOQ POINTER | QLINK
ENTRY 9 (2ND REQUEST UNIT 1)
F| PCB INDEX | QPCBN

DATA STACK

a → 0 DL - a = SEG RELATIVE DL VALUE
1 DB - a = SEG RELATIVE DB VALUE
2 USER ATTRIBUTES
3 JMAT INDEX
4 JPCNT INDEX
5 JCUT INDEX | PXGLOB
6 S|R|TY |D|I|/|/|/|/|STK DMP FLG
7 //////////////|NATIVE LANGUAGE
10 ACTUAL JOB INPUT LDEV
11 ACTUAL JOB OUTPUT LDEV
12 JDT DST INDEX
13 JIT DST INDEX
b → 0 c - b = PXFIXED SIZE
1 RELATIVE S (S - DB)
2 RELATIVE Z (Z - DB)
3 INITIAL Q (Q - DB)
4 INITIAL RELATIVE DL (DB - DL)
5 GENERAL RESOURCE CAPABILITY
6 A|L|S|C|C|/|/|/|/|U|L|C|G|A|L|L
7 LINK TO XDS ENTRIES |XDS CNT
10 P|S|EXTRA DATA SEGMENT DST INDX
:
13 P|S|EXTRA DATA SEGMENT DST INDX
14 X|A|STKDMPENV|R|INITIAL CST IDX
15 MAXIMUM STACK SIZE (MAXDATA)
16 ARITHMETIC TRAP MASK | PXFIXED
17 ARITHMETIC TRAP PLABEL | AREA
20 LIBRARY TRAP PLABEL
21 SYSTEM TRAP PLABEL
22 CONTROL Y PLABEL
23 CODE TRAP PLABEL
24 DATACOM TERMINATION TRAP PLABEL
25 IMAGE TRAP PLABEL
26 RESERVED
27 CUR MAX STK SIZE (LARGEST EVER)
30 PROCESS CPU TIME (MSEC)
31
32 MAXIMUM DATA SEG SIZE (SECTORS)
33 TOTAL VIRTUAL STORAGE (SECTORS)
34 CURRENT EXTRA DATA SEG SPACE
35 MAXIMUM EXTRA DATA SEG SPACE
36 PRIV MODE BOUND| STOV COUNT
37 PROC EXECUTION TIME REMAINDER
40 SET TO -1 IN BREAK MODE
41 CONTINUE FLAG (:CONTINUE)
42 ACTUAL SIZE OF VM ALLOC TO STK
43 ERROR LEVEL
44 INTRINSIC ERROR
:
51 INTRINSIC ERROR
52 TSLR,VIRT TIME SINCE LAST RESCH
53 TSTB,VIRT TIME SINCE TRANS BEGI
54 TSSWAPIN,VIRT TIME SINCE SWAPIN
55 TSLA,VIRT TIME SINCE LAST ABSEN
56 TSLD,VIRT TIME SINCE LAST DEALL
57 QCNT,QUANT USED SINCE TRANS BEG
60 /|D|/|O| RESERVED
61 TRLX INDEX FOR KERNELC TIMEOUT
62 TY | JOB / SESSION NUMBER
63 RESERVED
:
67
70 /|C|/|S|//////////////////////
71 TIMEOUT TRLX
72 ////////////////////////////////
73 ////////////////////////////////
74 PCLASSMASK
75 PROCQUESTOPWORD
76 PROCSTOPTIME
77
114 0|1|2|3|4|5|6|7|8|9|0|1|2|3|4|5 | PXFIXED
115 6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1 | EXPANSION
116 2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7 | BITMAP
117 8|9|0|1|2|3|4|5|6|7|8|9|0|1|2|3
120 LINK TO XDS ENTRIES |XDS CNT | VARIABLE
121 P|S|EXTRA DATA SEGMENT DST INDX | SIZE
: | PXFIXED
126 P|S|EXTRA DATA SEGMENT DST INDX | EXPANSION AREA
c → 0 d - c = PXFILE SIZE IN WORDS
1 LAST DOPEN ERR |LAST COPEN ERR
2 N|//////////////////////////////
3 LAST DS AFT
4 SLAVE AFT NUMBER
5 LAST KOPEN ERR |LAST FOPEN ERR
6 AFT SIZE IN WORDS
7-10 CS TRACE FILE INFO
11 LAST RESPONDING NO-WAIT I/O AFT | PXFILE
12 1ST USER (NOBUF) CBT DST NUMBER | OVERHEAD
:
21 8TH USER (NOBUF) CBT DST NUMBER
0-7 CONTROL BLOCK TABLE OVERHEAD | CONTROL BLOCK
10 VECTOR TABLE | TABLE
CONTROL BLOCK AREA | (VARIABLE)
AVAILABLE AREA | AVAILABLE (VARIABLE)
ENTRY N | ACTIVE FILE TABLE
:
ENTRY 1
d → COUNT (SECTORS) PXFIXED EXPAND
DL - c
DL - b
DL - a
DL →
DB → GLOBAL AREA
INFO POINTER
INFO LENGTH
Qi → PARM
000000 (X REGISTER) | MORGUE
040000 (P+1-PB) | STACK
1400XX (STATUS REGISTER) | MARKER
000004 (DELTA Q)
LOCAL AREA
S →
Z → OVERFLOW AREA

PXGLOB FIELD DESCRIPTIONS

WORD 6 S (0:1) = SB-Stun bit; used for stack underflow simulation for IFC44 or IFC55
R (1:1) = Restart bit
TY (2:2) = Job type :
0 : undefined
1 : session
2 : job
3 : task
D (4:1) = Job in / list is duplicative
I (5:1) = Job in / list is interactive
STACK DUMP (10:1) = Armed
(11:1) = suppress traceback
(12:1) = Suppress ASCII
(13:1) = Q - 63 to S
(14:1) = QINIT to S
(15:1) = DL to QINIT

I

DISC REQUEST TABLE (SYSGLOB 17) (DST 70)

0 TOTAL ENTRIES
1 ENTRY SIZE (21)
2 PRIMARY ENTRIES
3 IMPEDED PRECESS PCB
4 TAB REL INDX OF HEAD AVAIL LIST
5 TAB REL INDX OF TAIL AVAIL LIST
6 MAXIMUM ENTRIES IN USE | DISC
7 CURRENT ENTRIES IN USE | REQUEST
10 OVERFLOWS | TABLE
11-12 TOTAL REQUESTS | ENTRY 0
13 SYSGLOB IDX HEAD DISABLED REQ Q | FORMAT
14 SYSGLOB IDX TAIL DISABLED REQ Q
15 SERIAL WRITE QUEUE HEAD
16 A| |MAX SER WRITE Q
17-20 ////////////////////////////////

0 A|M|D|S|I|B|C|D|M|Q|S|P|C|D|I|L (B M I B O L O A M U F F U I D N, O R A U W O M T E E A U R S L C, R E G F A C P A R U I I R R A, T Q K E F E R Q L L E B C L, D) | QFLAG
1 REQUEST URGENCY CLASS | URGCLASS
2 LOGICAL DEVICE NUMBER | LDEVN
3 MISCELLANEOUS | MISC
4 S| DST (IF PROCESS DISC I/O) / BANK (IF SEGMENT TRANSFER) | DSTN, S = STACK
5 OFFSET IN DST (IF PROC DISC IO) / ADDRESS IN BANK (IF SEG TRANSF)
6 UNIT NUMBER | FUNCTION | FUNC
7 COUNT / XLOG / CONTROL RETURNS | XFERCNT
10 P1 (HODA IF SEGMENT TRANSER) | PARM1
11 P2 (LODA IF SEGMENT TRANSER) | PARM2
12 ////////////////|QUALIFI|STAT | STAT
13 F| PCB NUMBER | PCBN
14 INDEX OF PREV REQUEST IN QUEUE | PREVREQP
15 INDEX OF NEXT REQUEST IN QUEUE | NEXTREQP
16 TYPE | CST BLOCK INDEX | OBJECT
17 OBJECT NUMBER | IDENTIFIER
20 DISP OF READ OR WRITE FROM BASE | SEGDISP

0 A|M|D|S|I|B|C|D|M|Q|S|P|C|D|L|I | QFLAG
14 INDEX OF PREV REQUEST IN QUEUE | PREVREQP
15 INDEX OF NEXT REQUEST IN QUEUE | NEXTREQP
20 DISP OF READ OR WRITE FROM BASE | SEGDISP

0 A|M|D|S|I|B|C|D|M|Q|S|P|C|D|L|I | QFLAG
14 INDEX OF PREV REQUEST IN QUEUE | PREVREQP
15 INDEX OF NEXT REQUEST IN QUEUE | NEXTREQP
20 DISP OF READ OR WRITE FROM BASE | SEGDISP

0 A|M|D|S|I|B|C|D|M|Q|S|P|C|D|L|I | QFLAG
14 INDEX OF PREV REQUEST IN QUEUE | PREVREQP
15 INDEX OF NEXT REQUEST IN QUEUE | NEXTREQP
20 DISP OF READ OR WRITE FROM BASE | SEGDISP

0 /////|S|I|B|D|D|S|C|M|/|C|D|L|I (B L O O E D O / U I D N, U W O N P R D / R R S O, F A C E I T Q / B L R C, K K P P S O / R Q E A, E E O S T R / E Q L L, D D T) | LDR'FLAG
1 HODA OF EXTENT LIMIT | LDR'L'HODA
2 LOGICAL DEVICE NUMBER | LDR'LDEV
3 MAPPED DOMAIN CDT ENTRY NUMBER | LDR'CDT
4 S| DST NUMBER | LDR'BUFDST
5 OFFSET INTO DST | LDR'BUFADR
6 STRATEGY | FUNCTION | LDR'STRAT'FUNC
7 COUNT / XLOG / CONTROL RETURNS | LDR'COUNT
10 P1 | LDR'PARM1
11 P2 | LDR'PARM2
12 ////////////////|QUALIFI|STAT | LDR'STATQ
13 PCB NUMBER | LDR'PCB
14 INDEX OF PREV REQUEST IN QUEUE | LDR'PREVQ
15 INDEX OF NEXT REQUEST IN QUEUE | LDR'NEXTQ
16 HODA OF EXTENT BASE | LDR'B'HODA
17 LODA OF EXTENT BASE | LDR'B'LODA
20 LODA OF EXTENT LIMIT | LDR'L'LODA

0 /////|S|I|B|D|D|S|C|M|/|C|D|L|I | LDR'FLAG
14 INDEX OF PREV REQUEST IN QUEUE | LDR'PREVQ
15 INDEX OF NEXT REQUEST IN QUEUE | LDR'NEXTQ
:
20 LODA OF EXTENT LIMIT | LDR'L'LODA

0 /////|S|I|B|D|D|S|C|M|/|C|D|L|I | LDR'FLAG
14 INDEX OF PREV REQUEST IN QUEUE | LDR'PREVQ
15 INDEX OF NEXT REQUEST IN QUEUE | LDR'NEXTQ
:
20 LODA OF EXTENT LIMIT | LDR'L'LODA

DISC REQUEST ELEMENT FIELD DESCRIPTIONS

WORD 0 (0.1) ABORT = Request has been aborted externally
(1:1) MMREQ = Request is for a segment transfer
(2:1) DIAG = Diagnostic request (not used)
(3:1) SBUF = System buffer, Target is a system buffer whose index is relative to the start of the SBUF table
(4:1) IOWAKE = Wake caller on completion of request
(5:1) BLOCKED = Blocked I/O, Caller is waited in ATTACHIO until request is completed
(6:1) COMP = Request has been completed and caller awoken if he has specified
(7:1) DATAF = Data segment has been present has is frozen
(8:1) MAMERR = Memory management error on data segment make present
(9:1) QUEUED = Request is queued into disc's request queue
(10:1) SFAIL = Start SIO failure in GIP
(11:1) PFAIL = The I/O has been aborted because of a powerfail
(12:1) CURREQ = Request is device's current request
(13:1) DISABLE = Request is disabled
(14:1) LDR = Request in logical DRQ
(15:1) INLOCAL = Buffer DST is in process locality

WORD12 DRIVER STATUS RETURN CODES :

(13:3) STATUS	(8:5) QUALIFYING	(8:8) OVERALL
0 : Pending	1 : wait for completion	10
	3 : not ready wait	30
1 : Successful	0 : no errors	1
3 : Unusual Condition	1 : Status interrogation req	13
	21 : Device powered up	213
4 : Irrecoverable	0 : invalid function	4
	1 : track/sector error	14
	2 : i/o timed out before comp	24
	3 : transmission error	34
	4 : SIO failure	44
	5 : unit failure	54
	6 : invalid disc address	64
	12 : system error	124
	14 : channel failure	144
	16 : no spares available	164

LOGICAL DISC REQUEST ENTRY FIELD DESCRIPTIONS

WORD 0 (3:1) SBUF = Request is to / from a system buffer
(4:1) IOWAKE = System should wake up process when the logical request completes
(5:1) BLOCKED = Set if process wants to wait for logical disc request to complete
(6:1) DONE = Logical disc request is complete and the process to be awaken (if IOWAKE)
(7:1) DO POST = Set if caller wants to waited until the physical post to disc completes
(8:1) SERIAL = Set when Physical post should be through the Global Serial Write Queue
(9:1) CDT QUEUE = This request has been queued - either onto the CDT active queue or onto the disabled disc request list
(10:1) MOVE DONE = The move has been completed, but the process won't be awaken until DONE
(12:1) CUR REQ = This request is the current request
(13:1) DISABLED = Set if this request is disabled
(14:1) LDR REQ = Set if this is a logical disc request
(15:1) IN LOC = Set if Mapped Domain CDT entry is in process's locality

WORD 6 (0:8) Strategy = 0 : Unknown caller
1 : Unknown File System
2 : Spooler
3 : Directory
4-7 : Unknown caller
10 : Genmessage
11 : File System, Quiesce I/O
12 : File System, Sequential, No Buf
13 : File System, Direct, No Buf
14 : File System, Sequential, Buffered
15 : File System, Direct, Buffered
16 : File System, KASM
17 : File System, IMAGE

CONTROL BLOCK TABLE*

0 TABLE SIZE IN WORDS
1 DST NUMBER CONTAINING TABLE
2 TY | VECTOR TABLE SIZE IN WORDS
3 L| | OVERHEAD
4 LOCK PIN
5 IMPEDED QUEUE HEAD
6 IMPEDED QUEUE TAIL
7 ////////////////////////////////
0 CONTROL BLOCK ADDRESS
1 L|B| COUNT |////////////////
2 LOCK PIN | TYPICAL
3 HIGH PRIORITY HEAD PIN | VECTOR
4 HIGH PRIORITY TAIL PIN | TABLE
5 LOW PRIORITY HEAD PIN | ENTRY
6 LOW PRIORITY TAIL PIN
7 ////////////////////////////////
VECTOR TABLE ENTRY 2
VECTOR TABLE ENTRY N
0 TY | SIZE | CONTROL
1 DATA | BLOCK
N | AREA
3| COMPLETE LACB SIZE | LACB ENTRY FORMAT
LACB ENTRY
2 | COMPLETE PACB SIZE | PACB ENTRY FORMAT
PACB ENTRY
1 | COMPLETE FCB SIZE | FCB ENTRY FORMAT
FCB ENTRY
0 | ENTRY SIZE | GARBAGE ENTRY FORMAT
GARBAGE ENTRY

* A File Control Block Table can be located in two places
a) as a sub-part of the PXFILE area
b) in a data segment

ACTIVE FILE TABLE (IN PXFILE SECTION OF STACK)

ENTRY N
:
0 AFTTYPE|N|
1 PHYSICAL ACB DST NUMBER | FILE
2 PHYSICAL ACB ENTRY ADDRESS | SYSTEM
3 LOGICAL ACB DST NUMBER | AFT
4 LOGICAL ACB ENTRY ADDRESS | ENTRY
5 NO-WAIT I/O IOQX
:
ENTRY 2
ENTRY 1

J

CACHE DIRECTORY TABLE (SYSGLOB 273-275)

0 NUMBER OF ENTRIES | HEADER
1 ENTRY SIZE (30) | ENTRY
2 NUMBER OF FREE ENTRIES | CDT'FREE'COUNT
3 FIRST FREE ENTRY (TABLE OFFSET) | CDT'FREE'HEAD
4 LAST FREE ENTRY (TABLE OFFSET) | CDT'FREE'TAIL
5 MAXIMUM NUMBER OF ENTRIES USED | CDT'MAX'USED
6 NUMBER OF LDEVS CACHED | CDT'NUM'LDEV
7 1ST CACHED DEVICE ENTRY (ENT #) | CDT'DISC'HEAD
10 NUMBER OF WORDS IN THIS DST | CDT'DST'WORDS
11 TRUE IF STOPCACHE PENDING | CDT'STOP'PND
12 NUMBER SECTORS SEQUENTIAL FETCH | CDT'SEQ'MINFTCH
13 NUMBER SECTORS RANDOM FETCH | CDT'RND'MINFTCH
14 TRUE IF WAIT FOR PHYSICAL POST | CDT'FORCE'POST
15 HEAD OF IMPEDED QUEUE (PIN) | CDT'STOP'QUEUE
16-27 //////////////////////////////// | CDT'END

0 NEXT LDEV ENTRY (ENTRY NUMBER) | DEVICE
1 PREV LDEV ENTRY (ENTRY NUMBER) | ENTRY
2 LDEV FOR THIS CACHED DEVICE
3 NUM OF PAGES IN DEVICE'S DOMAIN | CDT'DE'MAPD'PAGE
4 # DISC DOMAINS CURRENTLY MAPPED | CDT'DE'MAPD'CNT
5 HEAD OF MAPPED DOMAIN (ENTRY #) | CDT'DE'MAPD'HEAD
6 TAIL OF MAPPED DOMAIN (ENTRY #) | CDT'DE'MAPD'TAIL
7 # DISC DOMAIN REGIONS FOR DEV | CDT'DE'REGIONS
10 MEMORY ADDRESS OF HEAD | CDT'DE'REG'HD
11 CACHED DISC DOMAIN
12 MEMORY ADDRESS OF TAIL | CDT'DE'REG'TL
13 CACHED DISC DOMAIN
14-15 NUMBER OF READ HITS | CDT'DE'RHIT
16-17 NUMBER OF WRITE HITS | CDT'DE'WHIT
20-21 NUMBER OF READ MISSES | CDT'DE'RMISS
22-23 NUMBER OF WRITE MISSES | CDT'DE'WMISS
24-25 NUMBER OF STOPS | CDT'DE'STOP
26 MEMORY ADDRESS OF LAST | CDT'DE'SCANPT
27 REFERENCED DOMAIN

0 NEXT LDEV ENTRY (ENTRY NUMBER) | DEVICE
1 PREV LDEV ENTRY (ENTRY NUMBER) | ENTRY 2
:
5 HEAD OF MAPPED DOMAIN (ENTRY #)
6 TAIL OF MAPPED DOMAIN (ENTRY #)
7 # DISC DOMAIN REGIONS FOR DEV | CDT'DE'REGIONS
10 MEMORY ADDRESS OF HEAD
11 CACHED DISC DOMAIN
12 MEMORY ADDRESS OF TAIL
13 CACHED DISC DOMAIN
:
26-27 MEM ADDRESS OF LAST REF DOMAIN

DEVICE ENTRY NUMBER N | DEVICE ENTRY N

0 PREV MAPPED DOMAIN ENTRY (ENT#) | MAPPED
1 NEXT MAPPED DOMAIN ENTRY (ENT#) | DOMAIN
2-3 START SECTOR ADDRESS | ENTRY
4-5 LAST SECTOR ADDRESS | CDT'MD'END'SECTOR
6 A|I|I|M|L|F|R|V|N|S|/| STATE (B M M I O W O I O E, S I O S C I C R P Q, E K P G O, N E I S, T D N T) | CDT'MD'FLAGS
7 NUMBER OF READS PENDING | CDT'MD'READ'CNT
10 NUMBER OF WRITES PENDING | CDT'MD'WRITE'CNT
11 LOCK WAITING | CDT'MD'LKD'CDT
12 HEAD OF IMPEDED LDR | CDT'MD'IMPED'HD
13 HEAD OF ACTIVE LDR | CDT'MD'LDR'HEAD
14-15 MEMORY ADDRESS (IF PRESENT) | CDT'MD'MEM'ADR
16 DRQ FOR THIS MAPPED DOMAIN | CDT'MD'DISCREQ
17 NUMBER FLUSHING CDTS | CDT'MD'LK'CNT
20 LDEV FOR THIS MAPPED DOMAIN | CDT'MD'LDEV
21 HEAD IMPEDED QUEUE (PIN) | CDT'MD'IMPEDED
22 DEVICE ENTRY (ENTRY NUMBER) | CDT'MD'DE
23-27 ////////////////////////////////

0 PREV MAPPED DOMAIN ENTRY (ENT#) | MAPPED
1 NEXT MAPPED DOMAIN ENTRY (ENT#) | DOMAIN
2-3 START SECTOR ADDRESS | ENTRY
4-5 LAST SECTOR ADDRESS
6 A|I|I|M|L|F|R|V|N|S|/| STATE
7 NUMBER OF READS PENDING
10 NUMBER OF WRITES PENDING
11 LOCK WAITING
12 HEAD OF IMPEDED LDR
13 HEAD OF ACTIVE LDR
14-15 MEMORY ADDRESS (IF PRESENT)
16 DRQ FOR THIS MAPPED DOMAIN
17 NUMBER FLUSHING CDTS
20 LDEV FOR THIS MAPPED DOMAIN
21 HEAD IMPEDED QUEUE (PIN)
22 DEVICE ENTRY (ENTRY NUMBER)
23-27 ////////////////////////////////

0 PREV MAPPED DOMAIN ENTRY (ENT#) | MAPPED
1 NEXT MAPPED DOMAIN ENTRY (ENT#) | DOMAIN
2-3 START SECTOR ADDRESS | ENTRY
4-5 LAST SECTOR ADDRESS
6 A|I|I|M|L|F|R|V|N|S|/| STATE
7 NUMBER OF READS PENDING
10 NUMBER OF WRITES PENDING
11 LOCK WAITING
12 HEAD OF IMPEDED LDR
13 HEAD OF ACTIVE LDR
14-15 MEMORY ADDRESS (IF PRESENT)
16 DRQ FOR THIS MAPPED DOMAIN
17 NUMBER FLUSHING CDTS
20 LDEV FOR THIS MAPPED DOMAIN
21 HEAD IMPEDED QUEUE (PIN)
22 DEVICE ENTRY (ENTRY NUMBER)
23-27 ////////////////////////////////

MAPPED DOMAIN ENTRY FIELD DESCRIPTIONS

WORD 6 (0:1) ABSENT = Region is not present in memory.
(1:1) IMI = Region is already In-Motion-In.
(2:1) IMO = Region is In-Motion-Out.
(3:1) MISS = This domain was not present and had to be pre-fetched.
(4:1) LOCKED = Not used.
(5:1) FWIP = Forced Write In Progress. Region was forced out of memory to make room for another object.
(6:1) ROC = Recover Overlay Candidate. Region may be forced out of memory to make room for another object.
(7:1) VIRGIN = Clean region in the write state. Cleared as soon as a move completes (ie. if this bit is on, then a a write can complete immediately. Otherwise the write will to wait until the current write completes the physical post.
(8:1) NOPOST = Set when the CDT is being posted as a result of a write request that did not want to wait for the physical post to complete. This is used to insure that a cache move for any subsequent write request will not be serviced until the physical post completes.
(9:1) SEQ = Set if doing sequential I/O. When the request for the last area of this disc domain is complete, this domain will will be made a ROC.
(13:3) STATE = 0 : AVAIL, CDT is an available entry
1 : READ, Only read LDR(s) are attached
2 : WRITE, Write LDR(s) and possibily attached
3 : FLUSH, CDT is being flushed out
4 : LOCK, unused

LOGICAL ACCESS CONTROL BLOCK (IN CONTROL BLOCK AREA OF CBT)

0 3| COMPLETE LACB SIZE
1 FILE NUMBER
2 FILE NAME - 1ST|FILE NAME - 2ND
3 FILE NAME - 3RD|FILE NAME - 4TH
4 FILE NAME - 5TH|FILE NAME - 6TH
5 FILE NAME - 7TH|FILE NAME - 8TH
6 FOPTIONS
7 AOPTIONS
10 RECORD SIZE IN BYTES
11 BLOCK SIZE IN WORDS
12 SPARE
13 CARRIAGE CONTROL CODE
14 /|E|P|L|S|F|T|T|B|C|D|E T|E M|/
15 |T|I|Q|/|TERMSTOP CHAR
16 ERROR CODE
17 LAST I/O TRANSMISSION LOG

PHYSICAL ACCESS CONTROL BLOCK

0 2| COMPLETE ACB SIZE
1-17 SAME AS LACB WORDS 1 TO 17
20-21 FILE POINTER
22-23 CURRENT VARIABLE BLOCK NUMBER
24-25 RECORD TRANSFER COUNT
26-27 BLOCK TRANSFER COUNT
30-31 HIGHEST BLOCK NUMBER STARTED
32-33 FCB VECTOR
34 TOTAL NUMBER OF LACB'S
35 |B|DEV TYPE |LAST I/O STATUS
36 LOGICAL DEVICE NUMBER
37 P| |CUR BUF|TAPEDSP|#BUF-1
40 CURRENT RECORD WORD INDEX
41 BUFFER SIZE
42 VIRTUAL LOGICAL DEVICE NUMBER
43 FMAVT INDEX
44 NUMBER OF INPUT LACB'S
45 NAME TYPE | DISPOSITION
46 ACCESS BIT MAP |BLOCKING FACTOR
47 S|M|Q|R|D|C|H|F|A|R|A|R|N|FS |EOF
50 SPOOL DEV TYP|SPOOL DEV REC SIZ
51 SPOOLED DEVICE FOPTIONS
52 SPOOLED DEVICE AOPTIONS
53 IDD OR ODD INDEX
54-55 NO - WAIT DISC ADDRESS
56 ////////////////////////////////
57 NO - WAIT LOGICAL DEVICE
60-61 P1P2 USED BY FDEVICECONTROL
62-63 ////////////////////////////////
0 IOQ ENTRY INDEX | BLKIOQX
1 BLK LDEV NUMBER| | |U|R|D|W|M|P | BLKFLAGW
2 IOCB - STATUS | BLKLSTAT
3 IOCB - TRANSMISSION LOG | BLKLOG
4-5 BLOCK NUMBER | BLKNUM
6-7 BLOCK SECTOR ADDRESS | BLKADDR
10-11 BLOCK EXTENT BASE | BLKEXTBASE
12 BLOCK EXTENT SIZE | BLKEXTSIZE
13 ////////////////////////////////
14 BUFFER | BLKBUFFER
NEXT PACB BLOCK BUFFER

K

GLOBAL REGION HEADER (RESERVED REGION)

RB-24 A|R|A|C|S|L|F|I|L|//////////|M (S E V L C K Z O S I, S S A N P N F T P, I D Z, L N) | RAS
RB-23 REGION SIZE | RS
RB-22 ON GOING I/O COUNT | IOCNT
RB-21 M|E|O|Q|I|E|G|M|R|M|S|//////////|M (S X N U N X A S E S, G T G E C P R G L G, P D O S O R B A P S, R I I E R E E B A T, O S N G M Q G O G A, C A G R V U E R E R, E B D E E E T T) (V A L I D) | INITMSG
RB-20 LOCATION OF DISCREQ OR MOVE MSG | INITINFO
RB-19 M|S|B|S|I|M|//////////|M (S O L C O S, G V K H W G, P E D E A A, R R L D I B, O E K M T O, C Q S G R T) (S G V A L I D) | COMPMSG
RB-18 MAKE PRES DEF QUEUE (PCB INDEX) | MPQLINK
RB-17 RELEASE PAGE COUNT | PAGECNT
RB-16 SPEC REQ TAB PTR (SRT TAB REL) | SPECREQTABPTR

SUBREGION HEADER (RESERVED REGION)

RB-15 C|R|R|//////////////////| IOST (A E O, C F C, H) | SAS
RB-14 SUBREGION SIZE | SS
RB-13 V| SUBREGION DISP IN MEM PAGES | SD
RB-12 WRITE REQUEST POINTER | WREQP
RB-11 TYPE | CST BLOCK INDEX | OBJIDENT
RB-10 OBJECT NUMBER
RB-09 FREEZE COUNT | LOCK COUNT | LKFZCNT
RB-08 WRT DISABLE CNT| I/O FROZEN CNT | WDIOFZCNT
RB-07 LDEV NUMBER | HIGH ORDER | HODA
RB-06 LOW ORDER DISC ADDRESS | LODA
RB-05 ////////////////////////////////
RB-04 ////////////////////////////////
RB-03 TIME OF ARRIVAL | ARRTIME
RB-02
RB-01 ////////////////////////////////

GLOBAL REGION HEADER (ASSIGNED REGION)

RB-24 A|R|A|C|S|L|F|I|L|//////////|M (S E V L C K Z O S I, S S A N P N F T P, I D Z, L N) | RAS
RB-23 REGION SIZE | RS
RB-22 ////////////////////////////////
RB-21 ////////////////////////////////
RB-20 ////////////////////////////////
RB-19 ////////////////////////////////
RB-18 ////////////////////////////////
RB-17 ////////////////////////////////
RB-16 ////////////////////////////////

SUBREGION HEADER (ASSIGNED REGION)

RB-15 C|R|R|//////////////////| IOST | SAS
RB-14 SUBREGION SIZE | SS
RB-13 V| SUBREGION DISP IN MEM PAGES | SD
RB-12 WRITE REQUEST POINTER | WREQP
RB-11 TYPE | CST BLOCK INDEX | OBJIDENT
RB-10 OBJECT NUMBER
RB-09 FREEZE COUNT | LOCK COUNT | LKFZCNT
RB-08 WRT DISABLE CNT| I/O FROZEN CNT | WDIOFZCNT
RB-07 LDEV NUMBER | HIGH ORDER | HODA
RB-06 LOW ORDER DISC ADDRESS | LODA
RB-05 ////////////////////////////////
RB-04 ////////////////////////////////
RB-03 TIME OF ARRIVAL | ARRTIME
RB-02
RB-01 ////////////////////////////////

SUBREGION HEADER (CACHED REGION)

RB-15 C|R|R|//////////////////| IOST | SAS
RB-14 SUBREGION SIZE | SS
RB-13 V| SUBREGION DISP IN MEM PAGES | SD
RB-12 WRITE REQUEST POINTER | WREQP
RB-11 TYPE | CST BLOCK INDEX | OBJIDENT
RB-10 OBJECT NUMBER
RB-09 PREVIOUS CACHED REGION (ADDRESS | PD
RB-08 OF PD FIELD OF PREVIOUS REGION)
RB-07 LDEV NUMBER | HIGH ORDER | HODA
RB-06 LOW ORDER DISC ADDRESS | LODA
RB-05 NEXT CACHED REGION (ADDRESS OF | ND
RB-04 ND FIELD OF NEXT CACHED REGION)
RB-03 TIME OF ARRIVAL | ARRTIME
RB-02
RB-01 DISC ADDRESS CSL(8) | CACDADISP

ASSIGNED REGIONS (CACHED) LINKED CACHED REGIONS

GLOBAL REGION HEADER (ASSIGNED CACHED) PD | ND
REGION
GLOBAL REGION TRAILER

GLOBAL REGION HEADER (ASSIGNED CACHED) PD | ND
REGION
GLOBAL REGION TRAILER

GLOBAL REGION HEADER (ASSIGNED CACHED) PD | ND
REGION
GLOBAL REGION TRAILER

FILE CONTROL BLOCK

0 1| COMPLETE FCB SIZE
1 SPARE
2 FOPTIONS
3 DEVICE SPECIFICATIONS | FCBDEVICE
4 PL |DEVICE TYPE|C| |SUBTYPE
5 NUMBER OF OPENS FOR OUTPUT
6 NUMBER OF OPENS FOR ANY MODE
7 RIN NUMBER | FCBRIN
10 EXCLUSIVE STATUS | FCBEXCSTAT
11 C| |MVTABX | VMASK | FCBVINFO
12 FILE LIMIT | FCBLIM
13
14 MAPPED FILE | FCBMAPIO
15 IDENTIFIER
16 END OF DATA POINTER | FCBEOF
17
20 # USER LAB WRIT|# USER LAB AVAI | FCBUSERLBL
21 EXTENT SIZE IN SECTORS | FCBEXTSIZE
22 BLOCKING FACTOR| SECTORS/BLOCK
23 OFFSET TO DATA |DISP |# EXT.-1
24 LAST EXTENT SIZE IN SECTORS
25 NUMBER OPENS INPUT MODE
26 GNAME 1ST CHAR | GNAME 2ND CHAR | FCBGN
27 GNAME 3RD CHAR | GNAME 4TH CHAR
30 GNAME 5TH CHAR | GNAME 6TH CHAR
31 GNAME 6TH CHAR | GNAME 8TH CHAR
32 ANAME 1ST CHAR | ANAME 2ND CHAR | FCBAN
33 ANAME 3RD CHAR | ANAME 4TH CHAR
34 ANAME 5TH CHAR | ANAME 6TH CHAR
35 ANAME 7TH CHAR | ANAME 8TH CHAR
36 START OF FILE BLOCK NUMBER | FCBSTART
37
40 CURRENT NUMBER OF DATA BLOCKS | FCBEND
41 IN THE FILE
42 NUMBER OF OPEN AND CLOSE
43 RECORDS (MESSAGE FILE)
44 LDEV NUMBER | HIGH ORDER
45 FIRST EXTENT LOW ORDER ADDRESS
:
LDEV NUMBER | HIGH ORDER
LAST EXTENT LOW ORDER ADDRESS

FILE MULTI-ACCESS VECTOR TABLE (DST 54)

0 CURRENT TABLE SIZE
1 ENTRY SIZE (6) | ENTRY 0
2 MAXIMUM TABLE SIZE | FORMAT
3-5 0
0 1|G|D| UNUSED
1 JIT DST NUMBER | TYPICAL
2 LDEV NUMBER | HIGH ORDER | ENTRY
3 LOW ORDER DISC ADDRESS | FORMAT
4 PACB VECTOR
5

SHARED CBT DIST LIST (SYSGLOB 76)

0 TABLE SIZE IN WORDS (%200)
1 DST NUMBER OF THIS TABLE
2-7 0
10 1ST SHARED CBT DST NUMBER
11 2ND SHARED CBT DST NUMBER
:
177 118TH SHARED CBT DST NUMBER

L

GLOBAL REGION TRAILER (ASSIGNED REGION)

RB-28 ////////////////////////////////
RB-27 PREVIOUS TRAILER SUBREGION SIZE | PTSS
RB-26 A|R|A|////////////////// (S E V, S S) | PTRAS
RB-25 PREVIOUS TRAILER REGION SIZE | PTRA

GLOBAL REGION HEADER (AVAILABLE REGION)

RB-24 A|R|A|C|S|L|F|I|L|//////////|M | RAS
RB-23 REGION SIZE | RS
RB-22 ////////////////////////////////
RB-21 //////////////////////////////|M
RB-20 PREVIOUS LINK (ADDRESS OF PL | PL
RB-19 FIELD OF PREV AVAILABLE REGION)
RB-18 NEXT LINK (ADDRESS OF NL FIELD | NL
RB-17 IN NEXT AVAILABLE REGION)
RB-16 ////////////////////////////////

SUBREGION HEADER (AVAILABLE REGION)

RB-15 C|R|R|//////////////////| IOST | SAS
RB-14 SUBREGION SIZE | SS
RB-13 V| SUBREGION DISP IN MEM PAGES | SD
RB-12 WRITE REQUEST POINTER | WREQP
RB-11 TYPE | CST BLOCK INDEX | OBJIDENT
RB-10 OBJECT NUMBER
RB-09 ////////////////////////////////
RB-08 ////////////////////////////////
RB-07 LDEV | HIGH ORDER | HODA
RB-06 LOW ORDER DISC ADDRESS | LODA
RB-05 ////////////////////////////////
RB-04 ////////////////////////////////
RB-03 ////////////////////////////////
RB-02 ////////////////////////////////
RB-01 ////////////////////////////////

AVAILABLE REGION LIST SYSGLOB %250-251 (HLHEAD)

GLOBAL REGION HEADER (AVAILABLE REGION) PL | NL
REGION
GLOBAL REGION TRAILER

GLOBAL REGION HEADER (AVAILABLE REGION) PL | NL
REGION
GLOBAL REGION TRAILER

GLOBAL REGION HEADER (AVAILABLE REGION) PL | NL
REGION
GLOBAL REGION TRAILER

SYSGLOB %252-253 (HLTAIL)

MEMORY HEADER AND TRAILER FIELD DESCRIPTIONS

RB-26 (0:1) ASS = Region Assigned
(1:1) RES = Region Reserved flag
(2:1) AV = Region Available flag

RB-24 (0:1) ASS = Region Assigned flag
(1:1) RES = Region Reserved flag
(2:1) AVAIL = Region Available flag
(3:1) CLND = Region Cleaned flag
(4:1) SC = Change Pending flag
(5:1) LKP = Region Locked flag
(6:1) FZN = Region Frozen flag
(7:1) IOFRZN = Region I/O Frozen flag
(8:1) LSTT = LSTT segment flag
(9:6) not used
(15:1) MIP = Blocked Locked migration in progress flag

RB-22 (0:16) IOCNT = The number of on going I/O's in the region which must complete before the initiation message can be processed

RB-21 (0:1) MSGPROCES = Message Processed Toggle switch
(1:1) EXTDISABL = Message Externally Disabled flag
(2:1) ONGOINGD = Message On-going I/O Disabled flag
(3:1) QUESEGRE = Queue Segment Read Disc Request flag
(4:1) INCORMOVE = Incore Move Request flag
(5:1) EXPREQUE = Expansion Request flag
(6:1) GARBAGE = Garbage Collection flag
(7:1) MSGABORT = Message Aborted flag
(8:1) RELPAGE = Release Residual Pages flag
(9:1) MSGSTART = OK to start completion flag
(10:5) = not used
(15:1) MSGVALID = Message Valid flag

RB-19 (0:1) MSGPROC = Message Processed Toggle switch
(1:1) MOVEREQ = Segment Modification Required
(2:1) BLKDLK = Block Lock Request
(3:1) SCHEDMSG = Send Scheduler a message
(4:1) IOWAIT = Message I/O Wake flag
(5:1) MSGABORT = Message aborted
(6:9) = not used
(15:1) MSGVALID = Message Valid flag

RB-15 (0:1) CACH = Cached Region
(1:1) REF = Referenced
(2:1) ROC = Recoverable Overlay Candidate
(13:3) IOST = I/O Status from region fetch

RB-13 (0:1) VALIDFLAG = Displacement count valid flag
(1:15) SD = Number of pages to base of region

FILE LABEL

0 FNAME 1ST CHAR | FNAME 2ND CHAR | FLLOCNAME
1 FNAME 3RD CHAR | FNAME 4TH CHAR
2 FNAME 5TH CHAR | FNAME 6TH CHAR
3 FNAME 7TH CHAR | FNAME 8TH CHAR
4 GNAME 1ST CHAR | GNAME 2ND CHAR | FLGRPNAME
5 GNAME 3RD CHAR | GNAME 4TH CHAR
6 GNAME 5TH CHAR | GNAME 6TH CHAR
7 GNAME 7TH CHAR | GNAME 8TH CHAR
10 ANAME 1ST CHAR | ANAME 2ND CHAR | FLACCTNAME
11 ANAME 3RD CHAR | ANAME 4TH CHAR
12 ANAME 5TH CHAR | ANAME 6TH CHAR
13 ANAME 7TH CHAR | ANAME 8TH CHAR
14 CNAME 1ST CHAR | CNAME 2ND CHAR | FLUSERID
15 CNAME 3RD CHAR | CNAME 4TH CHAR
16 CNAME 5TH CHAR | CNAME 6TH CHAR
17 CNAME 7TH CHAR | CNAME 8TH CHAR
20 LWORD 1ST CHAR | LWORD 2ND CHAR | FLLOCKWORD
21 LWORD 3RD CHAR | LWORD 4TH CHAR
22 LWORD 5TH CHAR | LWORD 6TH CHAR
23 LWORD 7TH CHAR | LWORD 8TH CHAR
24 SECURITY MATRIX | FLSECMX
25
26 FILE LANG ATTR |////////////|S|S
27 CREATION DATE | FLCREATE
30 LAST ACCESS DATE | FLLASTACC
31 LAST MODIFICATION | FLLASTMOD
32 FILE CODE | FLFILECODE
33 C|/////|MVTABX | VMASK | FLPVINFO
34 S|R|L|X|SUBTYPE| DISC TYPE |R/W | FLLOCK
35 # USER LAB WRIT|# USER LAB AVAL | FLUSERLBL
36 FILE LIMIT IN BLOCKS | FLFLIM
37
40 FCB VECTOR | FLFCBVECT
41
42 CHECKSUM | FLCHECKSUM
43 COLD LOAD ID | FLCLID
44 FOPTIONS | FLFOPTIONS
45 RECORD SIZE IN BYTES | FLRECSIZE
46 BLOCK SIZE IN WORDS | FLBLKSIZE
47 SECTOR OFFSET | |# EXTENTS-1
50 LAST EXTENT SIZE IN SECTORS | FLLASTEXTSIZE
51 EXTENT SIZE IN SECTORS | FLEXTSIZE
52 END OF DATA POINTER | FLEOF
53
54 VOL TABLE INDEX| HODA | FLEXTTMAP
55 1ST EXTENT LODA ADDRESS
56 VOL TABLE INDEX| HODA
57 2ND EXTENT LODA ADDRESS
:
VOL TABLE INDEX| HODA
LAST EXTENT LODA ADDRESS
:
154 FILE ALLOCATION TIME | FLALLOCTIME
155
156 FILE ALLOCATION DATE | FLALLOCDATE
157
160 START OF FILE BLOCK NUMBER | FLSTART
161
162 BLOCK NUMBER OF END OF FILE | FLEND
163
164 NUMBER OF OPEN AND CLOSE | FLNUMOPENCLSREC
165 RECORDS (MESSAGE FILES)
166 LAST FILE MODIFICATION TIME | FLMODTIME
167
170-173 ////////////////////////////////
174 DNAME 1ST CHAR |DNAME 2ND CHAR | FLDEVNAME
175 DNAME 3RD CHAR |DNAME 4TH CHAR
176 DNAME 5TH CHAR |DNAME 6TH CHAR
177 DNAME 7TH CHAR |DNAME 8TH CHAR

FILE LABEL FIELD DESCRIPTIONS

FLAB 26 (14:1) FLSRREALEASE = Store / Restore released bit
(15:1) FLSECURE = File secure bit

FLAB 33 (0:1) FLCLASSFLG = Class flag bit
(4:4) FLMVTABX = Mounted Volume Table Index
(8:8) FLVMASK = Volume Mask

FLAB 34 (0:1) FLSTORE = File being Stored
(1:1) FLRESTORE = File being Restored
(2:1) FLLOAD = File loaded
(3:1) FLEXCL = Exclusive access
(4:4) FLSUBTYPE = Device subtype
(8:8) FLDTYPE = Device type
(14:2) FLSTATUS = Read / Write status
0 : no accessors
1 : read
2 : write
3 : read / write