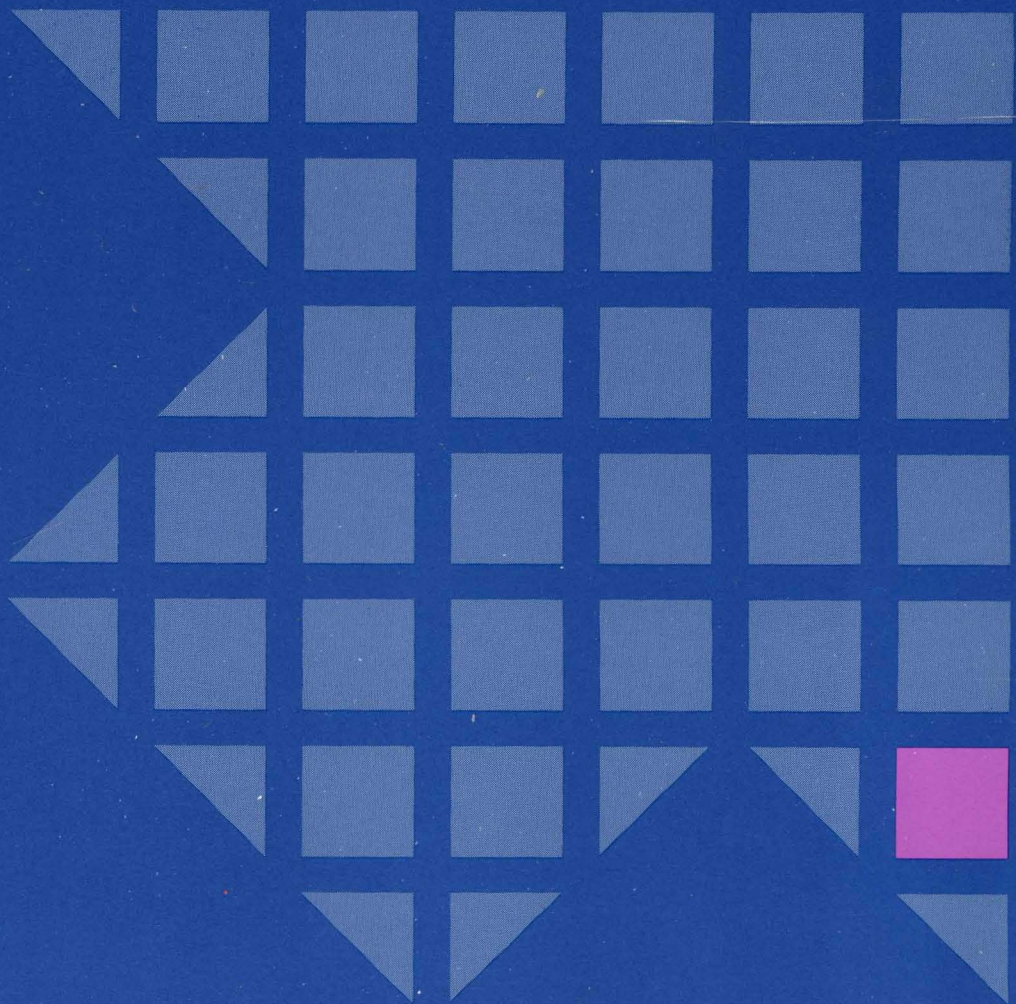
Virtual Machine/Extended Architecture™
System Product

LY27-8053-1

CP Data Areas and Control Blocks

VM/XA™ SP Release 2



IBM

Virtual Machine/Extended Architecture™
System Product

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CP Data Areas and Control Blocks

VM/XA™ SP Release 2

Second Edition (November 1988)

This is a major revision of, and obsoletes, LY27-8053-0. See "Summary of Changes" on page 834 for a summary of the changes made to this manual.

This edition applies to Release 2 of the Virtual Machine/Extended Architecture System Product (VM/XA SP) Licensed Program 5664-308. Changes are made periodically to the information herein; before using this publication in connection with the operation of IBM systems, consult the latest *IBM System/370, 30xx, 4300, and 9370 Processors Bibliography*, GC20-0001, for the editions that are applicable and current.

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Preface

Purpose

This publication describes the data areas and control blocks used by the VM/XA System Product control program (CP). This is a reference manual, for use in diagnosing system problems. You should use this book in conjunction with the *VM/XA System Product: CP Diagnosis Reference.*

Audience

This publication is for system programmers who are responsible for maintaining and updating VM/XA System Product Release 2.

Prerequisite Knowledge

To use this book most effectively, you should be familiar with the material in the following publications:

- *IBM System/370 Extended Architecture: Principles of Operation*, SA22-7085
- *VM/XA System Product: General Information*, GC23-0362
- *VM/XA System Product: Dump Viewing Facility Operation Guide and Reference*, SC23-0359
- *VM/XA System Product: CP Diagnosis Reference*, LY27-8054
- *Assembler H Version 2 Application Programming: Language Reference*, GC26-4037

Related Publications

See "Bibliography" on page 845 of this publication.

Contents

Using This Book

Overview

This book lists the data areas and control blocks (both referred to collectively as "blocks") used by the Virtual Machine/Extended Architecture™ System Product Release 2 (VM/XA™ SP 2) control program (CP). The blocks are listed alphabetically by DSECT name, although they are named by their COPY file names. You can determine the DSECT name by removing the prefix HCP from the COPY file name. If there is no HCP prefix, the DSECT name is the same as the COPY file name.

The text includes several data areas that consist only of equates. These equates are referenced by other data areas and control blocks.

Each block listing contains the following information:

- The DSECT name of the block
- Its COPY file name
- Its descriptive name
- Its function
- How the block is located
- How the block is created
- How the block is deleted
- What the block looks like
- What fields and bits (or codes) are defined in each block.

The information for each field defined in a block includes the field's displacement, name (label), length in bytes, a short description, and bits or codes defined in that field.

Determining Field Lengths

The information about each field includes both the field's displacement and its length in bytes. The length column sometimes contains the **implied length** of the field, not its actual length. This happens because the lengths were obtained from the cross reference of an Assembler H assembler listing. You can easily determine a

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field's actual length by comparing the field's displacement to the displacement of the field after it.

Fields With Labels

When the operand of a DS or DC instruction in the data area or control block is not coded with a length modifier, Assembler H assigns an implied length to that field in the cross reference. The implied length depends on the type of constant that was coded in the operand.

For example, if a field is coded as:

```
LABEL1   DS   2F
```

its length appears in this book as 004, the implicit length for a fullword, and not as 008, which is the actual length of this field.

Table 1 shows the implied lengths for different types of constants.

Table 1. Constants and their implied lengths

Type	Implied Length, Bytes	Alignment	Format
C	-	Byte	Characters
X	-	Byte	Hexadecimal digits
B	-	Byte	Binary digits
F	4	Word	Fixed-point binary
H	2	Halfword	Fixed-point binary
E	4	Word	Short floating-point
D	8	Doubleword	Long floating-point
L	16	Doubleword	Extended floating-point
P	-	Byte	Packed decimal
Z	-	Byte	Zoned decimal
A	4	Word	Value of address
Y	2	Halfword	Value of address
S	2	Halfword	Address in base-displacement form
V	4	Word	Externally defined address value

For more information about implied length, see *Assembler H Version 2 Application Programming: Language Reference.*

Fields Without Labels

When a field has no label, its length column contains the actual assembler operand for the length, rather than the length in bytes. If a field is coded as:

```
DS   CL24
```

its length appears as CL24, not as 024.

Finding Bit and Code Definitions

Some fields have bits or codes defined in them. These bits and codes are equates, defined by the assembler EQU statement. The bits or codes defined in any given field are found in one of these places: immediately after the field, or in another field.

Bits Defined Immediately After the Field

Sometimes the bits or codes are defined immediately after the field. In this case, they have the heading:

```
BITS DEFINED IN fieldname (AT HEX DISPLACEMENT: xxx)
```

or

```
CODES DEFINED IN fieldname (AT HEX DISPLACEMENT: xxx)
```

For example, the block HCPCPCBK contains a field called CPCDTFLG. This field has bits defined immediately after it:

```
003   CPCDTFLG   001      DATA TRANSFER CONTROL BYTE

        BITS DEFINED IN CPCDTFLG (AT HEX DISPLACEMENT: 3)

        80    CPCPSNSP    SENSE DATA PENDING AT CCWFETCH
        40    CPCDTBWD    READ-BACKWARD OPERATION
        20    CPCDTRTY    COMMAND RETRY IS IN EFFECT
        10    CPCDTBEG    DATA TRANSFER HAS BEGUN
        04    CPCDTSTP    'STOP' WAS SIGNALLED
        02    CPCDTCER    CHANNEL END RECEIVED
        01    CPCDTEND    RECEIVED FINAL STS FOR CMD
```

Bits Defined Elsewhere

The other possibility is that the bits or codes for a field are defined elsewhere. They could be defined in another field in the same block, or in another field in a different block. The "different block" is often one of the equates-only blocks. Bits and codes that are defined elsewhere have the following heading:

```
BITS DEFINED FOR fieldname BY blockname other-fieldname
```

or

```
CODES DEFINED FOR fieldname BY blockname other-fieldname
```

For example, a field called CPCCCWFL in the block HCPCPCBK looks like this:

```
001   CPCCCWFL   001      CCW CHANNEL CONTROL FLAGS

        BITS DEFINED FOR CPCCCWFL BY HCPEQUAT CCWFLAG
```

This means that CPCCCWFL uses the bit definitions found in the field CCWFLAG, which is in the equates-only block HCPEQUAT.

As a final example, let's look at a field called ALOAVAIL in the block HCPALOC:

```
001   ALOAVAIL   001      AVAILABILITY OF TYPES

        BITS DEFINED FOR ALOAVAIL BY HCPALOC ALOCMAP
```

In this case, bits are defined for ALOAVAIL by another field within the same block. ALOAVAIL uses the same bit definitions as the field called ALOCMAP.

Getting an Updated Block Listing

You can get the most up-to-date listing of CP data areas and control blocks by assembling a file called HCPBLOKS ASSEMBLE. To assemble the file, follow the 10-step process outlined below.

In the following example, the left-hand column gives instructions for assembling the file. The center column shows your dialog with the system, and the right-hand column contains additional comments. Within the dialog, commands you enter are shown in **lowercase bold** characters in the type font you are reading now. Variable data you must supply appear in ***lowercase bold italic*** type. System responses appear in the `example type` used on page 3 for examples of defining bits and codes. Variable data in system responses are in `underlined example type.` You should press the ENTER key after issuing each command.

Step	Instructions	Dialog	Comments
1	Log on to the MAINT user ID.	**logon maint**	By convention, the virtual machine that supervises service is named MAINT.

2	Define a temporary disk. Use the chart below to determine how much DASD space you need:
	Device (devtype) **Cylinders (cyls)**
	3330 22
	3340 55
	3350 10
	3375 16
	3380 10
		define ***tdevtype vdevno cyls***
		`DASD vdevno DEFINED`
		`Ready;`
			Substitute a device type for *devtype*, a virtual device number for *vdevno*, and a cylinder count for *cyls*.

Step	Instructions	Dialog	Comments
3	Format the temporary minidisk and access it as A.	**format *vdevno* a** FORMAT WILL ERASE ALL FILES ON DISK 'A(vdevno)'. DO YOU WISH TO CONTINUE? (YES|NO): **yes** ENTER DISK LABEL: ***label*** FORMATTING DISK 'A'. 'nn' CYLINDERS FORMATTED ON 'A(vdevno)'. Ready;	Substitute the virtual device number for *vdevno*. When prompted, enter your own disk label for this temporary disk.
4	Access MAINT's 394 minidisk (the CP source file disk) and copy the HCPBLOKS ASSEMBLE file.	**access 394 c** Ready; **copy hcpbloks assemble c (olddate unpack** Ready;	You must access 394 first as C. The file you copy is in packed format. Use the UNPACK option to unpack the file.
5	Access MAINT's 194 and 294 minidisks. Then reaccess MAINT's 394 minidisk as a read-only extension to MAINT's A minidisk.	**access 194 b/a** B (194) R/O Ready; **access 294 c/a** '294' REPLACES ' C (394) ' C (294) R/O Ready; **access 394 d/a** D (394) R/O Ready;	MAINT's 194 minidisk is the control file disk. The 294 disk is the update file disk.
6	Check MAINT's minidisk accesses. The minidisks, access modes, and link mode (R/W or R/O) should be the same as shown.	**query search** label vdevno A R/W MNT194 194 B/A R/O MNT294 294 C/A R/O MNT394 394 D/A R/O MNT190 190 S R/O MNT19E 19E Y/S R/O	*Label* and *devno* are the values you specified when you defined and formatted the temporary minidisk.

Step	Instructions	Dialog	Comments

7	Use the UPDATE command to update HCPBLOKS ASSEMBLE.	**update hcpbloks assemble * hcpxa cntrl * (ctl**
		`UPDATING 'HCPBLOKS ASSEMBLE D1'`
		`APPLYING 'HCPBLOKS ft C1'`
		`Ready;`
			This example assumes there is an update file for HCPBLOKS. If there is an update file, it will have a special filetype (*ft*). If there is no update file, you will receive the message 'NO UPDATE FILES WERE FOUND.'

8	Issue the GLOBAL command for the macro libraries called by HCPBLOKS.	**global maclib hcpxa dmssp cmslib osmacro osmacro1** `Ready;`	Use the macro library names shown in the dialog.
9	Set the virtual punch to stay open after spool files reach 50,000 records.	**spool punch noeof** `Ready;`	The option NOEOF means the punch stays open after punch spool files reach 50,000 records.

10	Issue the HASM command for HCPBLOKS.	**hasm *fn* (sysparm (exp) xref (full) print**
		`PRT FILE nnnn FROM MAINT`
		`PRT RECS nnnn COPY 001 A`
		`NOHOLD NOKEEP`
		`Ready;`
			If updates were applied to HCPBLOKS ASSEMBLE, substitute $HCPBLOK for *fn*. If updates were not applied to HCPBLOKS ASSEMBLE, substitute HCPBLOKS for *fn*.
			The resulting PRT file contains the assembled listing of HCPBLOKS ASSEMBLE.

CP Data Areas and Control Blocks

ACIPARMS— ACCESS CONTROL INTERFACE PARAMETERS

DSECT NAME: ACIPARMS

DESCRIPTIVE NAME: ACCESS CONTROL INTERFACE PARAMETERS

FUNCTION: VM/XA CP CREATES THIS PARAMETER LIST TO INTERFACE WITH RESOURCE ACCESS INTERFACE PROGRAM PRODUCT.

LOCATED BY:

NONE

CREATED BY:

HCPAUT, HCPCSC, HCPCSP, HCPCST, HCPCSL, HCPLGO, HCPLNK, HCPUSO

DELETED BY:

HCPAUT, HCPCSC, HCPCSP, HCPCST, HCPCSL, HCPLGO, HCPLNK, HCPUSO

REDEFINITION -

```
   +-------------------------------------------------------+
30 |                         ACICMD                        |
   +-------------------------------------------------------+
38
```

REDEFINITION -

```
   +-------------------------------------------------------+
18 |                                                       |
   =                         ACIUDIR                       =
   |                                                       |
   +-------------------------------------------------------+
38
```

REDEFINITION -

```
   +-------------------------------------------------------+
 0 |                         ACIUSRID                      |
   +-------------------------------------------------------+
 8
```

REDEFINITION -

```
   +-------------------------------------------------------+
18 |                                                       |
   =                         ACIPASS                       =
   |                                                       |
   +-------------------------------------------------------+
40
```

REDEFINITION - REDEFINE FOR ALTID FUNCTION

```
   +-------------------------------------------------------+
18 |                         ACIWUSR                       |
   +-------------------------------------------------------+
20 |                         ACIAUSR                       |
   +-------------------------------------------------------+
```

28

disp	name	length	description
000	ACIFCN	001	A*1 FUNCTION REQUEST
	CODES DEFINED IN ACIFCN (AT HEX DISPLACEMENT: 0)		
	00 ACILINK		LINK ACCESS VALIDATION
	04 ACISPOOL		SPOOL ACCESS VALIDATION
	08 ACITAG		NODE ACCESS VALIDATION
	0C ACIDEL		DELETE USER REQUEST
	10 ACILOG		LOGON PASSWORD VALIDATION
	14 ACINPMT		NO PROMPT OPTION
	18 ACIALTU		ALTERNATE USERID
	1C ACIVMCMD		COMMAND FUNCTION
			RETURN CODES FOR ACICODE
001	ACICODE	001	A*2 RETURN CODE FIELD
	EQUATES		
	00 ACIAUTH		ACCESS AUTHORIZED
	04 ACIDEFR		ACCESS DEFERRED
	08 ACINOAC		ACCESS DENIED
	0C ACIFAIL		LOGOFF USER
	10 ACITERM		TERMINAL I/O ERROR
			FUNCTION CODES FOR ACICODE
	01 ACIXTND		EXTENDED PLIST INDICATOR
	04 ACIVAL		NO PROMPT INDICATOR
002	ACIRPI	001	USED BY HCPRPI
004		4X	RESERVED
008	ACIRGRP	008	REQUESTOR'S GROUP NAME
010	ACIRUSR	008	REQUESTOR'S USERID
018	ACITGRP	008	TARGET GROUP NAME
020	ACITUSR	008	TARGET USERID
028	ACIMODE	002	ACCESS MODE
02A	ACIADDR	004	RESOURCE ADDRESS
02E		CL2	RESERVED
030	ACINODE	008	RESOURCE NODENAME
038	ACILABL	008	VOLUME LABEL
	EQUATES		
	08 ACISIZE		ACIPARMS SIZE IN DOUBLE WORDS
	18 ACICLR1		LENGTH OF THE FIELD TO CLEAR
	REDEFINITION -		
030	ACICMD	008	COMMAND NAME
	REDEFINITION -		
018	ACIUDIR	032	BUFFER USED FOR LINK
	REDEFINITION -		
000	ACIUSRID	008	USERID FIELD FOR LINK
	REDEFINITION -		
018	ACIPASS	040	LOGON PASSWORDS
	REDEFINITION - REDEFINE FOR ALTID FUNCTION		
018	ACIWUSR	008	WORKING (TARGET) USERID
020	ACIAUSR	008	ALTERNATE USERID ASSIGNED

CROSS REFERENCE

Name	Len	Val/Disp
ACIADDR	004	02A
ACIALTU	001	018
ACIAUSR	008	020
ACIAUTH	001	000
ACICLR1	001	018
ACICMD	008	030
ACICODE	001	001
ACIDEFR	001	004
ACIDEL	001	00C
ACIFAIL	001	00C
ACIFCN	001	000
ACILABL	008	038
ACILINK	001	000
ACILOG	001	010
ACIMODE	002	028
ACINOAC	001	008
ACINODE	008	030
ACINPMT	001	014
ACIPARMS	001	000
ACIPASS	040	018
ACIRGRP	008	008
ACIRPI	001	002
ACIRUSR	008	010
ACISIZE	001	008
ACISPOOL	001	004
ACITAG	001	008
ACITERM	001	010
ACITGRP	008	018
ACITUSR	008	020
ACIUDIR	032	018
ACIUSRID	008	000
ACIVAL	001	004
ACIVMCMD	001	01C
ACIWUSR	008	018
ACIXTND	001	001

HCPACOBK— USER ACCOUNTING RECORD FORMAT

DSECT NAME: ACOBK

DESCRIPTIVE NAME: USER ACCOUNTING RECORD FORMAT

FUNCTION: HCPACOBK DEFINES THE FORMAT OF THE FIELDS IN THE ACCOUNTING CARD THAT PROVIDE THE STATISTICAL INFORMATION ON EACH USER FOR: USER VIRTUAL MACHINE ACCOUNTING USER DEDICATED DEVICE ACCOUNTING USER T-DISK SPACE ACCOUNTING USER MINI-DISK SPACE ACCOUNTING ADJUNCT VIRTUAL MACHINE ACCOUNTING ADJUNCT DEDICATED DEVICE ACCOUNTING ADJUNCT T-DISK SPACE ACCOUNTING ADJUNCT MINI-DISK SPACE ACCOUNTING USER GENERATED ACCOUNTING

LOCATED BY:

THE SYSTEM CHECK POINT BLOCK (CKPBK) POINTS
TO THE DASD LOCATION OF CHECK-POINTED
ACOBK'S BY THE ANCHORS CKPSACCT AND CKPCACCT.
AFTER SYSTEM IS STARTED :
THE ACOBK'S ARE PLACED IN QUEUES ANCHORED
IN THE SYSTEM COMMON AREA
- SYSRECQU FOR CHECK-POINTED RECORDS
- SYSRECQL FOR NON CHECK-POINTED RECORDS

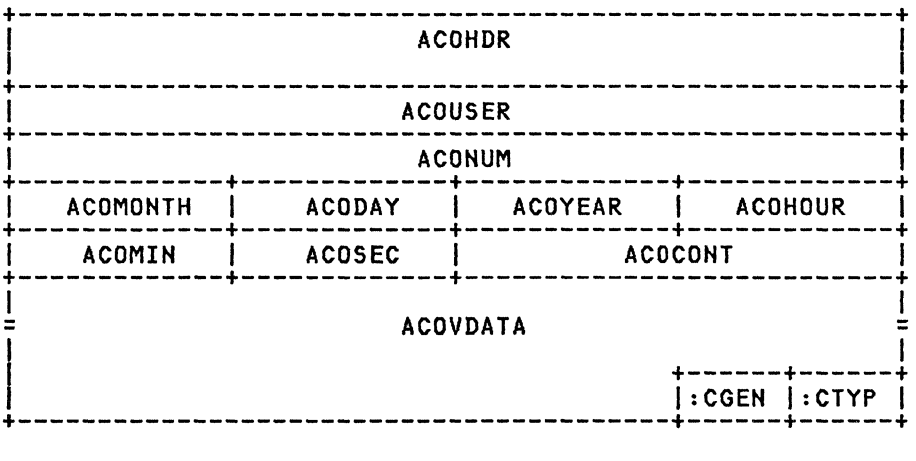
CREATED BY:

HCPACODV
HCPACOFF
HCPCKPRS
HCPHVDAL

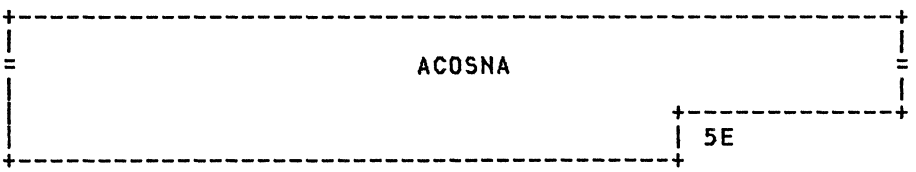
DELETED BY:

HCPRECNU

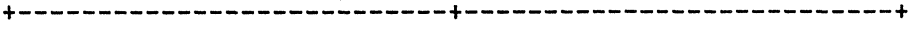
ACOBK - USER ACCOUNTING RECORD FORMAT

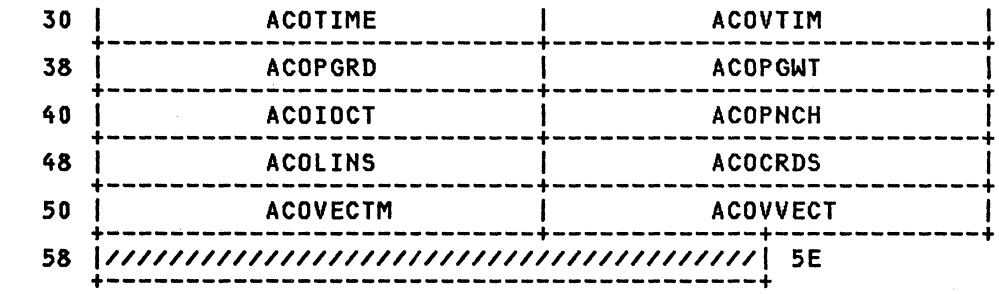


REDEFINITION - SNA/CCS GENERATED ACCOUNTING REC

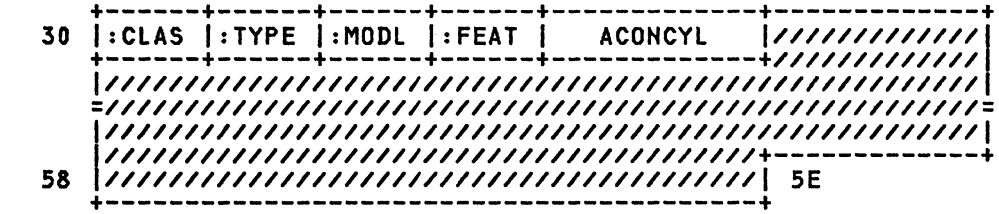


REDEFINITION - VM RESOURCE ACCOUNTING RECORD

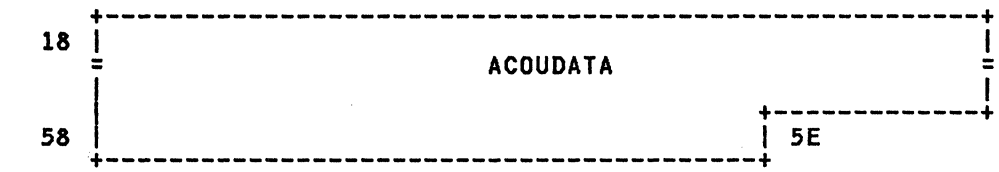




REDEFINITION - T-DISK/DEVICE ACCOUNTING RECORD



REDEFINITION - USER GENERATED ACCOUNTING RECORD



disp	name	length	description
000	ACOHDR	016	GSDBLOK HEADER FOR ACCOUNT BUFFER
010	ACODATA	080	GENERAL ACCOUNTING DATA
010	ACOUSER	008	VIRTUAL MACHINE IDENTIFICATION
018	ACONUM	008	VIRTUAL MACHINE ACCOUNT NUMBER
020	ACOSTOP	012	DATE AND TIME OF ACCOUNTING
020	ACOMONTH	002	MONTH PORTION
022	ACODAY	002	DAY PORTION
024	ACOYEAR	002	YEAR PORTION
026	ACOHOUR	002	HOUR PORTION
028	ACOMIN	002	MINUTE PORTION
02A	ACOSEC	002	SECOND PORTION
02C	ACOCONT	004	NUMBER OF SECONDS OF CONNECT TIME
030	ACOVDATA	001	RECORD SPECIFIC ACCOUNTING DATA
05E	ACOCODE	002	CARD IDENTIFICATION CODE

CHARACTER CODES DEFINED FOR ACOCODE

05E	ACOCGEN	001	CARD GENERATOR
05F	ACOCTYP	001	CARD TYPE

EQUATES

0C	ACOSIZE	SIZE OF ACOBK IN DWORDS

REDEFINITION - SNA/CCS GENERATED ACCOUNTING REC

020	ACOSNA	062	SNA/CCS ACCOUNTING DATA

REDEFINITION - VM RESOURCE ACCOUNTING RECORD

030	ACOTIME	004	MILLISECONDS OF CPU TIME USED
034	ACOVTIM	004	MILLISECONDS OF VIRTUAL CPU TIME
038	ACOPGRD	004	TOTAL PAGE READS
03C	ACOPGWT	004	TOTAL PAGE WRITES
040	ACOIOCT	004	VIRTUAL SIO CNT - NON-SPOOLED IO
044	ACOPNCH	004	VIRTUAL CARD CNT - SPOOLED PUN
048	ACOLINS	004	VIRTUAL LINE CNT - SPOOLED PRT
04C	ACOCRDS	004	VIRTUAL CARD CNT - SPOOLED RDR
050	ACOVECTM	004	MILLISECONDS OF TOTAL VECTOR TIME
054	ACOVVECT	004	MILLISECONDS OF VIRTUAL VECTR TIME
058		XL6	RESERVED FOR FUTURE IBM USE

REDEFINITION - T-DISK/DEVICE ACCOUNTING RECORD

030	ACOCLAS	001	DEVICE CLASS

BITS DEFINED FOR ACOCLAS BY HCPDVTYP DEVCLAS

031	ACOTYPE	001	DEVICE TYPE

BITS DEFINED FOR ACOTYPE BY HCPDVTYP DEVTYPE

032	ACOMODL	001	DEVICE MODEL
033	ACOFEAT	001	DEVICE FEATURES

BITS DEFINED FOR ACOFEAT BY HCPDVTYP DEVFEAT

034	ACONCYL	002	NUMBER OF CYLINDERS (T-DISK ONLY)
036		XL40	RESERVED FOR FUTURE IBM USE

REDEFINITION - USER GENERATED ACCOUNTING RECORD

018	ACOUDATA	070	USER PROVIDED DATA

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
ACOALTVM	001	020	ACOSEC	002	02A
ACOBK	001	000	ACOSIZE	001	00C
ACOCGEN	001	05E	ACOSNA	062	020
ACOCLAS	001	030	ACOSTOP	012	020
ACOCODE	002	05E	ACOTIME	004	030
ACOCONT	004	02C	ACOTYPE	001	031
ACOCRDS	004	04C	ACOUDATA	070	018
ACOCTYP	001	05F	ACOUSER	008	010
ACODATA	080	010	ACOVDATA	001	030
ACODAY	002	022	ACOVECTM	004	050
ACOFEAT	001	033	ACOVTIM	004	034
ACOHDR	016	000	ACOVVECT	004	054
ACOHIPR	001	020	ACOYEAR	002	024
ACOHOUR	002	026			
ACOIOCT	004	040			
ACOLINS	004	048			
ACOMIN	002	028			
ACOMODL	001	032			
ACOMONTH	002	020			
ACONCYL	002	034			
ACONUM	008	018			
ACOPGRD	004	038			
ACOPGWT	004	03C			
ACOPNCH	004	044			

HCPAFFBK— AFFINITY MANAGEMENT CONTROL BLOCK

DSECT NAME: AFFBK

DESCRIPTIVE NAME: AFFINITY MANAGEMENT CONTROL BLOCK

FUNCTION: THE AFFBK MAPS THE STORAGE IN HCPRCC STARTING AT LABEL HCPRCCAF, EXTENDING FOR THE LENGTH OF THIS BLOCK. WHEN THE AFFBK IS COPIED VIA THE 'COPY' PSUEDO-OP INTO ANY MODULE OTHER THAN HCPRCC, IT WILL GENERATE A DSECT. WHEN COPIED IN HCPRCC, HOWEVER, IT WILL GENERATE CODE TO ACTUALLY DEFINE THE FIELDS. THE AFFBK IS USED BY THE PROCESSOR FEATURE AFFINITY MANAGEMENT ROUTINES AS AN AREA TO DO BOOKKEEPING AND RECORDING.

LOCATED BY:

HCPRCCAF IS THE ADDRESS OF THE START OF THE BLOCK.

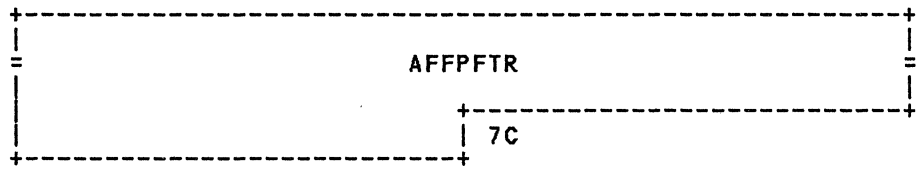
CREATED BY:

THE BLOCK IS DCED IN MODULE HCPRCC.

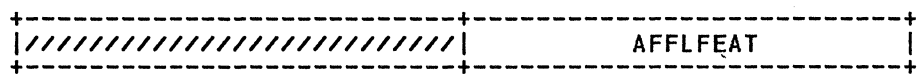
DELETED BY:

NEVER DELETED

AFFBK - AFFINITY MANAGEMENT CONTROL BLOCK



REDEFINITION -



disp	name	length	description
000	AFFPFTR	004	PROCESSOR FEATURES A DATA AREA CONTAINING A ..FULLWORD FOR EACH PROCESSOR ..(INDEXED BY PFXINDEX, OR ..VMDHPLDV/2**5) DESCRIBING THE ..FEATURES AVAILABLE ON EACH ..PROCESSOR.

REDEFINITION -

000		A(FTRAVAI	INITIALIZE FOR MASTER
07C	AFFLFEAT	004	LOADABLE FEATURES THIS IS A MASK OF FEATURE ..BITS CONTAINING A ONE IN THE ..POSITION OF EACH FEATURE WHICH ..IS "LOADABLE". A FEATURE ..WHICH IS LOADABLE CANNOT BE ..SHARED BY VMDBKS WITHOUT SOME ..WORK INVOLVED TO ACCOMPLISH ..THE SWITCH. THIS IS A STATIC ..MASK.

EQUATES

80	AFFLEN	LENGTH IN BYTES OF THE AFFBK
10	AFFSIZE	SIZE IN DOUBLEWORDS OF THE AFFBK

CROSS REFERENCE

Name	Len	Val/Disp
AFFBK	001	000
AFFLEN	001	080
AFFLFEAT	004	07C
AFFLOAFF	001	008
AFFPFTR	004	000
AFFSIZE	001	010
AFFSTLST	001	004
AFFUNLD	001	000

HCPALOC— DASD VOLUME ALLOCATION BLOCK

DSECT NAME: ALOC

DESCRIPTIVE NAME: DASD VOLUME ALLOCATION BLOCK

FUNCTION: AN ALOC BLOCK DESCRIBES THE ALLOCATION STATUS FOR A SYSTEM OWNED VOLUME.

LOCATED BY:

CPVALOC FIELD OF OWNING CPVOL BLOCK
SALALOC FAST ALLOCATION PATH CURRENT ALOC ADDR

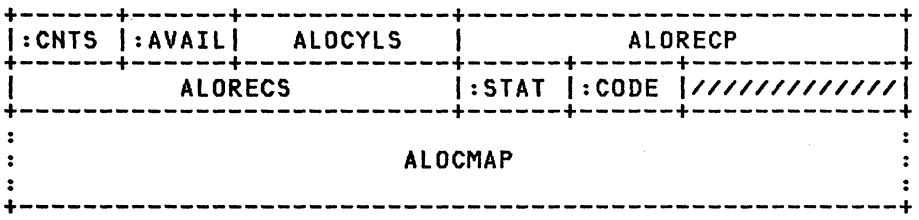
CREATED BY:

HCPIIODV AT INITIALIZATION
HCPRDAAT IF A SYSTEM VOLUME IS ATTACHED

DELETED BY:

HCPRDADT IF A SYSTEM VOLUME IS DETACHED.

ALOC - DASD VOLUME ALLOCATION BLOCK



REDEFINITION -

disp	name	length	description
000	ALOCNTS	001	VOLUME TYPE CONTENTS THIS BYTE CONTAINS THE RESULTING BIT CONFIGURATION OBTAINED BY ORING ALL USE FLAGS THAT REPRESENT TYPE OF CYLINDERS ALLOCATED ON THIS VOLUME.
	BITS DEFINED FOR ALOCNTS BY HCPALOC ALOCMAP		
001	ALOAVAIL	001	AVAILABILITY OF TYPES
	BITS DEFINED FOR ALOAVAIL BY HCPALOC ALOCMAP		
002	ALOCYLS	002	NUMBER OF CYLINDERS ON DEVICE
004	ALOCLIST	004	START OF ALLOCATION LIST
004	ALORECP	004	PTR TO PALBK CHAIN FOR PAGING
008	ALORECS	004	PTR TO PALBK CHAIN FOR SPOOLING
00C	ALOSTAT	001	VOLUME STATUS FLAGS
	BITS DEFINED IN ALOSTAT (AT HEX DISPLACEMENT: C)		
	80 ALOPREF		VOLUME CONTAINS PREFERRED SLOTS
00D	ALOCODE	001	INDEX INTO CPVOL LIST
00E		1H	RESERVED FOR FUTURE IBM USE
010	ALOCMAP	008	START OF VARIABLE LENGTH DATA

BITS DEFINED IN ALOCMAP (AT HEX DISPLACEMENT: 10)

80	ALOCATED	CYLINDER IS CURRENTLY IN USE
40	ALOCDRCT	ALLOCATION TYPE 'DRCT'
20	ALOCTDSK	ALLOCATION TYPE 'TDSK'
10	ALOCFULL	CYLINDER IS FULL
08	ALOCPERM	ALLOCATION TYPE 'PERM'
02	ALOCSPOL	ALLOCATION TYPE 'SPOL'
01	ALOCPAGE	ALLOCATION TYPE 'PAGE'

REDEFINITION -

010	ALOCBYTE	001	ALLOCATION BYTE FOR A SINGLE CYLINDER
011	ALOCNEXT	001	POSITION OF NEXT ALLOCATION BYTE

MORE EQUATES

00E	ALO2352	2305-2 ALOCBLOK SIZE
035	ALO3330	3330-1 ALOCBLOK SIZE
067	ALO3331	3330-11 ALOCBLOK SIZE
02E	ALO3340	3340-35 ALOCBLOK SIZE
059	ALO3347	3340-70 ALOCBLOK SIZE
048	ALO3350	3350 ALOCBLOCK SIZE
07A	ALO3375	3375 ALOCBLOCK SIZE
071	ALO3380	3380 ALOCBLOCK SIZE
0E0	ALO3380E	3380E ALOCBLOCK SIZE
14E	ALO3380K	3380K ALOCBLOCK SIZE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
ALOAVAIL	001	001	ALO3380K	001	14E
ALOC	001	000			
ALOCATED	001	080			
ALOCBYTE	001	010			
ALOCDRCT	001	040			
ALOCFULL	001	010			
ALOCLIST	004	004			
ALOCMAP	008	010			
ALOCNEXT	001	011			
ALOCNTS	001	000			
ALOCODE	001	00D			
ALOCPAGE	001	001			
ALOCPERM	001	008			
ALOCSPOL	001	002			
ALOCTDSK	001	020			
ALOCYLS	002	002			
ALOPREF	001	080			
ALORECP	004	004			
ALORECS	004	008			
ALOSTAT	001	00C			
ALO2352	001	00E			
ALO3330	001	035			
ALO3331	001	067			
ALO3340	001	02E			
ALO3347	001	059			
ALO3350	001	048			
ALO3375	001	07A			
ALO3380	001	071			
ALO3380E	001	0E0			

ALTREC— ALERT RECORDING RECORD

DSECT NAME: ALTREC

DESCRIPTIVE NAME: ALERT RECORDING RECORD

FUNCTION: ALTREC PROVIDES ERROR, SENSE, AND OTHER STATISTICAL DATA NEEDED FOR ERROR RECORDING ON A SPECIFIED CHANNEL-ATTACHED I/O DEVICE.

LOCATED BY:

N/A

CREATED BY:

HCPDUC

DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

REDEFINITION - ALTSFTOD

```
   +---------------------------+---------------------------+
 8 |          ALTDTEN          |          ALTTMEN          |
   +---------------------------+---------------------------+
10
```

REDEFINITION - ALTCPUID

```
   +------+--------------------+-------------+-------------+
10 |:VERNO|      ALTCPSER      |   ALTCPMOD  |   ALTCPMEL  |
   +------+--------------------+-------------+-------------+
18
```

disp	name	length	description
000	ALTHDR	016	ALERT RECORD HEADER
000	ALTHTYPE	001	RECORD TYPE
	CODES DEFINED IN ALTHTYPE (AT HEX DISPLACEMENT: 0)		
	A3 ALTRECRD		ALERT RECORD TYPE CODE (X'A3')
001	ALTSYS	001	SYSTEM/RELEASE LEVEL
	BITS DEFINED FOR ALTSYS BY HDRREC HDRHSYS		
002	ALTSWS0	001	SWITCH BYTE ZERO (0)
	BITS DEFINED IN ALTSWS0 (AT HEX DISPLACEMENT: 2)		
003	ALTSWS1	001	SWITCH BYTE ONE (1)
	BITS DEFINED IN ALTSWS1		
	10 ALTDASIM		DASD SERVICE INFORMATIONAL MESSAGE (SIM)
004	ALTSWS2	001	SWITCH BYTE TWO (2)
	BITS DEFINED IN ALTSWS2 (AT HEX DISPLACEMENT: 4)		
	80 ALTCHPVA		DASD SERVICE INFORMATIONAL MESSAGE (SIM)

```
005   ALTSWS3    001       SWITCH BYTE THREE (3)

        BITS DEFINED IN ALTSWS3  (AT HEX DISPLACEMENT: 5)

006   ALTRDCNT   001       RECORD COUNT

        BITS DEFINED FOR ALTRDCNT BY HDRREC HDRHCNT

007               XL1       RESERVED FOR FUTURE IBM USE
008   ALTSFTOD   008       TOD OF SYSTEM FAILURE
010   ALTCPUID   008       CPUID AND SERIAL NUMBER
018   ALTRUTYP   007       REPORTING UNIT TYPE
018   ALTRUOFS   001       REPORTING UNIT OFFSET (=ALTRUOFF)
019               XL3       RESERVED FOR FUTURE IBM USE

                     EQUATES

        04     ALTRUOFF     OFFSET IN BYTES OF ALTRUNIT

01C   ALTRUDID   002       REPORTING UNIT DEVICE ID
01E   ALTRUDMN   001       REPORTING UNIT DEVICE MODEL NUMBER
01F   ALTCUTYP   007       CONTROL UNIT TYPE
01F   ALTCUOFS   001       CONTROL UNIT OFFSET (=ALTCUOFF)
020               XL3       RESERVED FOR FUTURE IBM USE

                     EQUATES

        04     ALTCUOFF     OFFSET IN BYTES OF ALTCUNIT

023   ALTCUCID   002       CONTROL UNIT ID
025   ALTCUCMN   001       CONTROL UNIT MODEL NUMBER
026   ALTMFRID   001       MANUFACTURER ID
027   ALTDEVSR   009       DEVICE SERIAL NUMBER
030   ALTLENDI   001       LENGTH OF DEVICE INFORMATION (SENSE DATA)
031   ALTCHPID   001       LAST CHPID USED
032   ALTSCUA    002       SECONDARY DEVICE ADDRESS
034   ALTDVTYP   004       DEVICE TYPE AND CLASS CODES
034   ALTCUFVF   001       CONTROL UNIT FIELD VALIDITY FLAGS

        BITS DEFINED IN ALTCUFVF

        80     ALTCUVLD     CONTROL UNIT VALID FLAG

035   ALTCUID    001       CONTROL UNIT ID
036   ALTOSCLS   001       OS DEVICE CLASS CODE
037   ALTOBRID   001       OS OBR IDENTIFIER
038   ALTLENSI   001       LENGTH OF SYSTEM INFORMATION (=ALTSYSDL)
039               XL1       RESERVED FOR FUTURE IBM USE
03A   ALTPCUA    002       PRIMARY DEVICE ADDRESS
03C   ALTSYSDT   008       SYSTEM INFORMATION (VOLSER)

                     EQUATES

        08     ALTSYSDL     LENGTH IN BYTES OF ALTSYSDT

044   ALTDEVDT   032       DEVICE INFORMATION (SENSE DATA)

                     EQUATES

        64     ALTLENG      LENGTH IN BYTES OF ALTREC
        0D     ALTSIZE      DOUBLEWORD LENGTH OF ALTREC


         REDEFINITIONS OF ALERT RECORD FIELDS                *


         REDEFINITION - ALTSFTOD

010   ALTVERNO   001       MACHINE VERSION CODE
011   ALTCPSER   003       CPU SERIAL NUMBER
014   ALTCPMOD   002       CPU MACHINE MODEL NUMBER
016   ALTCPMEL   002       MAX LENGTH OF MACHINE-DEPENDENT
                           MACHINE CHECK EXTENDED LOGOUT AREA
```

CROSS REFERENCE

Name	Len	Val/Disp
ALTCHPID	001	031
ALTCHPVA	001	080
ALTCPMEL	002	016
ALTCPMOD	002	014
ALTCPSER	003	011
ALTCPUID	008	010
ALTCUCID	002	023
ALTCUCMN	001	025
ALTCUFVF	001	034
ALTCUID	001	035
ALTCUOFF	001	004
ALTCUOFS	001	01F
ALTCUTYP	007	01F
ALTCUVLD	001	080
ALTDASIM	001	010
ALTDEVDT	032	044
ALTDEVSR	009	027
ALTDTEN	004	008
ALTDVTYP	004	034
ALTHDR	016	000
ALTHTYPE	001	000
ALTLENDI	001	030
ALTLENG	001	064
ALTLENSI	001	038
ALTMFRID	001	026
ALTOBRID	001	037
ALTOSCLS	001	036
ALTPCUA	002	03A
ALTRDCNT	001	006
ALTREC	001	000
ALTRECRD	001	0A3
ALTRUDID	002	01C
ALTRUDMN	001	01E
ALTRUOFF	001	004
ALTRUOFS	001	018
ALTRUTYP	007	018
ALTSCUA	002	032
ALTSFTOD	008	008
ALTSIZE	001	00D
ALTSWS0	001	002
ALTSWS1	001	003
ALTSWS2	001	004
ALTSWS3	001	005
ALTSYS	001	001
ALTSYSDL	001	008
ALTSYSDT	008	03C
ALTTMEN	004	00C
ALTVERNO	001	010

AOFPARM— PARAMETER LIST FOR HCPACUOF

DSECT NAME: AOFPARM

DESCRIPTIVE NAME: PARAMETER LIST FOR HCPACUOF

FUNCTION: CONTAINS THE PARAMETERS TO BE PASSED BETWEEN THE SYSTEM ACCOUNTING ROUTINES AND THE ACCOUNTING USER EXIT HCPACUOF.

LOCATED BY:

N/A

CREATED BY:

HCPACO
HCPCKP (AS A STATIC AREA WITHIN HCPCKP)

DELETED BY:

HCPACO

disp	name	length	description
000	AOFAREC	004	CONTAINS THE ADDRESS OF A COMPLETED ACCOUNTING RECORD.

EQUATES

01	AOFSIZE	AOFPARM SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
AOFAREC	004	000
AOFPARM	001	000
AOFSIZE	001	001

AONPARM— PARAMETER LIST FOR HCPACUON

DSECT NAME: AONPARM

DESCRIPTIVE NAME: PARAMETER LIST FOR HCPACUON

FUNCTION: CONTAINS THE PARAMETERS TO BE PASSED BETWEEN THE SYSTEM ACCOUNTING ROUTINES AND THE ACCOUNTING USER EXIT HCPACUON.

LOCATED BY:

N/A

CREATED BY:

HCPACO

DELETED BY:

HCPACO

disp	name	length	description
000	AONBUFF	004	CONTAINS ONE OF THE FOLLOWING: - ADDRESS OF A BUFFER CONTAINING UP TO 130 BYTES OF DATA THAT HAS BEEN READ FROM THE IBM 3277 OPERATOR IDENTIFICATION CARD READER FEATURE. THE DATA IS USER-DEFINED FOR TERMINAL OPERATOR IDENTIFICATION. - 4, IF AN UNSUCCESSFUL ATTEMPT TO READ THIS READER FEATURE WAS MADE.

EQUATES

01	AONSIZE	AONPARM SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
AONBUFF	004	000
AONPARM	001	000
AONSIZE	001	001

HCPASATE— AUXILIARY STORAGE ADDRESS TABLE ENTRY

DSECT NAME: ASATE

DESCRIPTIVE NAME: AUXILIARY STORAGE ADDRESS TABLE ENTRY

FUNCTION: THE ASATE CONTAINS THE AUXILIARY STORAGE ADDRESS OF A 4K VIRTUAL PAGE IF A COPY RESIDES ON AUXILIARY PAGING STORAGE

LOCATED BY:

PGMASATB FIELD OF HCPPGMBK + (PAGE OFFSET
VPGASATE IN A VPGBK USING A PAGTE ADDRESS
AN AUXILIARY STORAGE ADDRESS TABLE RESIDES IN A
PAGE MANAGEMENT BLOCK ASSOCIATED WITH A MEGABYTE
OF VIRTUAL STORAGE AND IS POINTED TO BY PGMASATB.
THERE ARE 256 CONTIGUOUS AUXILIARY STORAGE ADDRESS
ENTRIES (ASATE'S) CONTAINED IN THE PGMASATB.
ANY SPECIFIC ASA TABLE ENTRY CAN BE OBTAINED BY
EXTRACTING THE PAGE NUMBER (BITS 12-19) FROM A
VIRTUAL ADDRESS MULTIPLYING THE PAGE NUMBER TIMES 4
AND ADDING THE OFFSET OBTAINED TO PGMASATB.
ALSO, USING THE ADDRESS OF A PAGTE AS THE ADDRESS
OF A VPGBK THE CORRESPONDING ASATE CAN BE FOUND
BY ADDRESSING FIELD VPGASATE IN THE VPGBK.

CREATED BY:

HCPBPBCU
HCPBPBIE
HCPBPBIM
HCPBPBSL
AN AUXILIARY STORAGE ADDRESS TABLE IS IMBEDDED
IN A PAGE MANAGEMENT BLOCK AND CONSEQUENTLY
SPACE IS CREATED FOR THE ASATE WHEN THE PGMBK
IS CREATED.
AT INITIALIZATION TIME HCPISTOR FILLS IN THE ASATE
FOR CP RESIDENT PAGES, CP PAGABLE PAGES AND
CHECKPOINT PAGES.
AFTER INITIALIZATION HCPPTVAA FILLS IN EACH ASATE
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

DELETED BY:

HCPRCIRL
HCPRPBPA
HCPRPBPS
HCPRPBRM
HCPRPBSL
AN AUXILIARY STORAGE ADDRESS TABLE IS DELETED WHEN
A PAGE MANAGEMENT BLOCK IS RELEASED.

ASATE - AUXILIARY STORAGE TABLE ENTRY

REDEFINITION - AUXILIARY STORAGE ADDRESS

disp	name	length	description
000	ASAENTRY	004	AUXILIARY STORAGE ADDRESS

EQUATES

	04	ASALENTH	LENGTH OF ONE ADDRESS TABLE ENTRY
004	ASANEXT	004	NEXT ADDRESS TABLE ENTRY

REDEFINITION - AUXILIARY STORAGE ADDRESS

000	ASACNUM	002	AUXILIARY STORAGE CYLINDER NUMBER
002	ASAPNUM	001	AUXILIARY STORAGE PAGE NUMBER
003	ASAVOL	001	AUXILIARY STORAGE VOLUME CODE

CROSS REFERENCE

Name	Len	Val/Disp
ASACNUM	002	000
ASAENTRY	004	000
ASALENTH	001	004
ASANEXT	004	004
ASAPNUM	001	002
ASATE	001	000
ASAVOL	001	003

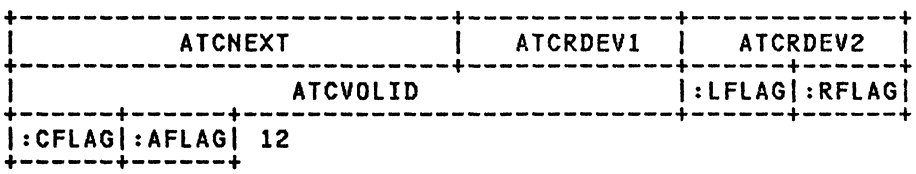
HCPATCBK— ATTACH COMMAND BLOCK

DSECT NAME: ATCBK

DESCRIPTIVE NAME: ATTACH COMMAND BLOCK

FUNCTION: CONTAINS PARAMETERS FROM THE ATTACH COMMAND

ATCBK - ATTACH COMMAND BLOCK



disp	name	length	description
000	ATCNEXT	004	ADDRESS OF NEXT ATCBK
004	ATCDEVS	004	REAL DEVICE NUMBERS
004	ATCRDEV1	002	BEGINING RDEV NUMBER
006	ATCRDEV2	002	ENDING RDEV NUMBER
008	ATCVDEV	004	BEGINNING VDEV NUMBER
008	ATCPARMS	008	PARMS TO PASS HCPATSYS
008	ATCVOLID	006	SYSTEM VOLUME LABEL
00E	ATCSFLGS	002	FLAG BYTES FOR HCPATSYS
00E	ATCLFLAG	001	FLAG BYTE FOR HCPATSYS
00F	ATCRFLAG	001	FLAG BYTE FOR HCPATSYS
010	ATCCFLAG	001	LEVEL OF CONTROL FLAG
	BITS DEFINED FOR ATCCFLAG BY HCPDDEV DDEVFLGB		
011	ATCAFLAG	001	ASSIGN OR NOASSIGN FLAG
	BITS DEFINED FOR ATCAFLAG BY HCPDDEV DDEVFLGC		
	03 ATCSIZE		SIZE IN DOUBLEWORDS
	MORE EQUATES		
	080 ATCASSGN		ASSIGN GIVEN LABEL TO DASD
	040 ATCCPVOL		MOUNT CP VOLUME LABELS
	020 ATCUSRVL		MOUNT USER VOLUME LABELS
	010 ATCUNKVL		MOUNT UNKNOWN VOLUME LABELS
	070 ATCANYVL		ANY LABELS
	080 ATCNORSP		NO REPONSE MESSAGES
	040 ATCNOATT		NO 'ALREADY ATTACHED' MSGS
	020 ATCSTACK		STACK OUTPUT
	010 ATCRO		ATTACH RDEV READ-ONLY
	008 ATCRLOGD		ATTACH LOGICAL DEVICE
	004 ATCRBFWT		WRITE RESPONSE TO BUFFER

CROSS REFERENCE

Name	Len	Val/Disp
ATCAFLAG	001	011
ATCANYVL	001	070
ATCASSGN	001	080
ATCBK	001	000
ATCCFLAG	001	010
ATCCPVOL	001	040
ATCDEVS	004	004
ATCLFLAG	001	00E
ATCNEXT	004	000
ATCNOATT	001	040
ATCNORSP	001	080
ATCPARMS	008	008
ATCRBFWT	001	004
ATCRDEV1	002	004
ATCRDEV2	002	006
ATCRFLAG	001	00F
ATCRLOGD	001	008
ATCRO	001	010
ATCSFLGS	002	00E
ATCSIZE	001	003
ATCSTACK	001	020
ATCUNKVL	001	010
ATCUSRVL	001	020
ATCVDEV	004	008
ATCVOLID	006	008

HCPAZPAG— VIRTUAL PAGE ZERO FOR CPFORMAT

DSECT NAME: AZPAG

DESCRIPTIVE NAME: VIRTUAL PAGE ZERO FOR CPFORMAT

FUNCTION: TO MAP OUT MACHINE DEPENDENT AREAS OF VIRTUAL PAGE ZERO FOR CPFORMAT. ALSO, COMMONLY USED CONTANTS AND ADDRESSES OF CPFORMAT ROUTINES RESIDE IN THIS PAGE.

LOCATED BY:

STARTS AT THE USER'S VIRTUAL ADDRESS 0.

CREATED BY:

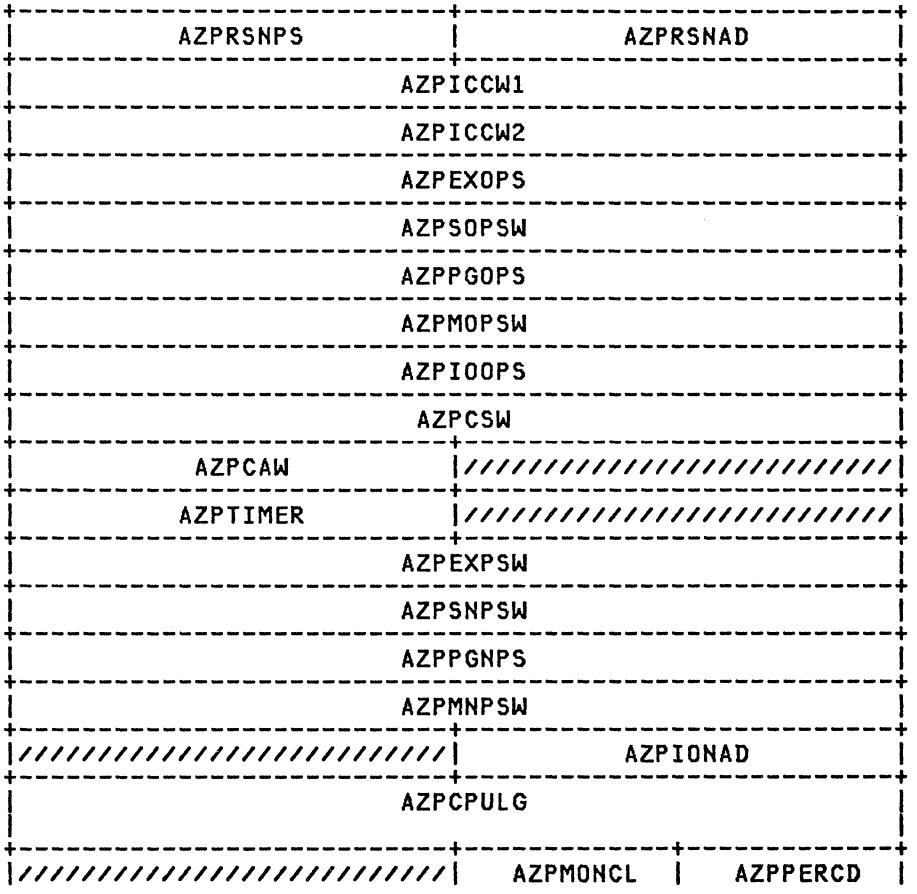
HCPFAN - THIS CONTROL BLOCK IS COPIED BY HCPFAN AS A CSECT, AND CREATES A MODULE WHICH CONTAINS ALL THE CONSTANTS DEFINED IN AZPAG. IT IS THIS MODULE THAT IS READ INTO THE USER'S VIRTUAL PAGE ZERO WHEN HE ISSUES THE CPFORMAT COMMAND. ALL OTHER MODULES COPY AND REFERENCE THIS CONTROL BLOCK AS A DSECT.

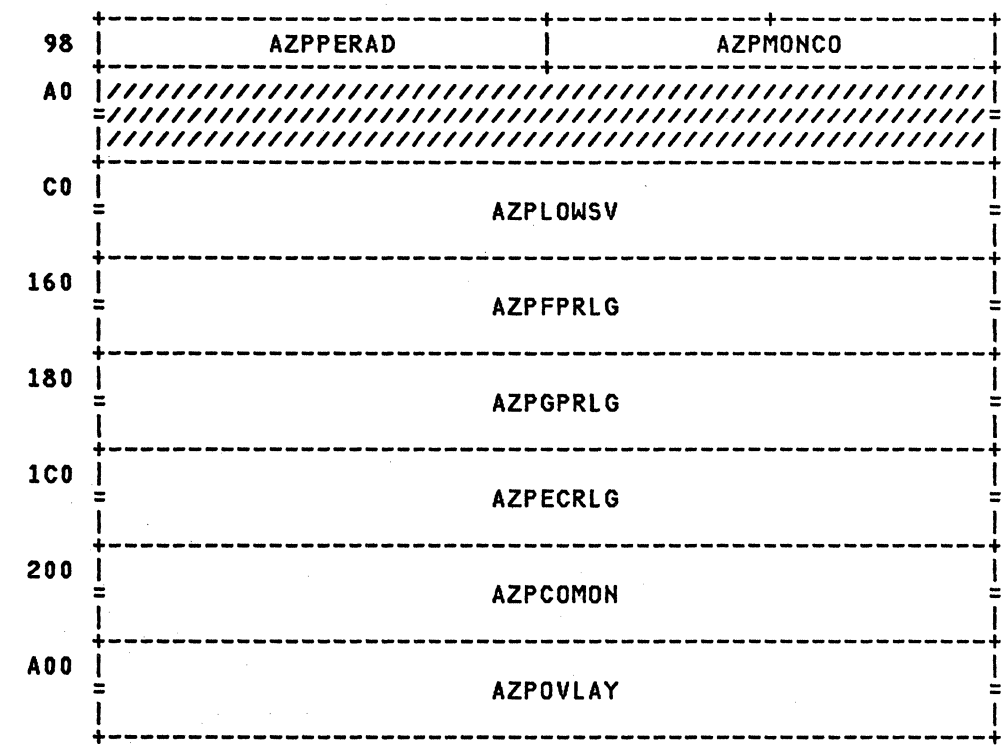
HCPLOD - THE FIELDS WHICH WILL CONTAIN THE ADDRESSES OF CPFORMAT ROUTINES ARE INITIALIZED BY THE LOADER

DELETED BY:

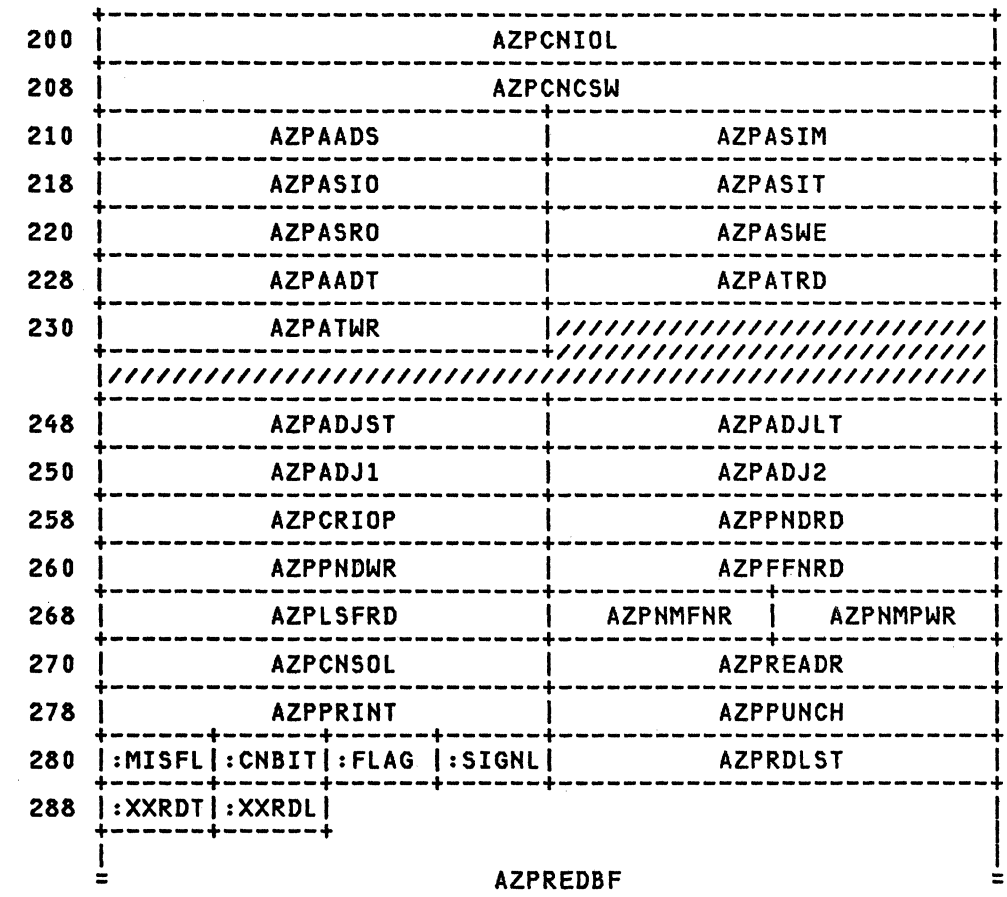
HCPRESCP - THIS BLOCK IS DELETED FROM THE USER'S VIRTUAL MACHINE WHEN THE CPFORMAT COMMAND COMPLETES OR IS TERMINATED.

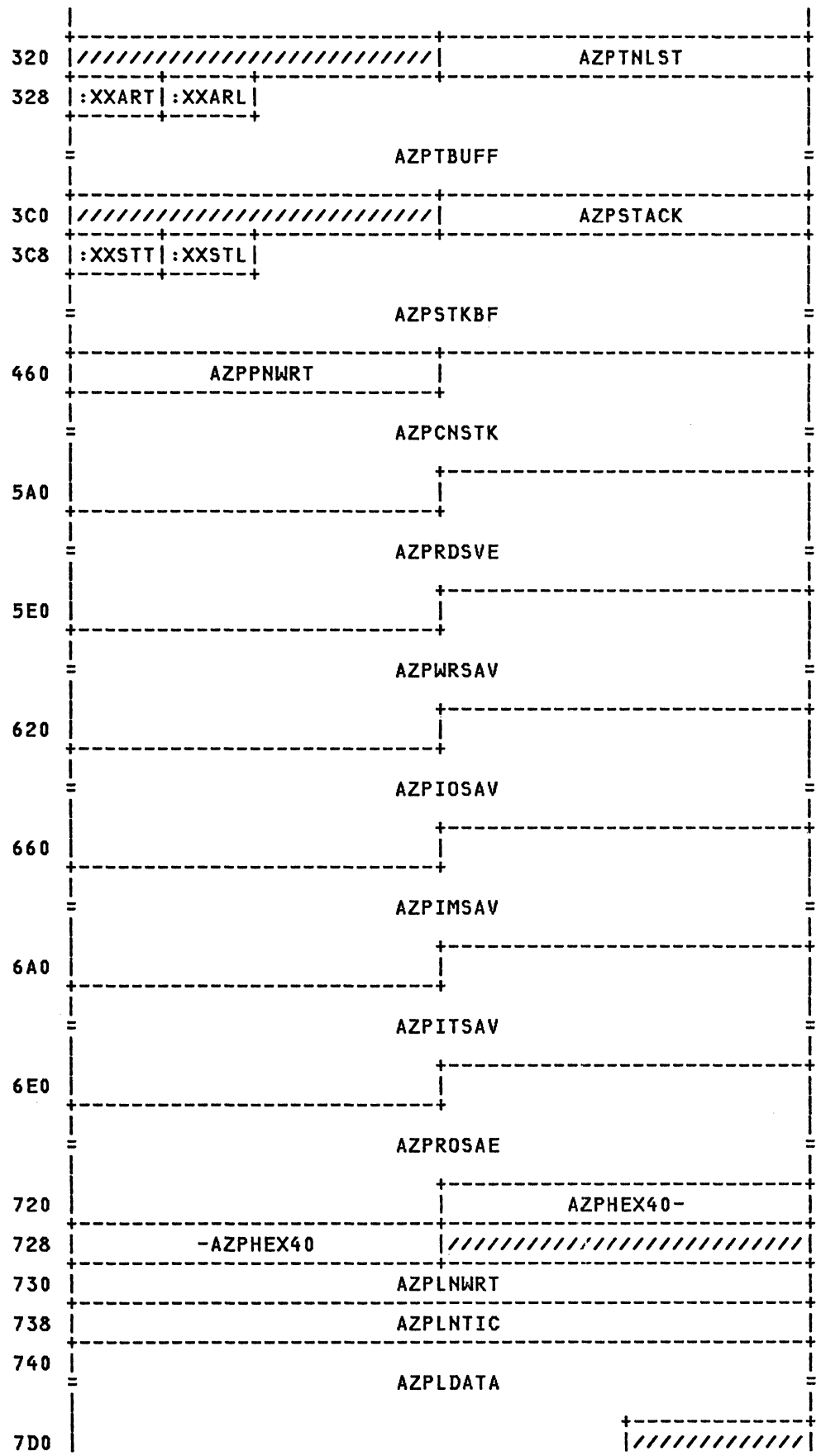
AZPAG - ADJUNCT PREFIX STORAGE AREA

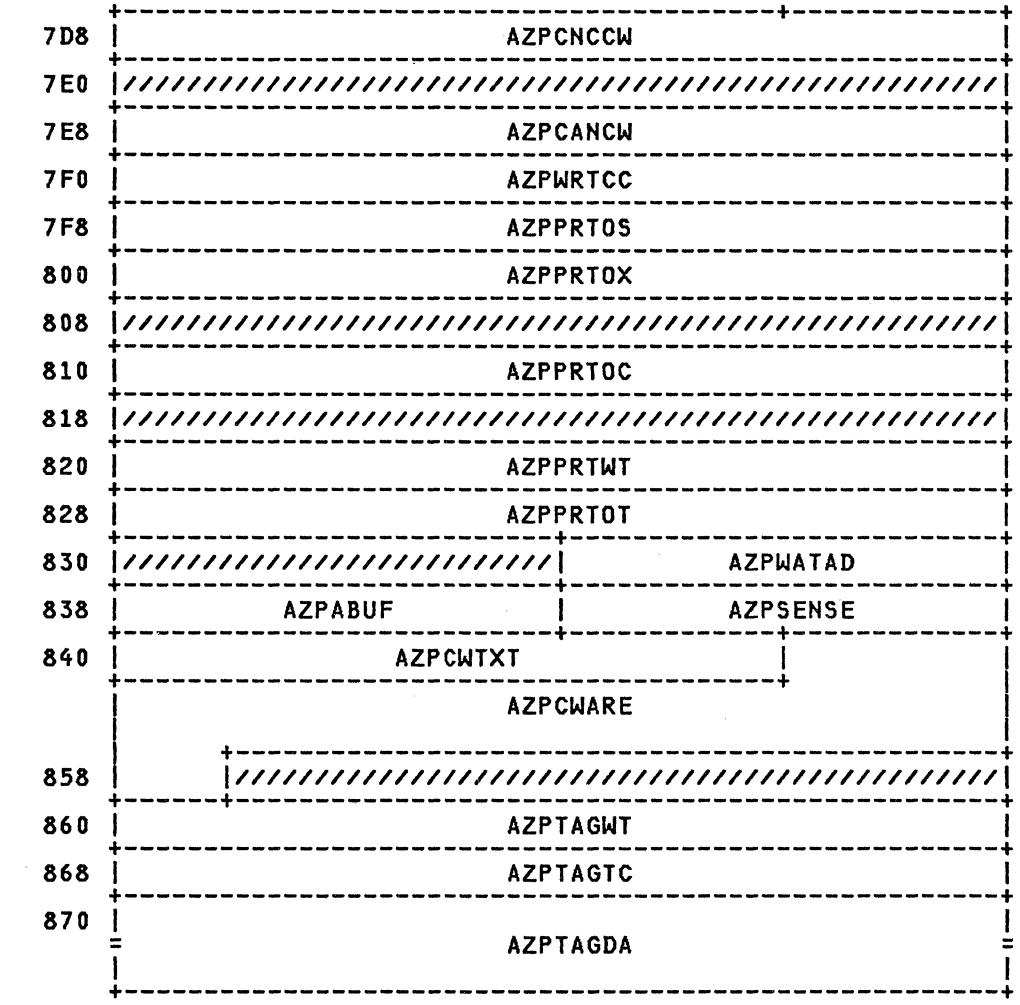




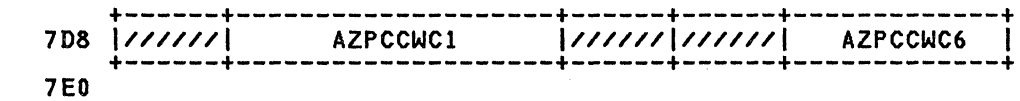
REDEFINITION - DEFINE COMMON I/O USAGE



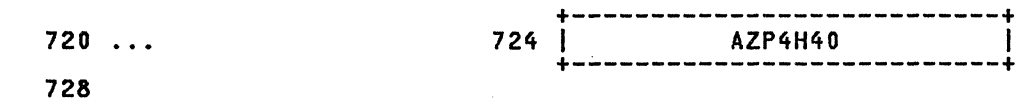

320
AZPTNLST
328
:XXART
:XXARL
AZPTBUFF
3C0
AZPSTACK
3C8
:XXSTT
:XXSTL
AZPSTKBF
460
AZPPNWRT
AZPCNSTK
5A0
AZPRDSVE
5E0
AZPWRSAV
620
AZPIOSAV
660
AZPIMSAV
6A0
AZPITSAV
6E0
AZPROSAE
720
AZPHEX40-
728
-AZPHEX40
730
AZPLNWRT
738
AZPLNTIC
740
AZPLDATA
7D0



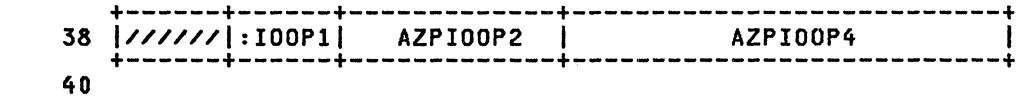
REDEFINITION - CONSOLE CCW



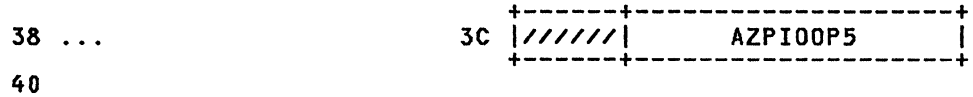
REDEFINITION - DIFFERENT LENGTHS OF BLANKS



REDEFINITION - I/O OLD PSW



REDEFINITION - FURTHER DEF'N OF 5TH - 8TH BYTES



disp	name	length	description
000	AZPNUCLS	008	BEGINNING OF HARDWARE NUCLEUS.
000	AZPIPSW	008	INITIAL PROGRAM LOADING PSW
000	AZPRSNPS	004	
004	AZPRSNAD	004	ADDRESS OF RESTART ROUTINE
008	AZPRSOPS	008	
008	AZPICCW1	008	INITIAL PROGRAM LOADING CCW1
010	AZPICCW2	008	INITIAL PROGRAM LOADING CCW2
018	AZPEXOPS	008	EXTERNAL OLD PSW
020	AZPSOPSW	008	SUPERVISOR CALL OLD PSW
028	AZPPGOPS	008	PROGRAM OLD PSW
030	AZPMOPSW	008	MACHINE-CHECK OLD PSW
038	AZPIOOPS	008	INPUT/OUTPUT OLD PSW
040	AZPCSW	008	CHANNEL STATUS WORD

EQUATES

40	AZPCSWA	1ST WORD OF THE CSW
44	AZPCSWB	2ND WORD OF THE CSW
41	AZPCSWAD	ADDRESS OF NEXT CCW TO BE EXECUTED
44	AZPCSWDS	DEVICE STATUS BYTE

048	AZPCAW	004	CHANNEL ADDRESS WORD
04C		F'0'	RESERVED FOR FUTURE USE
050	AZPTIMER	004	INTERVAL TIMER
054		F'0'	RESERVED FOR FUTURE USE
058	AZPEXPSW	008	EXTERNAL NEW PSW
060	AZPSNPSW	008	SUPERVISOR CALL NEW PSW
068	AZPPGNPS	008	PROGRAM NEW PSW
070	AZPMNPSW	008	MACHINE-CHECK NEW PSW
078	AZPIONPS	008	I/O NEW PSW
078		XL4'00'	
07C	AZPIONAD	004	
080	AZPCPULG	008	CPU LOGOUT AREA
090		1F	RESERVED FOR FUTURE USE
094	AZPMONCL	002	MONITOR CALL CLASS NUMBER
096	AZPPERCD	002	PROGRAM EVENT RECORDER CODE
098	AZPPERAD	004	PROGRAM EVENT RECORDER ADDRESS
09C	AZPMONCO	004	MONITOR CALL CODE
0A0		4D	RESERVED FOR FUTURE HARDWARE USE
0C0	AZPLOWSV	160	SAVEAREA FOR 1ST 160 BYTES
160	AZPFPRLG	008	FLOATING POINT REGISTER LOGOUT
180	AZPGPRLG	004	GENERAL PURPOSE REGISTER LOGOUT
1C0	AZPECRLG	004	EXTENDED CONTROL REGISTER LOGOUT
200	AZPCOMON	008	AREA FOR COMMON I/O USAGE

EQUATES

00	AZPSIZEC	LENGTH OF COMMON AREA

A00	AZPOVLAY	008	AREA FOR SPECIFIC MACHINES

EQUATES

00	AZPSIZEX	LENGTH OF SPECIFIC AREA

REDEFINITION - DEFINE COMMON I/O USAGE

200	AZPIOCMN	008	START OF I/O COMMON AREA
200	AZPCNIOL	008	SAVED CONSOLE I/O-OLD PSW

EQUATES

```
        02    AZPIOLC2    3RD BYTE SAVED CONS I/O PSW

208   AZPCNCSW   008       SAVED CONSOLE CSW
210   AZPAADS    004       LOW-LEVEL CONSOLE DRIVER
214   AZPASIM    004       CONSOLE INTERRUPT PROCESSOR
218   AZPASIO    004       CONSOLE INPUT/OUTPUT DRIVER
21C   AZPASIT    004       INTERRUPT HANDLER
220   AZPASRO    004       CONSOLE WAIT ROUTINE
224   AZPASWE    004       CONSOLE WAIT RETURN ADDRESS
228   AZPAADT    004       HIGH-LEVEL CONSOLE MODULE
22C   AZPATRD    004       CONSOLE READ ROUTINE
230   AZPATWR    004       CONSOLE WRITE ROUTINE
234              5A        RESERVED FOR FUTURE IBM USE
248   AZPADJST   004       1ST ADJUNCT MACHINE MOD ADDRESS
24C   AZPADJLT   004       LAST ADJUNCT MACHINE MOD ADDRESS
250   AZPADJ1    004       ADJUNCT MACHINE ADDRESSING USES
254   AZPADJ2    004       ADJUNCT MACHINE ADDRESSING USES
258   AZPCRIOP   004       CURRENT I/O BUFFER
25C   AZPPNDRD   004       PENDING READ
260   AZPPNDWR   004       PENDING WRITE
264   AZPFFNRD   004       FINISHED READ BUFFER
268   AZPLSFRD   004       LAST FINISHED READ BUFFER
26C   AZPNMFNR   002       NUMBER OF FINISHED READ BUFFERS
26E   AZPNMPWR   002       NUMBER OF PENDING WRITES
270   AZPCNSOL   004       DEVICE TERMINAL
274   AZPREADR   004       DEVICE READER
278   AZPPRINT   004       DEVICE PRINTER
27C   AZPPUNCH   004       DEVICE PUNCH
280   AZPMISFL   001       SYSTEM FLAGS (AZPUPCAS IS PRESET)

        BITS DEFINED IN AZPMISFL (AT HEX DISPLACEMENT: 280)

        80    AZPKXSW     KILL EXECUTION SWITCH
        40    AZPKTSW     KILL TYPING SWITCH
        20    AZPCANRD    READ CANCELLED BY ATTENTION
        10    AZPGRFDV    GRAPHICS CONSOLE
        08    AZPKXWNT    EXECUTION HALT POSTED
        04    AZPTNHIT    ATTENTION POSTED
        02    AZPUPCAS    UPPER-CASE TRANSLATION REQUIRED

281   AZPCNBIT   001       CONSOLE STATUS FLAG

        BITS DEFINED IN AZPCNBIT (AT HEX DISPLACEMENT: 281)

        80    AZPWAITP    PSEUDO-WAIT-BIT
        20    AZPINTR     INTERRUPT RECEIVED
        10    AZPINTP     INTERRUPT-PROCESSED

282   AZPFLAG    001       DISPLAY CONSOLE FLAGS

        BITS DEFINED IN AZPFLAG  (AT HEX DISPLACEMENT: 282)

        80    AZPDONLY    DISPLAY LOGICAL DATA RECORDS
        40    AZPUPRCS    UPPER-CASE TRANSLATION REQUIRED
        20    AZPIMNOT    LINE IMAGING SUPPRESSED
        10    AZPVEROV    OVER-RIDE VERIFY SETTING
        08    AZPREMOT    DISPLAY TERMINAL
        04    AZPTUBE     CONSOLE IS DISPLAY TYPE
        02    AZPLNGSW    LONG IS SET
        01    AZPVER      VERIFY IS SET

283   AZPSIGNL   001       SIGNALS BETWEEEN ROUTINES

        BITS DEFINED IN AZPSIGNL (AT HEX DISPLACEMENT: 283)

        80    AZPXYACT    PRIMARY X/Y RECURSION
        40    AZPYACT     'Y' IS ACTIVE
        20    AZPXACT     'X' IS ACTIVE
        10    AZPSWTCH    INPUT HAS FORCED TUBE TO LINE
        08    AZPGTPUT    GET/PUT ACTIVE
        04    AZPOVER     REQUEST IS 'OVERLAY'
```



```
        02    AZPREPL     TRICKY REPLACE MODE (FIRST LINE)
        01    AZPQUOD     LAST REQUEST WAS ? OR "

284   AZPRDLST   004
288   AZPXXRDT   001
289   AZPXXRDL   001
28A   AZPREDBF   150       CONSOLE READ BUFFER
320              1F        RESERVED FOR FUTURE IBM USE
324   AZPTNLST   004
328   AZPXXART   001
329   AZPXXARL   001
32A   AZPTBUFF   150       CONSOLE ATTENTION READ BUFFER
3C0              1F        RESERVED FOR FUTURE IBM USE
3C4   AZPSTACK   004
3C8   AZPXXSTT   001
3C9   AZPXXSTL   001
3CA   AZPSTKBF   150       CONSOLE STACKED LINE BUFFER
460   AZPPNWRT   004
                          OFFSET OF CONSOLE STACK(AZPCNSTK)
464   AZPCNSTK   320       BUFFER OF COMPRESSED OUTPUT LINES

                  EQUATES

        40    AZPTNRD     BUFFER CAME FROM ATTENTION READ

5A4   AZPRDSVE   004       REGISTER SAVEAREA FOR HCPADTRD
5E4   AZPWRSAV   004       REGISTER SAVEAREA FOR HCPADTWR
624   AZPIOSAV   004       REGISTER SAVEAREA FOR HCPADSIO
664   AZPIMSAV   004       REGISTER SAVEAREA FOR HCPADSIM
6A4   AZPITSAV   004       REGISTER SAVEAREA FOR HCPADSIT
6E4   AZPROSAE   004       REGISTER SAVEAREA FOR HCPADSRO
724              0F        ENSURE CORRECT ALIGNMENT
724   AZPHEX40   008       EIGHT BLANKS FOR GENERAL USE
72C              1F        RESERVED FOR FUTURE IBM USE
730   AZPLINE    008
730   AZPLNWRT   008
738   AZPLNTIC   008
740   AZPLDATA   150       CURRENT LINE IS HELD HERE
7D6              1H        RESERVED FOR FUTURE IBM USE
7D8              0D
7D8   AZPCNCCW   008
7E0              X'03',0,X
7E8   AZPCANCW   008       SCREEN CANCEL CCW
7F0   AZPWRTCC   008       WRITE SCREEN CCW
7F8   AZPPRTOS   008
800   AZPPRTOX   008
808              X'08',409
810   AZPPRTOC   008
818              X'08',409
820   AZPPRTWT   008
828   AZPPRTOT   008
830   AZPWATNG   008       WAIT PSW
830              X'FE06000
834   AZPWATAD   004
838   AZPABUF    004       I/O BUFFER PAGE
83C   AZPSENSE   004       SENSE DATA FOR I/O ERROR MESSAGES
840   AZPCWTXT   006       '
846   AZPCWARE   019       AREA IN WHICH CCW IS FORMATTED

                  EQUATES

        19    AZPCWTLN    LENGTH OF DISPLAYABLE CCW

859              XL7       ALIGNMENT
860   AZPTAGAR   016
860   AZPTAGWT   008
868   AZPTAGTC   008
870   AZPTAGDA   136

                  EQUATES

        80    AZPCPMRE    REQUEST TO CP TO CAUSE 'MORE...'
        20    AZPCPALR    REQUEST TO CP TO SOUND THE ALARM
```

```
         REDEFINITION - CONSOLE CCW

7D8                X          CCW OPCODE
7D9    AZPCCWC1    003        DATA ADDRESS
7DC                X          FLAGS
7DD                X          NOT USED
7DE    AZPCCWC6    002        COUNT

         REDEFINITION - DIFFERENT LENGTHS OF BLANKS

724    AZP4H40     004        FULLWORD OF BLANKS (HEX 40'S)

         REDEFINITION - I/O OLD PSW

038                X          1ST BYTE
039    AZPIOOP1    001        2ND BYTE
03A    AZPIOOP2    002        3RD & 4TH BYTES
03C    AZPIOOP4    004        5TH - 8TH BYTES

         REDEFINITION - FURTHER DEF'N OF 5TH - 8TH BYTES

03C                X          5TH BYTE
03D    AZPIOOP5    003        6TH - 8TH BYTES

                     MORE EQUATES

       200     AZPSIZEM     LENGTH OF NUCLEUS AREA
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
AZPAADS	004	210	AZPCRIOP	004	258	AZPIOOPS	008	038
AZPAADT	004	228	AZPCSW	008	040	AZPIOOP1	001	039
AZPABUF	004	838	AZPCSWA	008	040	AZPIOOP2	002	03A
AZPADJLT	004	24C	AZPCSWAD	008	041	AZPIOOP4	004	03C
AZPADJST	004	248	AZPCSWB	008	044	AZPIOOP5	003	03D
AZPADJ1	004	250	AZPCSWDS	008	044	AZPIOSAV	004	624
AZPADJ2	004	254	AZPCWARE	019	846	AZPIPSW	008	000
AZPAG	001	000	AZPCWTLN	001	019	AZPITSAV	004	6A4
AZPASIM	004	214	AZPCWTXT	006	840	AZPKTSW	001	040
AZPASIO	004	218	AZPDONLY	001	080	AZPKXSW	001	080
AZPASIT	004	21C	AZPECRLG	004	1C0	AZPKXWNT	001	008
AZPASRO	004	220	AZPEXOPS	008	018	AZPLDATA	150	740
AZPASWE	004	224	AZPEXPSW	008	058	AZPLINE	008	730
AZPATRD	004	22C	AZPFFNRD	004	264	AZPLNGSW	001	002
AZPATWR	004	230	AZPFLAG	001	282	AZPLNTIC	008	738
AZPCANCW	008	7E8	AZPFPRLG	008	160	AZPLNWRT	008	730
AZPCANRD	001	020	AZPGPRLG	004	180	AZPLOWSV	160	0C0
AZPCAW	004	048	AZPGRFDV	001	010	AZPLSFRD	004	268
AZPCCWC1	003	7D9	AZPGTPUT	001	008	AZPMISFL	001	280
AZPCCWC6	002	7DE	AZPHEX40	008	724	AZPMNPSW	008	070
AZPCNBIT	001	281	AZPICCW1	008	008	AZPMONCL	002	094
AZPCNCCW	008	7D8	AZPICCW2	008	010	AZPMONCO	004	09C
AZPCNCSW	008	208	AZPIMNOT	001	020	AZPMOPSW	008	030
AZPCNIOL	008	200	AZPIMSAV	004	664	AZPNMFNR	002	26C
AZPCNSOL	004	270	AZPINTP	001	010	AZPNMPWR	002	26E
AZPCNSTK	320	464	AZPINTR	001	020	AZPNUCLS	008	000
AZPCOMON	008	200	AZPIOCMN	008	200	AZPOVER	001	004
AZPCPALR	001	020	AZPIOLC2	008	202	AZPOVLAY	008	A00
AZPCPMRE	001	080	AZPIONAD	004	07C	AZPPERAD	004	098
AZPCPULG	008	080	AZPIONPS	008	078	AZPPERCD	002	096

Name	Len	Val/Disp
AZPPGNPS	008	068
AZPPGOPS	008	028
AZPPNDRD	004	25C
AZPPNDWR	004	260
AZPPNWRT	004	460
AZPPRINT	004	278
AZPPRTOC	008	810
AZPPRTOS	008	7F8
AZPPRTOT	008	828
AZPPRTOX	008	800
AZPPRTWT	008	820
AZPPUNCH	004	27C
AZPQUOD	001	001
AZPRDLST	004	284
AZPRDSVE	004	5A4
AZPREADR	004	274
AZPREDBF	150	28A
AZPREMOT	001	008
AZPREPL	001	002
AZPROSAE	004	6E4
AZPRSNAD	004	004
AZPRSNPS	004	000
AZPRSOPS	008	008
AZPSENSE	004	83C
AZPSIGNL	001	283
AZPSIZEC	001	800
AZPSIZEM	001	200
AZPSIZEX	001	600
AZPSNPSW	008	060
AZPSOPSW	008	020
AZPSTACK	004	3C4
AZPSTKBF	150	3CA
AZPSWTCH	001	010
AZPTAGAR	016	860
AZPTAGDA	136	870
AZPTAGTC	008	868
AZPTAGWT	008	860
AZPTBUFF	150	32A
AZPTIMER	004	050
AZPTNHIT	001	004
AZPTNLST	004	324
AZPTNRD	001	040
AZPTUBE	001	004
AZPUPCAS	001	002
AZPUPRCS	001	040
AZPVER	001	001
AZPVEROV	001	010
AZPWAITP	001	080
AZPWATAD	004	834
AZPWATNG	008	830
AZPWRSAV	004	5E4
AZPWRTCC	008	7F0
AZPXACT	001	020
AZPXXARL	001	329
AZPXXART	001	328
AZPXXRDL	001	289
AZPXXRDT	001	288
AZPXXSTL	001	3C9
AZPXXSTT	001	3C8
AZPXYACT	001	080
AZPYACT	001	040
AZP4H40	004	724

HCPBMSBK— BUFFER MANAGEMENT SERVICE CONTROL BLOCK

DSECT NAME: BMSBK

DESCRIPTIVE NAME: BUFFER MANAGEMENT SERVICE CONTROL BLOCK

FUNCTION: CONTAINS THE CURRENT STATUS OF A BUFFER MANAGEMENT TASK

LOCATED BY:

USAGE DEPENDENT

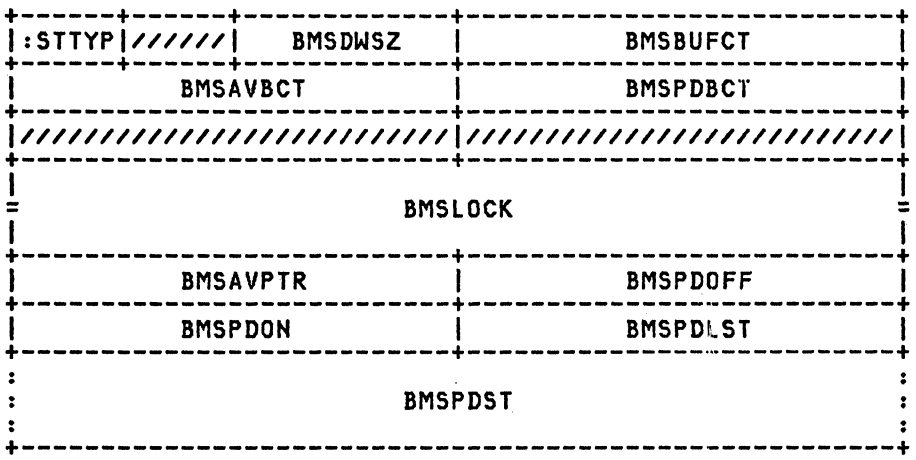
CREATED BY:

HCPBMSIN

DELETED BY:

HCPBMSTM

BMSBK - BUFFER MANAGEMENT SERVICE BLOCK



disp	name	length	description
000		0F	BLOCK STATUS
000	BMSSTTYP	001	FREE STORAGE INDICATOR
001		X	RESERVED FOR FUTURE USE
002	BMSDWSZ	002	DOUBLE WORD SIZE OF BLOCK THIS FIELD IS ONLY USED WHEN THIS BLOCK IS CREATED FORM FREE STORAGE
004	BMSBUFCT	004	COUNT OF TOTAL BUFFERS
008	BMSAVBCT	004	COUNT OF AVAILABLE BUFFERS
00C	BMSPDBCT	004	COUNT OF PENDING BUFFERS
010		F	RESERVED FOR FUTURE USE
014		F	RESERVED FOR FUTURE USE
018	BMSLOCK	008	SPIN LOCK FOR THE BMS BLOCK
030	BMSAVPTR	004	POINTER TO AVAILABLE BUFFERS
034	BMSPDOFF	004	POINTER TO FIRST BUFFER ON THE QUEUE
038	BMSPDON	004	POINTER TO NEXT AVAILABLE SLOT ON THE QUEUE
03C	BMSPDLST	004	ADDRESS OF THE LAST SLOT IN THE ARRAY
		EQUATES	
	08 BMSHSIZE		SIZE OF THE BMS HEADER
040	BMSPDST	004	START OF VARIABLE LENGTH DATA

ARRAY OF POINTERS TO PENDING BUFFERS
1000 BUFFERS ARE MAXIMUM

MORE EQUATES

001	BMSPAG	BMSBK IS A REAL FRAME (PAGE)
002	BMSFRE	BMSBK IS FROM FREE STORAGE
004	BMSFIXED	BMSBK DESCRIBES A BUFFER POOL THAT IS A FIXED SIZE (USED BY TRSAVE FOR CP ON)

CROSS REFERENCE

Name	Len	Val/Disp
BMSAVBCT	004	008
BMSAVPTR	004	030
BMSBK	001	000
BMSBUFCT	004	004
BMSCNRLS	001	000
BMSDWSZ	002	002
BMSFIXED	001	004
BMSFRE	001	002
BMSHSIZE	001	008
BMSLOCK	008	018
BMSPAG	001	001
BMSPDBCT	004	00C
BMSPDLST	004	03C
BMSPDOFF	004	034
BMSPDON	004	038
BMSPDST	004	040
BMSSTABL	001	000
BMSSTTYP	001	000
BMSUNRLS	001	004
BMSVARI	001	004

HCPBOXBK— LOGO BLOCK

DSECT NAME: BOXBK

DESCRIPTIVE NAME: LOGO BLOCK

FUNCTION: THIS IS A DSECT OF THE VM LOGOS DEFINED IN THE MODULE HCPBOX.

LOCATED BY:

THIS IS A DSECT OVER HCPBOXMS AND HCPBOXNS.

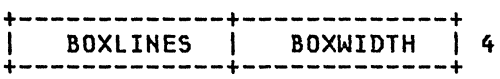
CREATED BY:

NONE, THIS IS ONLY A DSECT OVER STORAGE DEFINED IN
MODULE HCPBOX.

DELETED BY:

NONE

BOXBK - LOGO BLOCK



disp	name	length	description
000	BOXLINES	002	NUMBER OF ROWS IN RECTANGULAR LOGO
002	BOXWIDTH	002	NUMBER OF COLUMNS IN RECTANGULAR LOGO
004	BOXLOGO	002	LOGO TEXT

CROSS REFERENCE

Name	Len	Val/Disp
BOXBK	001	000
BOXLINES	002	000
BOXLOGO	002	004
BOXWIDTH	002	002

HCPBPQBK— BUFFER PENDING QUEUE BLOCK

DSECT NAME: BPQBK

DESCRIPTIVE NAME: BUFFER PENDING QUEUE BLOCK

FUNCTION: DESCRIBES A QUEUE OF BUFFERS TO BE PROCESSED

LOCATED BY:

TSDBPQP IN THE TSDBK

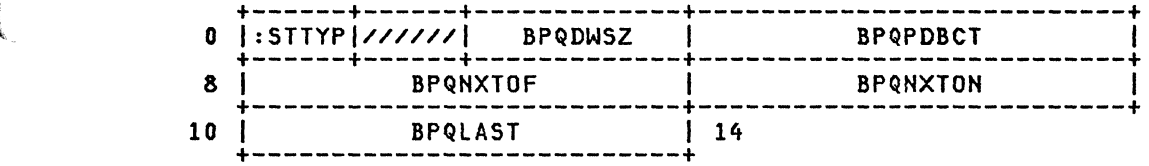
CREATED BY:

HCPBMSSP - START A BPQBK

DELETED BY:

HCPBMSTP - TERMINATE A BPQBK

BPQBK - BUFFER PENDING QUEUE BLOCK



disp	name	length	description
000	BPQSTTYP	001	FREE STORAGE INDICATOR
001		X	RESERVED FOR FUTURE USE
002	BPQDWSZ	002	DOUBLE WORD SIZE OF BLOCK THIS FIELD IS ONLY USED WHEN THIS BLOCK IS CREATED FORM FREE STORAGE
004	BPQPDBCT	004	COUNT OF PENDING BUFFERS
008	BPQNXTOF	004	POINTER TO FIRST BUFFER ON THE QUEUE (NEXT TO BE TAKEN OFF)
00C	BPQNXTON	004	POINTER TO NEXT AVAILABLE SLOT ON THE QUEUE (NEXT FILLED WHEN ADDING ON)
010	BPQLAST	004	POINTER TO LAST FULLWORD OF QUEUE

EQUATES

03	BPQHSIZE	SIZE OF THE HEADER PORTION OF BPQBK IN DOUBLEWORDS

014	BPQSTART	004	START OF PENDING BUFFERS

MORE EQUATES

000	BPQFRE	BPQBK IS FROM FREE STORAGE
001	BPQPAG	BPQBK IS A REAL FRAME (PAGE)

CROSS REFERENCE

Name	Len	Val/Disp
BPQBK	001	000
BPQDWSZ	002	002
BPQFRE	001	000
BPQHSIZE	001	003
BPQLAST	004	010
BPQNXTOF	004	008
BPQNXTON	004	00C
BPQPAG	001	001
BPQPDBCT	004	004
BPQSTART	004	014
BPQSTTYP	001	000

HCPCACBK— VIRTUAL CHANNEL-TO-CHANNEL ADAPTER CONTROL BLOCK

DSECT NAME: CACBK

DESCRIPTIVE NAME: VIRTUAL CHANNEL-TO-CHANNEL ADAPTER CONTROL BLOCK

FUNCTION: THIS CONTROL BLOCK CONTAINS ALL THE PERTINENT CHANNEL-TO CHANNEL ADAPTER INFORMATION FOR A GIVEN CTCA.

LOCATED BY:

VDEVCTCA FIELD OF HCPVDEV
CACXYCAC (Y-SIDE CACBK) FIELD OF HCPCACBK
CACYXCAC (X-SIDE CACBK) FIELD OF HCPCACBK

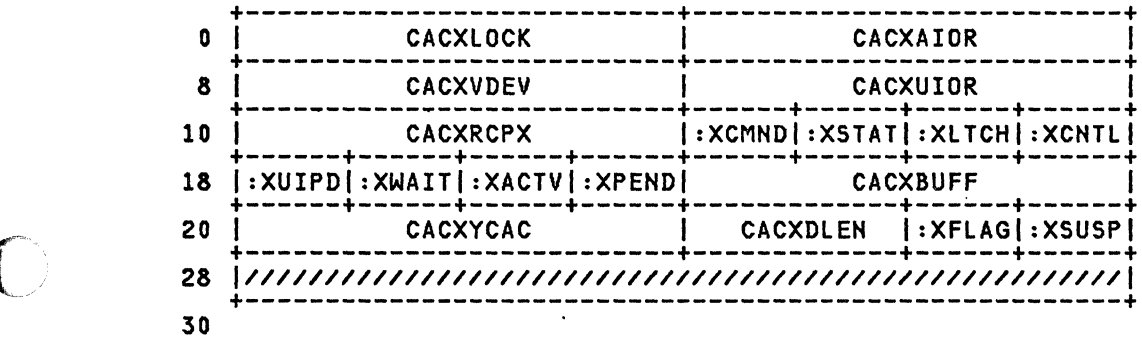
CREATED BY:

HCPCTCDF - WHEN DEFINING A CTCA.

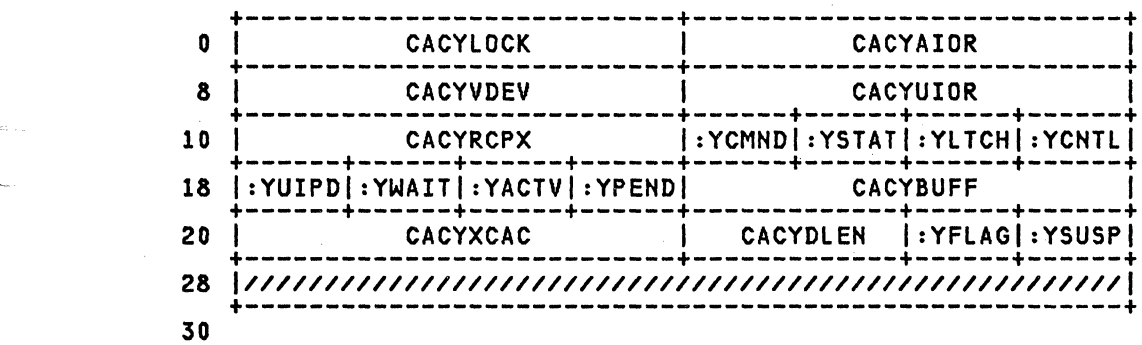
DELETED BY:

HCPCTCDT - WHEN DETACHING A CTCA.

CACBK - CHANNEL ADAPTER CONTROL BLOCK



REDEFINITION -



disp	name	length	description
000		0F	
000	CACXLOCK	004	LOCKWORD FOR EXCLUSIVE CONTROL
004	CACXAIOR	004	ACTIVE IORBK (POINTER)
008	CACXVDEV	004	VIRTUAL DEVICE BLOCK (POINTER)
00C	CACXUIOR	004	UNSOLICITED IORBK (POINTER)
010	CACXRCPX	004	RESUME CPEBK (POINTER)
014	CACXCMND	001	COMMAND CODE ACTIVE IN ADAPTER
015	CACXSTAT	001	CTC ADAPTER STATUS
016	CACXLTCH	001	CTC ADAPTER LATCH

BITS DEFINED IN CACXLTCH (AT HEX DISPLACEMENT: 16)

80	CACEOFLE	END OF FILE
40	CACICMDE	INHIBIT COMPATABILITY MODE
20	CACNTRDY	NOT READY
10	CACIDISC	INTERFACE OR SELECTIVE DISCONNECT

017	CACXCNTL	001	ADAPTER CONTROL FLAGS

BITS DEFINED IN CACXCNTL (AT HEX DISPLACEMENT: 17)

80	CACEODTR	END OF DATA TRANSFER(Y SIDE)
40	CACHALTD	HALTED BY Y SIDE

018	CACXUIPD	001	UNSOLICITED INTERRUPT FLAG

BITS DEFINED IN CACXUIPD (AT HEX DISPLACEMENT: 18)

80	CACUNSAT	UNSOLICITED ATTENTION
40	CACUNSDE	UNSOLICITED DEVICE END

019	CACXWAIT	001	COMMAND WAITING IN ADAPTER

BITS DEFINED IN CACXWAIT (AT HEX DISPLACEMENT: 19)

80	CACWRTWT	WRITE WAITING
40	CACRDXWT	READ WAITING
20	CACCTLWT	CONTROL WAITING

01A	CACXACTV	001	COMMAND ACTIVE IN ADAPTER

BITS DEFINED IN CACXACTV (AT HEX DISPLACEMENT: 1A)

80	CACWRTAC	WRITE ACTIVE
40	CACRDXAC	READ ACTIVE
20	CACCTLAC	CONTROL ACTIVE

01B	CACXPEND	001	COMMAND PENDING FOR ADAPTER

BITS DEFINED IN CACXPEND (AT HEX DISPLACEMENT: 1B)

80	CACWRTPD	WRITE PENDING
40	CACRDXPD	READ PENDING
20	CACCTLPD	CONTROL PENDING

01C	CACXBUFF	004	DATA BUFFER ADDRESS
020	CACXYCAC	004	CACBK OF Y SIDE
024	CACXDLEN	002	DATA LENGTH IN ADAPTER
026	CACXFLAG	001	COMMAND CHAINING FLAG

BITS DEFINED IN CACXFLAG (AT HEX DISPLACEMENT: 26)

10	CACXCCCW	COMMAND CHAINING BIT

027	CACXSUSP	001	SUSPEND COMMAND - SENSE

BITS DEFINED IN CACXSUSP (AT HEX DISPLACEMENT: 27)

10	CACXSNS	SUSPENDED SENSE COMMAND

028		2F	RESERVED FOR EXPANSION OF BLOCK

EQUATES

06	CACSIZE	TOTAL BLOCK SIZE IN DBL-WDS

REDEFINITION -

000	CACYLOCK	004	LOCKWORD FOR EXCLUSIVE CONTROL
004	CACYAIOR	004	ACTIVE IORBK (POINTER)
008	CACYVDEV	004	VIRTUAL DEVICE BLOCK (POINTER)
00C	CACYUIOR	004	UNSOLICITED IORBK (POINTER)


```
010   CACYRCPX   004      RESUME CPEBK          (POINTER)
014   CACYCMND   001      COMMAND CODE ACTIVE IN ADAPTER
015   CACYSTAT   001      CTC ADAPTER STATUS
016   CACYLTCH   001      CTC ADAPTER LATCH

        BITS DEFINED FOR CACYLTCH BY HCPCACBK CACXLTCH

017   CACYCNTL   001      ADAPTER CONTROL FLAGS

        BITS DEFINED FOR CACYCNTL BY HCPCACBK CACXCNTL

018   CACYUIPD   001      UNSOLICITED INTERRUPT FLAG

        BITS DEFINED FOR CACYUIPD BY HCPCACBK CACXUIPD

019   CACYWAIT   001      COMMAND WAITING IN ADAPTER

        BITS DEFINED FOR CACYWAIT BY HCPCACBK CACXWAIT

01A   CACYACTV   001      COMMAND ACTIVE IN ADAPTER

        BITS DEFINED FOR CACYACTV BY HCPCACBK CACXACTV

01B   CACYPEND   001      COMMAND PENDING FOR ADAPTER

        BITS DEFINED FOR CACYPEND BY HCPCACBK CACXPEND

01C   CACYBUFF   004      DATA BUFFER ADDRESS
020   CACYXCAC   004      CACBK OF X SIDE
024   CACYDLEN   002      DATA LENGTH IN ADAPTER
026   CACYFLAG   001      COMMAND CHAINING FLAG

        BITS DEFINED IN CACYFLAG (AT HEX DISPLACEMENT: 26)

        10    CACYCCCW    COMMAND CHAINING BIT

027   CACYSUSP   001      SUSPEND COMMAND - SENSE

        BITS DEFINED IN CACYSUSP (AT HEX DISPLACEMENT: 27)

        10    CACYSNS     SUSPENDED SENSE COMMAND

028              2F       RESERVED FOR EXPANSION OF BLOCK
030              0F
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
CACBK	001	000	CACUNSDE	001	040	CACXRCPX	004	010
CACCTLAC	001	020	CACWRTAC	001	080	CACXSIDE	001	000
CACCTLPD	001	020	CACWRTPD	001	080	CACXSNS	001	010
CACCTLWT	001	020	CACWRTWT	001	080	CACXSTAT	001	015
CACEODTR	001	080	CACXACTV	001	01A	CACXSUSP	001	027
CACEOFLE	001	080	CACXAIOR	004	004	CACXUIOR	004	00C
CACHALTD	001	040	CACXBUFF	004	01C	CACXUIPD	001	018
CACICMDE	001	040	CACXCCCW	001	010	CACXVDEV	004	008
CACIDISC	001	010	CACXCMND	001	014	CACXWAIT	001	019
CACNTRDY	001	020	CACXCNTL	001	017	CACXYCAC	004	020
CACRDXAC	001	040	CACXDLEN	002	024	CACYACTV	001	01A
CACRDXPD	001	040	CACXFLAG	001	026	CACYAIOR	004	004
CACRDXWT	001	040	CACXLOCK	004	000	CACYBUFF	004	01C
CACSIZE	001	006	CACXLTCH	001	016	CACYCCCW	001	010
CACUNSAT	001	080	CACXPEND	001	01B	CACYCMND	001	014

Name	Len	Val/Disp
CACYCNTL	001	017
CACYDLEN	002	024
CACYFLAG	001	026
CACYLOCK	004	000
CACYLTCH	001	016
CACYPEND	001	01B
CACYRCPX	004	010
CACYSIDE	001	000
CACYSNS	001	010
CACYSTAT	001	015
CACYSUSP	001	027
CACYUIOR	004	00C
CACYUIPD	001	018
CACYVDEV	004	008
CACYWAIT	001	019
CACYXCAC	004	020

HCPCBIBK— CONTROL BLOCK IDENTIFIERS AND LENGTHS

DSECT NAME: CBIBK

DESCRIPTIVE NAME: CONTROL BLOCK IDENTIFIERS AND LENGTHS MAPPING

FUNCTION: PROVIDES A MAP FOR A CONTROL BLOCK'S INFORMATION IN THE HCPCBI TABLE.

LOCATED BY:

THE LOCATION OF HCPCBI AND THE OFFSET INTO HCPCBI
PROVIDED BY THE HCPGETST AND HCPRELST MACROS

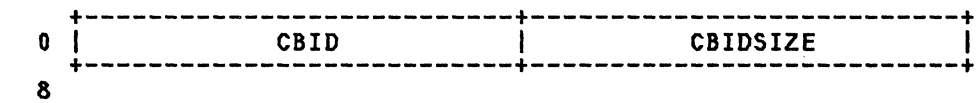
CREATED BY:

THIS BLOCK IS NEVER CREATED. IT IS USED TO MAP PORTIONS
OF THE HCPCBI DATA AREA

DELETED BY:

NEVER DELETED

CBIBK - CONTROL BLOCK IDENTIFIERS AND LENGTHS MAPPING



disp	name	length	description
000	CBID	004	THE BLOCK'S IDENTIFIER, '<XXX'. WHERE 'XXX' IS UNIQUE TO EACH BLOCK AND THE WHOLE ID IS '<<<<' FOR UNDEFINED BLOCKS.
004	CBIDSIZE	004	THE BLOCK'S LENGTH IN DOUBLEWORDS. THIS FIELD IS 0 IF THE BLOCK IS A VARIABLE LENGTH OR UNDEFINED BLOCK.

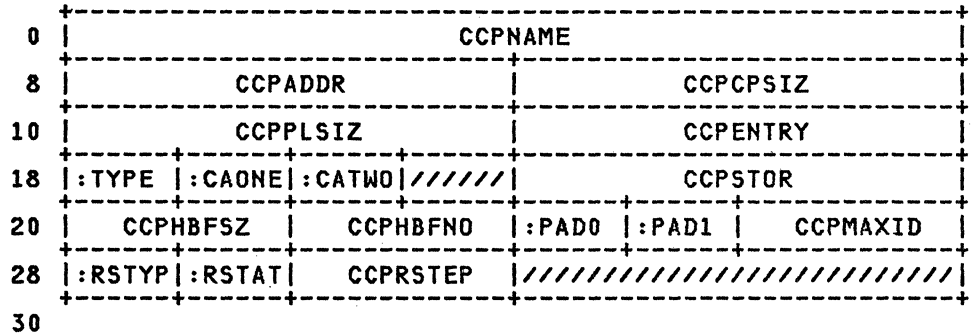
EQUATES

08	CBIBSIZE	LENGTH OF THE CBIBK IN BYTES
01	CBISIZE	LENGTH OF THE CBIBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
CBIBK	001	000
CBIBSIZE	001	008
CBID	004	000
CBIDSIZE	004	004
CBISIZE	001	001

CCPAR - COMMUNICATION CONTROLS PARAMETERS



disp	name	length	description
000	CCPNAME	008	NCPNAME SPECIFIED IN NAMECP MACRO
008	CCPADDR	004	ORIGIN OF CONTROL PROGRAM IMAGE
00C	CCPCPSIZ	004	CONTROL PROGRAM SIZE IN BYTES
010	CCPPLSIZ	004	PARAMETER LIST SIZE IN BYTES
014	CCPENTRY	004	CONTROL PROGRAM ENTRY POINT ADDR.
018	CCPTYPE	001	CONTROL PROGRAM TYPE FLAG
	BITS DEFINED IN CCPTYPE (AT HEX DISPLACEMENT: 18)		
	01 CCPTNCP		NETWORK CONTROL PROGRAM
	02 CCPTEP		270X EMULATION PROGRAM
	03 CCPTPEP		PARTITIONED EMULATION PROGRAM
019	CCPCAONE	001	FIRST CHANNEL ADAPTER TYPE FLAG
	BITS DEFINED IN CCPCAONE (AT HEX DISPLACEMENT: 19)		
	01 CCPTYPE1		CHANNEL ADAPTER TYPE ONE
	02 CCPTYPE2		CHANNEL ADAPTER TYPE TWO
01A	CCPCATWO	001	SECOND CHANNEL ADAPTER TYPE FLAG
	BITS DEFINED FOR CCPCATWO BY HCPCCPAR CCPCAONE		
01B		1X	RESERVED FOR FUTURE IBM USE
01C	CCPSTOR	004	370X STORAGE SIZE SPECIFIED (BYTES)
020	CCPHBFSZ	002	BUFFER SIZE FROM 'HOST' MACRO
022	CCPHBFNO	002	NUMBER OF BUFFERS IN READ LIST
024	CCPPAD0	001	FIRST BUFFER PAD COUNT (BYTES)
025	CCPPAD1	001	SUBSEQUENT BUFFER PAD COUNT
026	CCPMAXID	002	HIGHEST RESOURCE I.D. DEFINED
028	CCPRESID	004	RESOURCE I.D. DESCRIPTION
028	CCPRSTYP	001	RESOURCE TYPE FLAG
029	CCPRSTAT	001	RESOURCE INITIAL STATUS FLAGS
02A	CCPRSTEP	002	SUBCHANNEL ADDRESS WHEN IN EP-MODE
02C		1F	RESERVED FOR FUTURE IBM USE
	EQUATES		
	06 CCPSIZE		LENGTH OF CCPAR BLOCK
			HOST VALUES REQUIRED FOR 3704/3705:
	22 CCPVPAD0		34-BYTE PAD IN FIRST BTU BUFFER
	22 CCPVPAD1		34-BYTE PAD IN SUBSEQUENT BUFFERS

CROSS REFERENCE

Name	Len	Val/Disp
CCPADDR	004	008
CCPAR	001	000
CCPCAONE	001	019
CCPCATWO	001	01A
CCPCPSIZ	004	00C
CCPENTRY	004	014
CCPHBFNO	002	022
CCPHBFSZ	002	020
CCPMAXID	002	026
CCPNAME	008	000
CCPPAD0	001	024
CCPPAD1	001	025
CCPPLSIZ	004	010
CCPRESID	004	028
CCPRSTAT	001	029
CCPRSTEP	002	02A
CCPRSTYP	001	028
CCPSIZE	001	006
CCPSTOR	004	01C
CCPTEP	001	002
CCPTNCP	001	001
CCPTPEP	001	003
CCPTYPE	001	018
CCPTYPE1	001	001
CCPTYPE2	001	002
CCPVPAD0	001	022
CCPVPAD1	001	022

HCPCCTBK— COMMUNICATIONS CONTROL TABLE

DSECT NAME: CCTBK

DESCRIPTIVE NAME: COMMUNICATIONS CONTROL TABLE

FUNCTION: THIS CONTROL BLOCK DEFINES THE COMMUNICATION CONTROL TABLE FOR AN IUCV USER.

LOCATED BY:

IUCVCCT FIELD OF HCPIUCVB

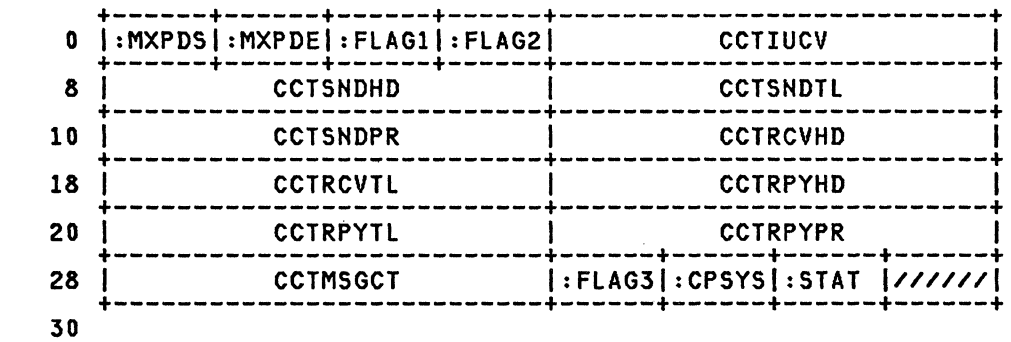
CREATED BY:

HCPIUBDB - IUCV DECLARE BUFFER FUNCTION

DELETED BY:

HCPIUERB - IUCV RETRIEVE BUFFER FUNCTION

CCTBK - COMMUNICATIONS CONTROL TABLE



disp	name	length	description
000	CCTMXPID	002	CURRENT MAX PATH ID FOR THIS CCT
000	CCTMXPDS	001	MAX PDSEG NUMBER
001	CCTMXPDE	001	MAX PDEBK NUMBER IN LAST PDSEG
002	CCTFLAG1	001	IUCV INTERRUPTS ENABLED

BITS DEFINED IN CCTFLAG1 (AT HEX DISPLACEMENT: 2)

80	CCTSNDN	IUCV NON-PRIORITY MSGS ENABLED
40	CCTSNDP	IUCV PRIORITY MESSAGES ENABLED
20	CCTRPYN	IUCV NON-PRIORITY REPLIES ENABLED
10	CCTRPYP	IUCV PRIORITY REPLIES ENABLED
08	CCTICTRL	IUCV CONTROL INTERRUPT ENABLED

003	CCTFLAG2	001	IUCV INTERRUPTS PENDING

BITS DEFINED IN CCTFLAG2 (AT HEX DISPLACEMENT: 3)

80	CCTPNDSN	IUCV NON-PRIORITY MSGS PENDING
40	CCTPNDSP	IUCV PRIORITY MESSAGES PENDING
20	CCTPNDRN	IUCV NON-PRIORITY REPLIES PENDING
10	CCTPNDRP	IUCV PRIORITY REPLIES PENDING
08	CCTPNDCT	IUCV CONTROL INTERRUPT PENDING

004	CCTIUCV	004	POINTER TO THE USER'S IUCVBK
008	CCTSNDHD	004	SEND QUEUE HEAD
00C	CCTSNDTL	004	SEND QUEUE TAIL
010	CCTSNDPR	004	SEND PRIORITY QUEUE TAIL
014	CCTRCVHD	004	RECEIVE QUEUE HEAD

```
018   CCTRCVTL   004      RECEIVE QUEUE TAIL
01C   CCTRPYHD   004      REPLY QUEUE HEAD
020   CCTRPYTL   004      REPLY QUEUE TAIL
024   CCTRPYPR   004      REPLY PRIORITY QUEUE TAIL
028   CCTMSGCT   004      TOTAL MSGS SENT ON ALL PATHS

02C   CCTFLAG3   001      CONTROL INTERRUPTS ENABLED

        BITS DEFINED IN CCTFLAG3 (AT HEX DISPLACEMENT: 2C)

        80     CCTCLPC     PENDING CONNECTONS ENABLED
        40     CCTCLCC     COMPLETE CONNECTIONS ENABLED
        20     CCTCLPS     SEVER INTERRUPTS ENABLED
        10     CCTCLPQ     QUIESCE INTERRUPTS ENABLED
        08     CCTCLPR     RESUME INTERRUPTS ENABLED


02D   CCTCPSYS   001      CP SYSTEM SERVICE CODE

02E   CCTSTAT    001      STATUS

        BITS DEFINED IN CCTSTAT  (AT HEX DISPLACEMENT: 2E)

        80     CCTRTVBF    RETRIEVE BUFFER IN PROGRESS


02F              X        RESERVED

                          START OF PATH DESCRIPTION SEGMENT POINTERS (DWD ALIGNED)
030              0D       ALIGNMENT
030   CCTPDSEG   004      N (1<=N<=256) PDSEG POINTERS

                   EQUATES

        33     CCTPDSLO    BYTE FOR INVALID PDSEG TEST
        01     CCTSINV     PDSEG INVALID BIT

        06     CCTSIZE     CCTBK SIZE IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
CCTBK	001	000	CCTPNDRP	001	010
CCTCLCC	001	040	CCTPNDSN	001	080
CCTCLPC	001	080	CCTPNDSP	001	040
CCTCLPQ	001	010	CCTRCVHD	004	014
CCTCLPR	001	008	CCTRCVTL	004	018
CCTCLPS	001	020	CCTRPYHD	004	01C
CCTCPSYS	001	02D	CCTRPYN	001	020
CCTFLAG1	001	002	CCTRPYP	001	010
CCTFLAG2	001	003	CCTRPYPR	004	024
CCTFLAG3	001	02C	CCTRPYTL	004	020
CCTICTRL	001	008	CCTRTVBF	001	080
CCTIUCV	004	004	CCTSINV	001	001
CCTMSGCT	004	028	CCTSIZE	001	006
CCTMXPDE	001	001	CCTSNDHD	004	008
CCTMXPDS	001	000	CCTSNDN	001	080
CCTMXPID	002	000	CCTSNDP	001	040
CCTPDSEG	004	030	CCTSNDPR	004	010
CCTPDSLO	004	033	CCTSNDTL	004	00C
CCTPNDCT	001	008	CCTSTAT	001	02E
CCTPNDRN	001	020			

HCPCHCBK— CHANNEL CLASS BLOCK

DSECT NAME: CHCBK

DESCRIPTIVE NAME: CHANNEL CLASS BLOCK

FUNCTION: DESCRIBE THE STATUS OF THE CHANNELS (IN XA MODE, THE CHANNEL CLASSES) FOR A VIRTUAL MACHINE. ANCHOR THE QUEUE OF DEVICES (FOR EACH CHANNEL NUMBER OR CLASS) FOR WHICH INTERRUPTS ARE PENDING.

LOCATED BY:

VMDCHC FIELD IN THE VIRTUAL MACHINE'S DEFINITION BLOCK

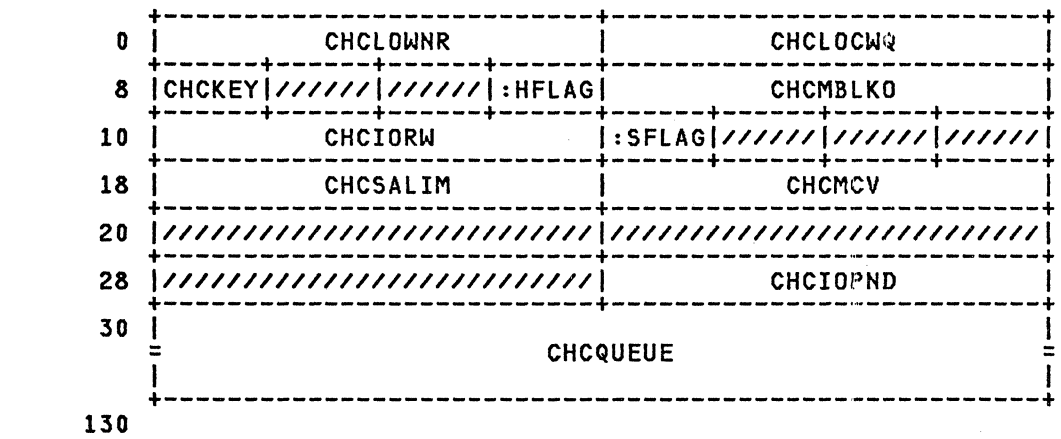
CREATED BY:

VIRTUAL MACHINE CREATION PROCESS - HCPBVM

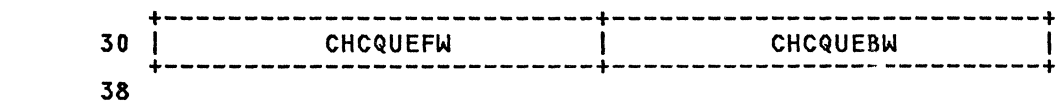
DELETED BY:

VIRTUAL MACHINE DESTRUCTION PROCESS

CHCBK - CHANNEL CLASS BLOCK



REDEFINITION - CHANNEL INTERRUPT QUEUE ELEMENT



disp	name	length	description
000	CHCLOCK	008	LOCKWORD FOR THIS BLOCK
000	CHCLOWNR	004	ADDRESS OF OWNING VMDBK
004	CHCLOCWQ	004	QUEUE OF WAITING TASKS
008	CHCSCHMD	008	SET-CHANNEL-MONITOR DOUBLEWORD THE FOLLOWING FIELDS CONTROL GUEST CHANNEL MONITORING. THEY ARE KEPT WITHIN A DOUBLEWORD TO ALLOW A STORE-MULTIPLE TO PERFORM MP-CONSISTENT SETTING OF THE CONTROLS ON A HOST MP.
008	CHCKEY	001	KEY OF USER MEASUREMENT BLOCK
009		1X	RESERVED FOR FUTURE IBM USE
00A		1X	RESERVED FOR FUTURE IBM USE
00B	CHCHFLAG	001	HARDWARE CONTROLS

BITS DEFINED IN CHCHFLAG (AT HEX DISPLACEMENT: B)

```
         02     CHCMSM       MEASUREMENT ACTIVE
         01     CHCTIM       TIMING (SHOULD BE) ACTIVE

00C    CHCMBLKO    004        MEASUREMENT BLOCK INDEX
010    CHCIORW     004        POINTER TO CHAIN OF CRWBK'S.
014    CHCSFLAG    001        SOFTWARE CONTROLS

         BITS DEFINED IN CHCSFLAG (AT HEX DISPLACEMENT: 14)

         80     CHCRWCC1     CONDITION CODE 1 REMAINS TO BE
                             GIVEN TO A GUEST STORE CHANNEL
                             REPORT WORD SINCE GENERATING A
                             MACHINE CHECK FOR  A  PREVIOUS
                             CHANNEL REPORT WORD CONDITION.
                             THIS BIT IS CLEARED BY AN  I/O
                             SYSTEM RESET.  IT PREVENTS THE
                             GENERATION OF A  MACHINE CHECK
                             FOR  CHANNEL REPORT WORDS MADE
                             PENDING.

015                 1X       RESERVED FOR FUTURE IBM USE
016                 1X       RESERVED FOR FUTURE IBM USE
017                 1X       RESERVED FOR FUTURE IBM USE
018    CHCSALIM     004      SET ADDRESS LIMIT VALUE
01C    CHCMCV       004      POINTER TO MCVBK.  FOR FLOATING
                             MACHINE CHECKS (THEY ARE RELATED
                             TO THE I/O SUBSYSTEM).
020                 1F       RESERVED FOR FUTURE IBM USE
024                 1F       RESERVED FOR FUTURE IBM USE
028                 1F       RESERVED FOR FUTURE IBM USE
02C    CHCIOPND     004      MASK OF PENDING INTERRUPTIONS
030    CHCQUEUE     008      FWD AND BWD INTERRUPT PTRS

                      EQUATES

         20     CHCQSIZE     DEFINE NUMBER OF CHANNELS
         26     CHCSIZE      SIZE OF FLOATING CHANNEL BLOCK

          REDEFINITION - CHANNEL INTERRUPT QUEUE ELEMENT

030    CHCQUEFW     004      CHANNEL INT. QUEUE FORWARD PTR
034    CHCQUEBW     004      CHANNEL INT. QUEUE BACKWARD PTR

                      EQUATES

         08     CHCQENTL     LENGTH OF QUEUE POINTERS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
CHCBK	001	000	CHCQENTL	001	008
CHCHFLAG	001	00B	CHCQSIZE	001	020
CHCIOPND	004	02C	CHCQUEBW	004	034
CHCIORW	004	010	CHCQUEFW	004	030
CHCKEY	001	008	CHCQUEUE	008	030
CHCLOCK	008	000	CHCRWCC1	001	080
CHCLOCWQ	004	004	CHCSALIM	004	018
CHCLOWNR	004	000	CHCSCHMD	008	008
CHCMBLKO	004	00C	CHCSFLAG	001	014
CHCMCV	004	01C	CHCSIZE	001	026
CHCMSM	001	002	CHCTIM	001	001

HCPCHRBK— DEVICE / SUBCHANNEL INDEX STRUCTURE

DSECT NAME: CHRBK

DESCRIPTIVE NAME: DEVICE / SUBCHANNEL INDEX STRUCTURE

FUNCTION: THE DEVICE / SUBCHANNEL RADIX TREE BLOCK IS USED TO REPRESENT THE DEVICE BLOCK INDEX STRUCTURE

LOCATED BY:

HCPRIOIX CONTAINS THE RADIX TREE FOR THE REAL DEVICE NUMBERS WHICH ADDRESSES THE CHRBK FOR THE FIRST DIGIT OF THE DEVICE NUMBER.

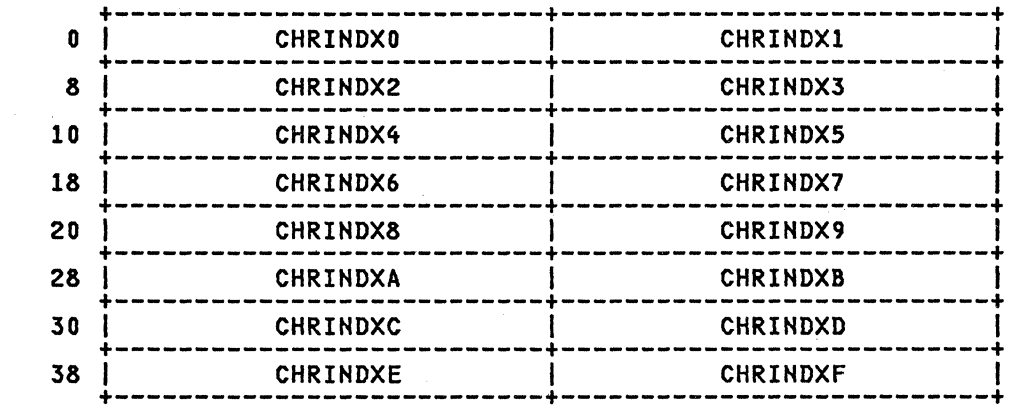
CREATED BY:

CHRBK'S ARE DYNAMICALLY CREATED BY CALLING HCPFREE

DELETED BY:

CHRBK'S ARE DELETED BY CALLING HCPFRET

CHRBK - CHANNEL RADIX TREE INDEX BLOCK



disp	name	length	description
000	CHRINDX0	004	INDEX FOR DIGIT 0 MOD 16
004	CHRINDX1	004	INDEX FOR DIGIT 1 MOD 16
008	CHRINDX2	004	INDEX FOR DIGIT 2 MOD 16
00C	CHRINDX3	004	INDEX FOR DIGIT 3 MOD 16
010	CHRINDX4	004	INDEX FOR DIGIT 4 MOD 16
014	CHRINDX5	004	INDEX FOR DIGIT 5 MOD 16
018	CHRINDX6	004	INDEX FOR DIGIT 6 MOD 16
01C	CHRINDX7	004	INDEX FOR DIGIT 7 MOD 16
020	CHRINDX8	004	INDEX FOR DIGIT 8 MOD 16
024	CHRINDX9	004	INDEX FOR DIGIT 9 MOD 16
028	CHRINDXA	004	INDEX FOR DIGIT A MOD 16
02C	CHRINDXB	004	INDEX FOR DIGIT B MOD 16
030	CHRINDXC	004	INDEX FOR DIGIT C MOD 16
034	CHRINDXD	004	INDEX FOR DIGIT D MOD 16
038	CHRINDXE	004	INDEX FOR DIGIT E MOD 16
03C	CHRINDXF	004	INDEX FOR DIGIT F MOD 16

EQUATES

3C	CHROMASK	MASK TO ISOLATE THE OFFSET TO INDX0-INDXF
08	CHRSIZE	SIZE OF BLOCK IN DBW'S

CROSS REFERENCE

Name	Len	Val/Disp
CHRBK	001	000
CHRINDXA	004	028
CHRINDXB	004	02C
CHRINDXC	004	030
CHRINDXD	004	034
CHRINDXE	004	038
CHRINDXF	004	03C
CHRINDX0	004	000
CHRINDX1	004	004
CHRINDX2	004	008
CHRINDX3	004	00C
CHRINDX4	004	010
CHRINDX5	004	014
CHRINDX6	004	018
CHRINDX7	004	01C
CHRINDX8	004	020
CHRINDX9	004	024
CHROMASK	004	03C
CHRSIZE	001	008

HCPCKIBK— SYSTEM CHECK POINT INTERFACE BLOCK

DSECT NAME: CKIBK

DESCRIPTIVE NAME: SYSTEM CHECK POINT INTERFACE BLOCK

FUNCTION: CONTAINS THE INFORMATION SHARED BY MODULES HCPCKP AND HCPCKS DURING THE CHECKPOINT PROCESS.

LOCATED BY:

HCPWRKCK - STORAGE IN THE HCPWRK DATA AREA. THIS IS ONE OF THE FIRST MODULES LOADED AT IPL AND REMAINS IN STORAGE ACROSS A BOUNCE.

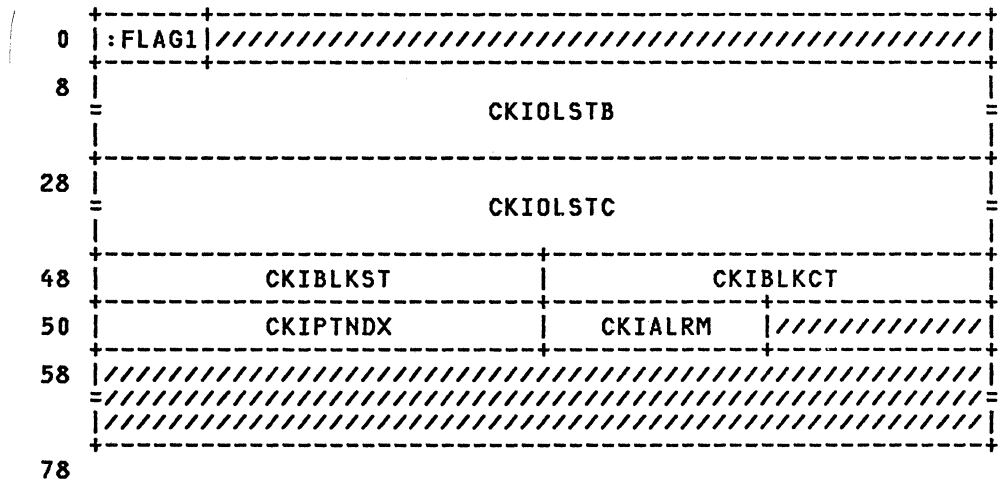
CREATED BY:

N/A

DELETED BY:

N/A

CKIBK - SYSTEM CHECK POINT INTERFACE BLOCK



disp	name	length	description
000	CKIFLAG1	001	PROGRAM EXECUTION FLAG
001		XL7	RESERVED FOR IBM USE
008	CKIOLSTB	008	STAND-ALONE BLOCK I/O PLIST
028	CKIOLSTC	008	STAND-ALONE ASA I/O PLIST
048	CKIBLKST	004	STARTING BLOCK NO. FOR ENTRY
04C	CKIBLKCT	004	NO. BLOCKS IN CURRENT ENTRY
050	CKIPTNDX	004	BUFFER OFFSET TO NEXT RECORD SLOT
054	CKIALRM	002	ALARM CODE FOR OPERATOR OR NOT

EQUATES

55	CKIALRM2	ACTUAL ALARM BYTE

056	H	RESERVED FOR IBM USE
058	4D	RESERVED FOR IBM USE

EQUATES

0F	CKISIZE	CKIBK SIZE IN DOUBLEWORDS

MORE EQUATES

001	CKINOCLK	TIME OF DAY CLOCK IS INVALID
002	CKIRSUME	RESUME INTERRUPTED CHECKPOIN
010	CKIALLFL	CHECKPOINT CYLINDER(S) FULL
020	CKINM981	MESSAGE 981 ALREADY ISSUED
040	CKINM982	MESSAGE 982 ALREADY ISSUED

CROSS REFERENCE

Name	Len	Val/Disp
CKIALLFL	001	010
CKIALRM	002	054
CKIALRM2	002	055
CKIBK	001	000
CKIBLKCT	004	04C
CKIBLKST	004	048
CKIFLAG1	001	000
CKINM981	001	020
CKINM982	001	040
CKINOCLK	001	001
CKIOLSTB	008	008
CKIOLSTC	008	028
CKIPTNDX	004	050
CKIRSUME	001	002
CKISIZE	001	00F

HCPCKPBK— SYSTEM CHECK POINT CONTROL BLOCK

DSECT NAME: CKPBK

DESCRIPTIVE NAME: SYSTEM CHECK POINT CONTROL BLOCK

FUNCTION: DOCUMENTS THE PROGRESS OF THE CHECKPOINT PROCESS BY RECORDING THE STARTING AND ENDING TIMES OF EACH DATA COLLECTION, THE DASD EXTENT OF THE COLLECTED DATA, AND THE DASD LOCATION OF THAT DATA. THUS, THE CKPBK CHECKPOINTS THE PROGRESS OF THE CHECKPOINT PROCESS WHILE MAINTAINING A DIRECTORY OF THE DATA FILES CREATED DURING THAT PROCESS.

LOCATED BY:

SYSCKPS - POINTER TO FIRST CHECKPOINT CYLINDER ON SYSRES
ON WHICH THE CKPBK IS THE FIRST RECORD

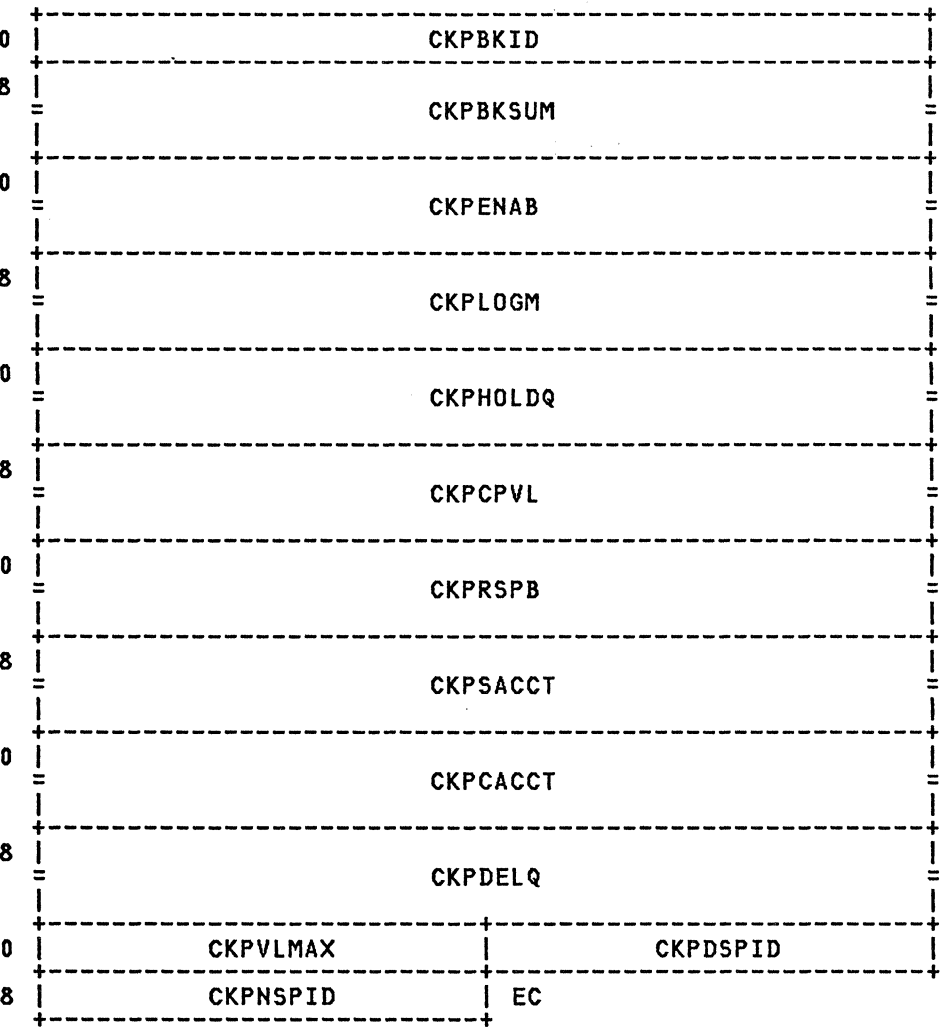
CREATED BY:

HCPCKPSH - DURING SYSTEM SHUTDOWN OR ABNORMAL TERMINATION
HCPCKPRS - BEFORE SYSTEM INITIALIZATION

DELETED BY:

NEVER DELETED; ALWAYS REFRESHED

CKPBK - SYSTEM CHECK POINT CONTROL BLOCK



disp	name	length	description
000	CKPBKID	008	EYECATCHER FOR IDENTIFICATION
008	CKPBKSUM	008	OVERALL CHECKPOINT STATUS
020	CKPENAB	008	RDEV ENABLE STATUS
038	CKPLOGM	008	LOG MESSAGES
050	CKPHOLDQ	008	HOLD QUEUES
068	CKPCPVL	008	CPVOL BLOCKS
080	CKPRSPB	008	RSPBLOKS
098	CKPSACCT	008	RESIDUAL ACCOUNTING RECORDS
0B0	CKPCACCT	008	GENERATED ACCOUNTING RECORDS
0C8	CKPDELQ	008	DELETE QUEUE
			MISCELLANEOUS CHECKPOINT DATA ITEMS
0E0	CKPVLMAX	004	HIGHEST CPVOL USED AT SHUTDOWN
0E4	CKPDSPID	004	SYSTEM ABEND DUMP SPOOL FILE ID
0E8	CKPNSPID	004	NEXT AVAILABLE
			SYSTEM SPOOL FILE ID

MORE EQUATES

000	CKPTIME1	START TIME
008	CKPTIME2	END TIME
010	CKPBLKS	START BLOCK
014	CKPBLKN	BLOCK COUNT
018	CKPENTLN	
01E	CKPSIZE	CKPBK SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
CKPBK	001	000
CKPBKID	008	000
CKPBKSUM	008	008
CKPBLKN	004	014
CKPBLKS	004	010
CKPCACCT	008	0B0
CKPCPVL	008	068
CKPDELQ	008	0C8
CKPDSPID	004	0E4
CKPENAB	008	020
CKPENTLN	004	018
CKPHOLDQ	008	050
CKPLOGM	008	038
CKPNSPID	004	0E8
CKPRSPB	008	080
CKPSACCT	008	098
CKPSIZE	001	01E
CKPTIME1	008	000
CKPTIME2	008	008
CKPVLMAX	004	0E0

HCPCLASS— USER CLASS CATEGORIES

DSECT NAME: CLASS

DESCRIPTIVE NAME: USER CLASS CATEGORIES

FUNCTION: THE USER CLASS CATEGORIES DEFINES THE CP COMMAND CATEGORIES WHICH CAN BE ASSOCIATED WITH EACH VIRTUAL MACHINE

LOCATED BY:

NOT APPLICABLE

CREATED BY:

THIS FILE CONTAINS ONLY CONSTANTS
AND DEFINITIONS TO BE USED ELSEWHERE
THEREFORE, IT TAKES UP NO SPACE
AND REQUIRES NO STORAGE.

DELETED BY:

NOT APPLICABLE

Value	Name	Description
00000080	CLASSA	CLASS A FUNCTIONS
00000040	CLASSB	CLASS B FUNCTIONS
00000020	CLASSC	CLASS C FUNCTIONS
00000010	CLASSD	CLASS D FUNCTIONS
00000008	CLASSE	CLASS E FUNCTIONS
00000004	CLASSF	CLASS F FUNCTIONS
00000002	CLASSG	CLASS G FUNCTIONS
00000001	CLASSH	CLASS H FUNCTIONS
		USERCLS1 BIT DEFINITIONS - BYTE 1
00000080	CLASSI	CLASS I FUNCTIONS
00000040	CLASSJ	CLASS J FUNCTIONS
00000020	CLASSK	CLASS K FUNCTIONS
00000010	CLASSL	CLASS L FUNCTIONS
00000008	CLASSM	CLASS M FUNCTIONS
00000004	CLASSN	CLASS N FUNCTIONS
00000002	CLASSO	CLASS O FUNCTIONS
00000001	CLASSP	CLASS P FUNCTIONS
		USERCLS2 BIT DEFINITIONS - BYTE 2
00000080	CLASSQ	CLASS Q FUNCTIONS
00000040	CLASSR	CLASS R FUNCTIONS
00000020	CLASSS	CLASS S FUNCTIONS
00000010	CLASST	CLASS T FUNCTIONS
00000008	CLASSU	CLASS U FUNCTIONS
00000004	CLASSV	CLASS V FUNCTIONS
00000002	CLASSW	CLASS W FUNCTIONS
00000001	CLASSX	CLASS X FUNCTIONS
		USERCLS3 BIT DEFINITIONS - BYTE 3
00000080	CLASSY	CLASS Y FUNCTIONS
00000040	CLASSZ	CLASS Z FUNCTIONS
00000020	CLASS1	CLASS 1 FUNCTIONS
00000010	CLASS2	CLASS 2 FUNCTIONS
00000008	CLASS3	CLASS 3 FUNCTIONS
00000004	CLASS4	CLASS 4 FUNCTIONS
00000002	CLASS5	CLASS 5 FUNCTIONS
00000001	CLASS6	CLASS 6 FUNCTIONS
		CLASSALL DEFINITION

FFFFFFFF CLASSALL ALL FUNCTIONS ALLOWED

HCPCMDBK— COMMAND TABLE ENTRY BLOCK

DSECT NAME: CMDBK

DESCRIPTIVE NAME: COMMAND TABLE ENTRY BLOCK

FUNCTION: THIS DSECT CAN BE USED TO MAP THE ENTRIES IN THE TABLE OF COMMANDS (HCPCOMTB)

LOCATED BY:

START OF THE COMMAND TABLE IS THE ENTRY POINT HCPCOMTB

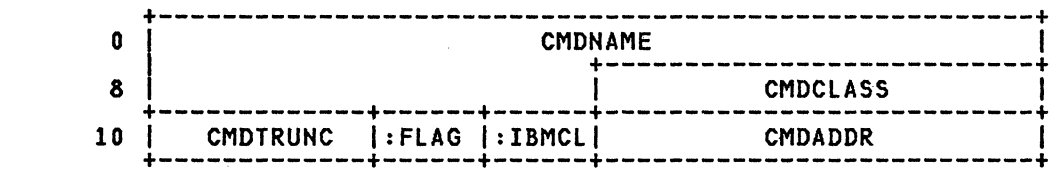
CREATED BY:

N/A - MAPS COMMAND TABLE ENTRIES

DELETED BY:

N/A - MAPS COMMAND TABLE ENTRIES

CMDBK - COMMAND TABLE ENTRY BLOCK



disp	name	length	description
000	CMDNAME	012	COMMAND NAME
00C	CMDCLASS	004	CLASS MASK
010	CMDTRUNC	002	ABREVIATION COUNT
012	CMDFLAG	001	COMMAND FLAGS
013	CMDIBMCL	001	IBMCLASS
014	CMDADDR	004	ROUTINE ADDRESS

EQUATES

18	CMDNEXT	NEXT COMMAND
03	CMDSIZE	SIZE OF CMDBK IN DOUBLE WORDS
18	CMDBSIZE	SIZE OF CMDBK IN BYTES

MORE EQUATES

080	CMDALOG	COMMAND ALLOWED BEFORE LOGON
040	CMDOLOG	COMMAND ALLOWED ONLY AT LOGON
020	CMDALIAS	ENTRY IS AN 'ALIAS'
010	CMDSUBCM	CMDADDR POINTS TO SUBCOMMANDS
008	CMDEP	ADDR IS ACTUAL CMD PROCESSOR
004	CMDLAST	THIS IS THE LAST COMMAND IN THE TA
002	CMDONLY	COMMAND HAS ONLY ONE VERSION (IBMC
001	CMDNOCL	ANY CLASS USER MAY USE THIS CMD

CROSS REFERENCE

Name	Len	Val/Disp
CMDADDR	004	014
CMDALIAS	001	020
CMDALOG	001	080
CMDBK	001	000
CMDBSIZE	001	018
CMDCLASS	004	00C
CMDEP	001	008
CMDFLAG	001	012
CMDIBMCL	001	013
CMDLAST	001	004
CMDNAME	012	000
CMDNEXT	001	018
CMDNOCL	001	001
CMDOLOG	001	040
CMDONLY	001	002
CMDSIZE	001	003
CMDSUBCM	001	010
CMDTRUNC	002	010

HCPCOMBK— CONSOLE COMMUNICATIONS CONTROL BLOCK

DSECT NAME: COMBK

DESCRIPTIVE NAME: CONSOLE COMMUNICATIONS CONTROL BLOCK

FUNCTION: CONTAINS DATA AND CONTROL INFORMATION PERTINENT TO THE CONTROL AND COMMUNICATION BETWEEN VIRTUAL AND REAL TERMINAL CONSOLE TASKS AND COMMAND STREAMS.

LOCATED BY:

COMPNT	CHAINED
RDEVCON	FIELD OF HCPRDEV

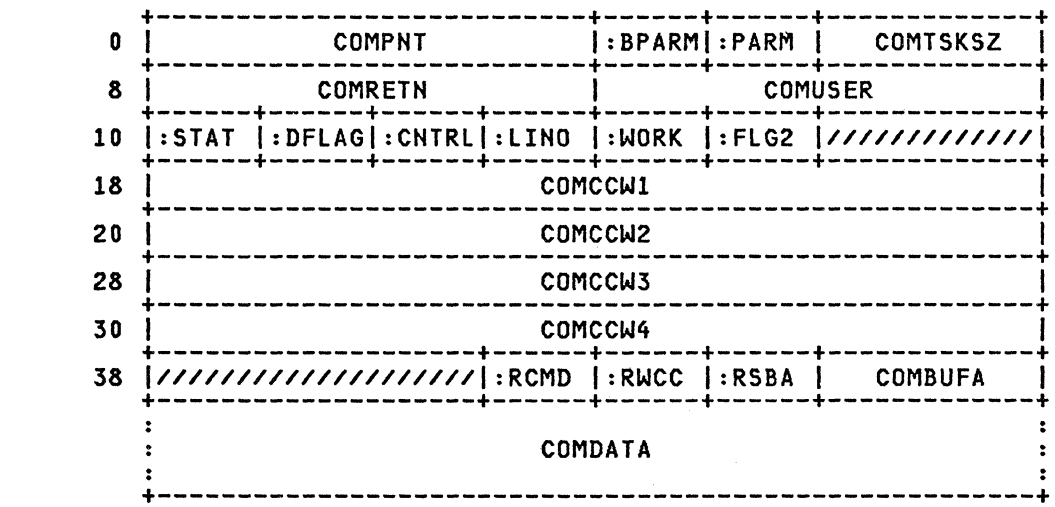
CREATED BY:

- HCPQCN - WHENEVER A READ OR WRITE IS TO BE DONE.
- HCPGFS - WHEN SWITCHING FROM FULL SCREEN MODE TO CP, A COMBK IS BUILT TO CLEAR THE SCREEN.
- HCPGRF - FOR APL/TEXT TRANSLATIONS. WHEN SWITCHING FROM FULL SCREEN MODE TO CP, A COMBK IS BUILT TO CLEAR THE SCREEN.
- HCPGIN - UPPERCASE TRANSLATION.
- HCPTTY - WHEN A WRITE IS TO BE DONE TO PUT ---MORE--- IN THE STATUS AREA.
- HCPVCYSM - CREATES COMBK FOR SNA.

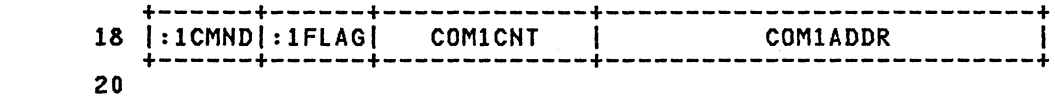
DELETED BY:

- HCPQCOET - GENERAL SYSTEM ROUTINE TO RETURN COMBK'S TO FREE STORAGE.
- HCPQCN - DELETED WHEN A MESSAGE WON'T BE DISPLAYED ON THE SCREEN OR WHEN A COMBK IS SPLIT INTO TWO OR MORE COMBKS.
- HCPGIN - WHEN UPPERCASE TRANSLATION IS COMPLETED.
- HCPGRF - WHEN APL/TEXT TRANSLATION IS COMPLETED.

COMBK - CONSOLE COMMUNICATIONS CONTROL BLOCK



REDEFINITION -



REDEFINITION - TERMINAL HANDLING

disp	name	length	description
000	COMPNT	004	POINTER TO NEXT COMBK
004	COMHPARM	002	CALLING PARMS (SEE EQUATES COPY)
004	COMBPARM	001	BYTE 1 OF CALLING PARMS
005	COMPARM	001	CALLING PARMS (SEE EQUATES COPY)
006	COMTSKSZ	002	COMBK SIZE IN DOUBLE WORDS
008	COMRETN	004	POINTER TO SAVEAREA FOR RETURN
00C	COMUSER	004	ADDRESS OF VMDBK FOR DESTINATION USER
010	COMSTAT	001	COMBK STATUS CONTROL FLAGS

BITS DEFINED IN COMSTAT (AT HEX DISPLACEMENT: 10)

80	COMOUTPT	OUTPUT COMBK
40	COMRESP	RESPONSE EXPECTED FROM THIS COMBK
20	COMACTV	COMBK IS ACTIVE ON REAL DEVICE
10	COMCNTL	THIS IS A CONTROL COMBK ONLY
08	COMESCP	COMBK CONTAINS DEVICE DEPENDENT DATA
04	COMLOALM	THIS COMBK HAS BEEN INHIBITED FROM BREAKING INTO FULL SCREEN MODE AND THE ALARM HAS ALREADY BEEN RUNG TO NOTIFY THE USER
02	COMSPLT	OUTPUT DATA BEING SPLIT
01	COMSYNC	COMBK FOR SYNCHRONIZATION ONLY

011	COMDFLAG	001	DIAGNOSE DISPLAY FLAG

BITS DEFINED IN COMDFLAG (AT HEX DISPLACEMENT: 11)

0FF	COMCNCL	DISPLAY - CANCEL FUNCTION REQUESTED
0FE	COMCLEAR	DISPLAY - CLEAR FUNCTION REQUESTED ERASE THE ENTIRE SCREEN, REWRITE THE ATTRIBUTE BYTES FOR CP SCREEN FORMAT, AND RESET THE CURSOR TO THE BEGINNING OF THE INPUT AREA
080	COMCLRS	DISPLAY - CLEAR SCREEN BEFORE OUTPUT
040	COMFSRQ	DISPLAY - FULL-SCREEN CONTROL REQUEST
03F	COMLMSK	DISPLAY - MASK FOR BITS IN LINE NUM
080	COMHOLD	DISPLAY - SCREEN STATUS HOLDING
040	COMWRTRD	TERM - COMBK CONTAINS WRITE/READ
020	COMMORE	TERM - 'MORE' COMBK
010	COMPFWRT	TERM - ECHO WRITE COMBK
008	COMPFDEL	TERM - PF DELAY WRITE COMBK
004	COMEXTHC	EXTENDED COLOR AND EXTENDED HIGHLIGHTING ATTRIBUTES ARE TO BE ADDED INTO THIS COMBK
002	COMHIGH	HILIGHTING ATTRIBUTES ARE TO BE ADDED INTO THIS COMBK

012	COMCNTRL	001	CONTROL FLOW FLAGS

BITS DEFINED IN COMCNTRL (AT HEX DISPLACEMENT: 12)

013	COMLINO	001	DIAGNOSE DISPLAY LINE NO
014	COMWORK	001	TEMPORARY WORK FIELD
015	COMFLG2	001	MISC. FLAGS

EQUATES

01	COMLED	LIMITED EDIT WRITE REQUESTED
02	COMCMND	COMMAND OUTPUT FLAG

```
016                 2X        RESERVED FOR FUTURE IBM USE
018    COMCCW1      008       FIRST  CONSOLE I/O CCW
020    COMCCW2      008       SECOND CONSOLE I/O CCW
028    COMCCW3      008       THIRD  CONSOLE I/O CCW
030    COMCCW4      008       FOURTH CONSOLE I/O CCW
038                 3X        RESERVED FOR FUTURE IBM USE
03B    COMRCMD      001       3270 COMMAND CHARACTER
03C    COMRWCC      001       3270 WRITE CONTROL CHARACTER
03D    COMRSBA      001       3270 'SBA' ORDER CHARACTER
03E    COMBUFA      002       3270 BUFFER ADDRESS CHARACTERS
040                 0D        ALIGNMENT

                        EQUATES

         08     COMSIZE       COMBK HEADER SIZE IN DOUBLE WORDS

040    COMDATA      001       START OF VARIABLE LENGTH DATA

                              COMCCW DEFINITION


           REDEFINITION -

018    COM1CMND     001       CCW COMMAND CODE
019    COM1FLAG     001       CCW FLAG BITS

         BITS DEFINED FOR COM1FLAG BY HCPEQUAT CCWFLAG

01A    COM1CNT      002       CCW DATA COUNT
01C    COM1ADDR     004       CCW DATA ADDRESS

                        EQUATES

         1F     COM1ADRX      CCW FINAL BYTE OF ADDRESS

020    COM1NEXT     008       CCW FOLLOWING CURRENT CCW

                        EQUATES

         0F     COMWIS        ICM/STCM MASK  FOR 31 BIT ADDRESS
         04     COMWMC        MVC/CLC LENGTH FOR 31 BIT ADDRESS
         80     COMWIDAL      IDAL INVALID BIT  MASK
         08     COMWLEN       LENGTH OF A SINGLE CCW (8 BYTES)


           REDEFINITION - TERMINAL HANDLING

03E    COMBUFAD     001       BUFFER ADDRESS
03F    COMBUFLC     001       LOCATION ON THE HEADER
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
COMACTV	001	020	COMCLEAR	001	0FE	COMFLG2	001	015
COMBK	001	000	COMCLRS	001	080	COMFSRQ	001	040
COMBPARM	001	004	COMCMND	001	002	COMHIGH	001	002
COMBUFA	002	03E	COMCNCL	001	0FF	COMHOLD	001	080
COMBUFAD	001	03E	COMCNTL	001	010	COMHPARM	002	004
COMBUFLC	001	03F	COMCNTRL	001	012	COMLED	001	001
COMCCW1	008	018	COMDATA	001	040	COMLINO	001	013
COMCCW2	008	020	COMDFLAG	001	011	COMLMSK	001	03F
COMCCW3	008	028	COMESCP	001	008	COMLOALM	001	004
COMCCW4	008	030	COMEXTHC	001	004	COMMORE	001	020

Name	Len	Val/Disp
COMOUTPT	001	080
COMPARM	001	005
COMPFDEL	001	008
COMPFWRT	001	010
COMPNT	004	000
COMRCMD	001	03B
COMRESP	001	040
COMRETN	004	008
COMRSBA	001	03D
COMRWCC	001	03C
COMSIZE	001	008
COMSPLT	001	002
COMSTAT	001	010
COMSYNC	001	001
COMTSKSZ	002	006
COMUSER	004	00C
COMWIDAL	001	080
COMWIS	001	00F
COMWLEN	001	008
COMWMC	001	004
COMWORK	001	014
COMWRTRD	001	040
COM1ADDR	004	01C
COM1ADRX	001	01F
COM1CMND	001	018
COM1CNT	002	01A
COM1FLAG	001	019
COM1NEXT	008	020

HCPCPABK— CPUBK ANCHOR BLOCK

DSECT NAME: CPABK

DESCRIPTIVE NAME: CPUBK ANCHOR BLOCK

FUNCTION: THE CPABK CONTAINS INFORMATION ABOUT THE CHAIN OF CPUBKS WHICH IT ANCHORS.

LOCATED BY:

NONE

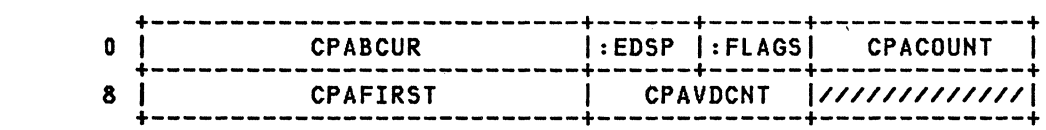
CREATED BY:

HCPCPU

DELETED BY:

HCPCPU

CPABK - CPUBK ANCHOR BLOCK



disp	name	length	description
000	CPABCUR	004	POINTER TO CURRENT CPUBK BEING PROCESSED
004	CPAEDSP	001	CURRENT DISPLACEMENT WITHIN CPUBK POINTED TO BY CPABCUR
005	CPAFLAGS	001	GLOBAL FLAGS FOR CPUBK CHAIN

BITS DEFINED IN CPAFLAGS (AT HEX DISPLACEMENT: 5)

80	CPACALL	'ALL' WAS SPECIFIED AS CPU ADDRESS
40	CPASCAN	SCAN IS IN PROGRESS

006	CPACOUNT	002	COUNT OF CPUS SPECIFIED IN COMMAND LINE
008	CPAFIRST	004	ADDRESS OF FIRST CPUBK IN CHAIN
00C	CPAVDCNT	002	COUNT OF EXISTING CPUS SPECIFIED
00E		1H	RESERVED FOR IBM USE

EQUATES

10	CPALEN	LENGTH OF CPABK
02	CPASIZE	SIZE OF CPABK (IN DOUBLEWORDS)

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
CPABCUR	004	000	CPAFIRST	004	008	CPAVDCNT	002	00C
CPABK	001	000	CPAFLAGS	001	005			
CPACALL	001	080	CPALEN	001	010			
CPACOUNT	002	006	CPASCAN	001	040			
CPAEDSP	001	004	CPASIZE	001	002			

HCPCPCBK— CHANNEL PROGRAM CONTROL BLOCK

DSECT NAME: CPCBK

DESCRIPTIVE NAME: CHANNEL PROGRAM CONTROL BLOCK

FUNCTION: DESCRIBE THE STATUS OF THE SIMULATION OF A CHANNEL PROGRAM BY THE VIRTUAL CHANNEL SIMULATOR

LOCATED BY:

N/A. THE CPCBK IS INTERNAL TO THE VIRTUAL CHANNEL SIMULATOR. IT MAPS THE WORK AREA PORTION OF THE SAVBK ADDRESSED BY IORSAVE. IT IS SHARED BY HCPTRV, WHICH TRACES THE OPERATION OF THE VIRTUAL CHANNEL. REFER TO CURRENT LISTINGS OF HCPIOV AND HCPTRV FOR USAGE INFORMATION.

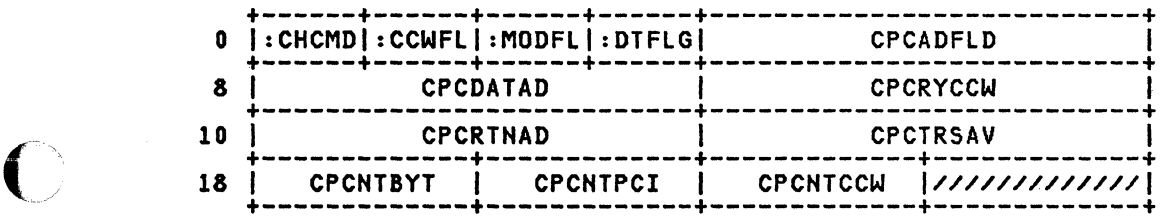
CREATED BY:

N/A

DELETED BY:

N/A

CPCBK - CHANNEL PROGRAM CONTROL BLOCK



disp	name	length	description
000	CPCCHCMD	001	DEVICE COMMAND BEING SIMULATED
001	CPCCCWFL	001	CCW CHANNEL CONTROL FLAGS
	BITS DEFINED FOR CPCCCWFL BY HCPEQUAT CCWFLAG		
002	CPCMODFL	001	BYTE 5 OF FORMAT-0 CCW
003	CPCDTFLG	001	DATA TRANSFER CONTROL BYTE
	BITS DEFINED IN CPCDTFLG (AT HEX DISPLACEMENT: 3)		
	80 CPCPSNSP		SENSE DATA PENDING AT CCWFETCH
	40 CPCDTBWD		READ-BACKWARD OPERATION
	20 CPCDTRTY		COMMAND RETRY IS IN EFFECT
	10 CPCDTBEG		DATA TRANSFER HAS BEGUN
	04 CPCDTSTP		'STOP' WAS SIGNALLED
	02 CPCDTCER		CHANNEL END RECEIVED
	01 CPCDTEND		RECEIVED FINAL STS FOR CMD
004	CPCADFLD	004	ADDRESS FIELD FROM CURRENT CCW
008	CPCDATAD	004	CURRENT USER DATA ADDRESS
00C	CPCRYCCW	004	CCW ADDRESS FOR INST RETRY
010	CPCRTNAD	004	ADDRESS OF SIMULATION ROUTINE
014	CPCTRSAV	004	A(SAVEAREA) FOR I/O TRACING
018	CPCNTBYT	002	FETCH/STORE BYTE COUNT
01A	CPCNTPCI	002	PCI STATUS PRESENTATIONS
01C	CPCNTCCW	002	COUNT CCWS FETCHED W/O DATA XFER
01E		2X	RESERVED FOR FUTURE IBM USE

CROSS REFERENCE

Name	Len	Val/Disp
CPCADFLD	004	004
CPCBK	001	000
CPCCCWFL	001	001
CPCCHCMD	001	000
CPCDATAD	004	008
CPCDTBEG	001	010
CPCDTBWD	001	040
CPCDTCER	001	002
CPCDTEND	001	001
CPCDTFLG	001	003
CPCDTRTY	001	020
CPCDTSTP	001	004
CPCMODFL	001	002
CPCNTBYT	002	018
CPCNTCCW	002	01C
CPCNTPCI	002	01A
CPCPSNSP	001	080
CPCRTNAD	004	010
CPCRYCCW	004	00C
CPCTRSAV	004	014

HCPCPEBK— CP TASK EXECUTION BLOCK

DSECT NAME: CPEBK

DESCRIPTIVE NAME: CP TASK EXECUTION BLOCK

FUNCTION: HCPCPEBK MAINTAINS REGISTER VALUES AND ADDRESSING INFORMATION (MODULE ADDRESS OR ENTRY POINT ADDRESS) TO ALLOW CODE TO BE EXECUTED ASYNCHRONOUSLY. NOTE: A CPEBK IS IDENTICAL TO A SAVBK.

LOCATED BY:

CPEXFPNT	DOUBLY CHAINED	
CPEXBPNT	DOUBLY CHAINED	
CACXRCPX	FIELD OF HCPCACBK	(X-SIDE CHANNEL RECONNECT)
CACYRCPX	FIELD OF HCPCACBK	(Y-SIDE CHANNEL RECONNECT)
GSDCPEX	FIELD OF HCPGSDBK	
LCKQUE	FIELD OF HCPLCKBK	(OBTAIN LOCK QUEUE)
PIOCPEX	FIELD OF HCPPIOBK	(PAGING I/O)
RDEVWTDV	FIELD OF HCPRDEV	(WAIT-DEVICE)
SYSDCPEX	FIELD OF HCPSYSCM	(DIRECTORY SWAP CONTROL BLOCK)
VDSDSTK	FIELD OF HCPVDSBK	(DEFERRED STACK FOR DEVICE)
VMDQURCP	FIELD OF HCPVMDBK	(URGENT CPEBK STACK)
VMDQCPEF	FIELD OF HCPVMDBK	(NORMAL CPEBK STACK)
HCPPAGQ	FIELD OF HCPPAG	(TASKS IN TRANSIT - ACTIVE I/O)
HCPPTRKQ	FIELD OF HCPPTR	(TASKS IN PAGE WAIT FROM A STEAL TASK WRITE)
HCPPTRRQ	FIELD OF HCPPTR	(PAGING READ REQUEST QUEUE)
HCPPTRWQ	FIELD OF HCPPTR	(PAGING WRITE REQUEST QUEUE)
FREEQ	FIELD OF HCPPTR	(TASKS WAITING FOR FREE FRAME)
STACKQ	FIELD OF HCPPTR	(RELATED TASKS WAITING FOR A PAGE)
WAITQ	FIELD OF HCPPTR	(TASKS WAITING FOR USERS IN PAGE WAIT)

CREATED BY:

	HCPABN	SWITCH BACK TO ORIGINAL USER DURING SOFT ABEND
	HCPCSP	SWITCH TO BASE VMDBK DURING CLOSE OR SPOOL COMMAND
	HCPCTC	SUSPEND COMMANDS DURING CTCA PROCESSING
	HCPFRE	SWITCH TO MASTER PROCESSOR DURING FREE STORAGE
BLK	HCPBLK	(CP) VM/XA - SYSTEM PRODUCT 5664-308

DELETED BY:

	HCPSVC	CPEBKS ARE DELETED AS SAVBKS

CPEBK - CP TASK EXECUTION BLOCK

0	CPEXFPNT			CPEXBPNT	
8	CPEXSFQP			CPEXCPRQ	
10	:XSCHC	:XCALC	//////////	CPEXRETN	
18	CPEXR0			CPEXR1	
20	:XR2B0	:XR2B1	:XR2B2 :XR2B3	CPEXR3	
28	CPEXR4			CPEXR5	
30	CPEXR6			CPEXR7	
38	CPEXR8			CPEXR9	
40	CPEXR10			CPEXR11	
48	CPEXR12			CPEXR13	
50	CPEXR14			CPEXR15	
58	CPEXWRK0			CPEXWRK1	

```
   +--------------------------+--------------------------+
60 |          CPEXWRK2        |          CPEXWRK3        |
   +--------------------------+--------------------------+
68 |          CPEXWRK4        |          CPEXWRK5        |
   +--------------------------+--------------------------+
70 |          CPEXWRK6        |          CPEXWRK7        |
   +--------------------------+--------------------------+
78 |          CPEXWRK8        |          CPEXWRK9        |
   +--------------------------+--------------------------+
80
```

disp	name	length	description
000	CPEXFPNT	004	GENERAL FORWARD POINTER
004	CPEXBPNT	004	GENERAL BACKWARD POINTER (BACKWARD POINTER NOT USED FOR SINGLE-THREAD LISTS)
008	CPEXSFQP	004	SAVBK FRAME QUEUE POINTER
00C	CPEXCPRQ	004	CROSS PROCESSOR RETURN QUEUE ADDR
010	CPEXSCHD	008	SAVBK STACKING CONTROL FIELDS
010	CPEXSCHC	001	HCPSAVBK DISPATCHING CONTROLS
	BITS DEFINED FOR CPEXSCHC BY HCPSAVBK SAVESCHC		
011	CPEXCALC	001	SAVEBK USAGE STATUS
	BITS DEFINED FOR CPEXCALC BY HCPSAVBK SAVECALC		
012		H	RESERVED
014	CPEXRETN	004	RETURN LINKAGE ROUTINE ADDRESS
018	CPEXREGS	064	CALLERS REGISTERS - R0 TO R15
018	CPEXR0	004	REGISTER 0
01C	CPEXR1	004	REGISTER 1
020	CPEXR2	004	REGISTER 2 THE FOLLOWING BYTE DEFINITIONS FOR CPEXR2 ARE FOR TESTING OF PARAMETERS PASSED BETWEEN MODULES.
020	CPEXR2B0	001	REGISTER 2 BYTE 0
021	CPEXR2B1	001	REGISTER 2 BYTE 1
022	CPEXR2B2	001	REGISTER 2 BYTE 2
023	CPEXR2B3	001	REGISTER 2 BYTE 3
024	CPEXR3	004	REGISTER 3
028	CPEXR4	004	REGISTER 4
02C	CPEXR5	004	REGISTER 5
030	CPEXR6	004	REGISTER 6
034	CPEXR7	004	REGISTER 7
038	CPEXR8	004	REGISTER 8
03C	CPEXR9	004	REGISTER 9
040	CPEXR10	004	REGISTER 10
044	CPEXR11	004	REGISTER 11; ALSO VMDBK ADDRESS OF USER ON WHICH CPEBK IS SCHEDULED
048	CPEXR12	004	REGISTER 12
04C	CPEXR13	004	REGISTER 13; ALSO PREVIOUS SAVE AREA ADDRESS ON CALL
050	CPEXR14	004	REGISTER 14; ALSO RETURN ADDRESS ON CALL OR STACKED SAVBK RETURN
054	CPEXR15	004	GOTO ADDRESS ON SCHEDULED CPEBK EXECUTION
058	CPEXWRK	040	WORK AREA
058	CPEXWRK0	004	WORK AREA
05C	CPEXWRK1	004	WORK AREA
060	CPEXWRK2	004	WORK AREA
064	CPEXWRK3	004	WORK AREA
068	CPEXWRK4	004	WORK AREA
06C	CPEXWRK5	004	WORK AREA
070	CPEXWRK6	004	WORK AREA
074	CPEXWRK7	004	WORK AREA
078	CPEXWRK8	004	WORK AREA
07C	CPEXWRK9	004	WORK AREA

EQUATES

10 CPEXSIZE SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
CPEBK	001	000
CPEXBPNT	004	004
CPEXCALC	001	011
CPEXCPRQ	004	00C
CPEXFPNT	004	000
CPEXREGS	064	018
CPEXRETN	004	014
CPEXR0	004	018
CPEXR1	004	01C
CPEXR10	004	040
CPEXR11	004	044
CPEXR12	004	048
CPEXR13	004	04C
CPEXR14	004	050
CPEXR15	004	054
CPEXR2	004	020
CPEXR2B0	001	020
CPEXR2B1	001	021
CPEXR2B2	001	022
CPEXR2B3	001	023
CPEXR3	004	024
CPEXR4	004	028
CPEXR5	004	02C
CPEXR6	004	030
CPEXR7	004	034
CPEXR8	004	038
CPEXR9	004	03C
CPEXSCHC	001	010
CPEXSCHD	008	010
CPEXSFQP	004	008
CPEXSIZE	001	010
CPEXWRK	040	058
CPEXWRK0	004	058
CPEXWRK1	004	05C
CPEXWRK2	004	060
CPEXWRK3	004	064
CPEXWRK4	004	068
CPEXWRK5	004	06C
CPEXWRK6	004	070
CPEXWRK7	004	074
CPEXWRK8	004	078
CPEXWRK9	004	07C

HCPCPIBK— CP INFORMATION DATA AREA OVERLAYS

DSECT NAME: CPIBK

DESCRIPTIVE NAME: CP INFORMATION DATA AREA OVERLAYS

FUNCTION: OVERLAYS THE ENTRY DEFINITIONS IN DATA AREA HCPCPE.

LOCATED BY:

N/A

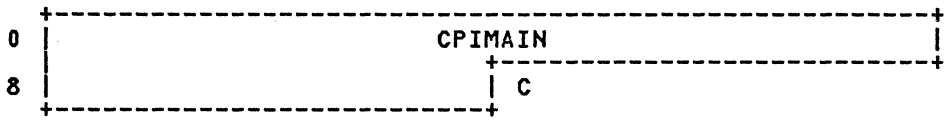
CREATED BY:

N/A

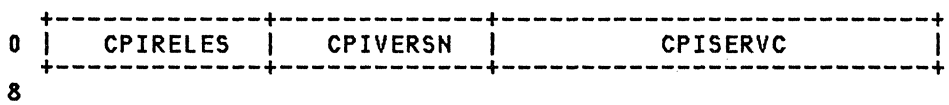
DELETED BY:

N/A

CPIBK - CP INFORMATION DATA AREA OVERLAYS



REDEFINITION -



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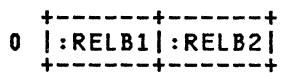

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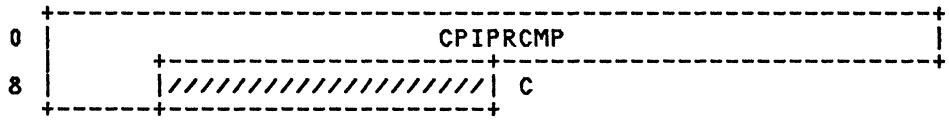

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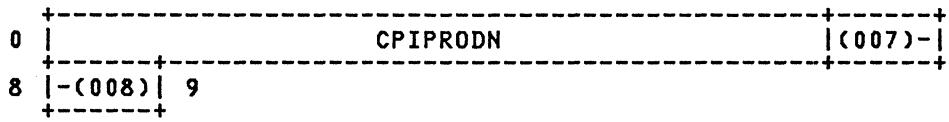

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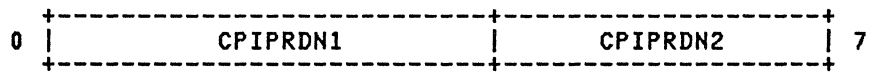


disp	name	length	description
000	CPIMAIN	012	
	REDEFINITION -		
000	CPIRELES	002	RELEASE
002	CPIVERSN	002	VERSION
004	CPISERVC	004	SERVICE LEVEL
	REDEFINITION -		
000	CPIRELB1	001	RELEASE NUMBER BYTE 1
001	CPIRELB2	001	RELEASE NUMBER BYTE 2
	REDEFINITION -		
000	CPIPRCMP	009	PROD. NUMBER AND COMPID
009		CL3	RESERVED FOR IBM USE
	REDEFINITION -		
000	CPIPRODN	007	PRODUCT NUMBER
007	CPICMPID	002	CP COMPONENT ID
	REDEFINITION -		
000	CPIPRDN1	004	PRODUCT NUMBER - FIRST HALF
004	CPIPRDN2	003	PRODUCT NUMBER - SECOND HALF

MORE EQUATES

002	CPISIZE	CPIBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
CPIBK	001	000
CPICMPID	002	007
CPIMAIN	012	000
CPIPRCMP	009	000
CPIPRDN1	004	000
CPIPRDN2	003	004
CPIPRODN	007	000
CPIRELB1	001	000
CPIRELB2	001	001
CPIRELES	002	000
CPISERVC	004	004
CPISIZE	001	002
CPIVERSN	002	002

HCPCPUBK— CPU DATA BLOCK

DSECT NAME: CPUBK

DESCRIPTIVE NAME: CPU DATA BLOCK

FUNCTION: THE CPUBK CONTAINS INFORMATION ABOUT SPECIFIED VIRTUAL CPUS IN A CP COMMAND LINE.

LOCATED BY:

CPUBNXT CHAINED, CPABCUR (CPABK)

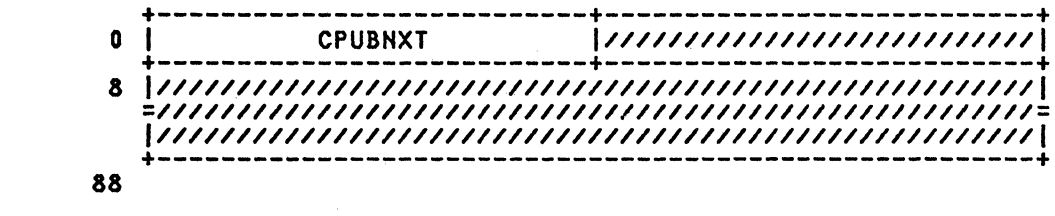
CREATED BY:

HCPCPU

DELETED BY:

HCPCPU

CPUBK - CPU DATA BLOCK



REDEFINITION -

disp	name	length	description
000	CPUBNXT	004	POINTER TO NEXT CPUBLOK
004		1F	RESERVED FOR IBM USE 16 DOUBLE WORDS FOR CPU ENTRIES

EQUATES

08	CPUHDRLN	LENGTH OF CPUBK HEADER

008	CPUENTRY	002	MAP OF THE ENTRIES IN CPUBK
008		16D	16 ENTRIES IN EACH CPUBK

REDEFINITION -

008	CPUEFLAG	001	CPUBK ENTRY FLAGS

BITS DEFINED IN CPUEFLAG (AT HEX DISPLACEMENT: 8)

80	CPUEXIST	FLAGS IF VMDBK EXIST FOR CPU
40	CPUETYMP	MP TYPE ADJUNCT VMDBK (VMDTYPMP)
20	CPUETYUS	BASE TYPE VMDBK (VMDTYPUS)
10	CPUELAST	LAST ENTRY IN THIS BLOCK

009		X	RESERVED FOR IBM USE
00A	CPUECPUA	002	THE CPU ADDRESS
00C	CPUEVMDA	004	ADDRESS OF THIS CPU'S VMDBK IF IT EXISTS

EQUATES


```
        08     CPUENTLN     LENGTH OF THE DATA IN CPUBK

                    MORE EQUATES

        088    CPULEN       LENGTH OF CPUBK
        011    CPUSIZE      SIZE OF CPUBK (DOUBLEWORDS)
```

CROSS REFERENCE

Name	Len	Val/Disp
CPUBK	001	000
CPUBNXT	004	000
CPUECPUA	002	00A
CPUEFLAG	001	008
CPUELAST	001	010
CPUENTLN	001	008
CPUENTRY	002	008
CPUETYMP	001	040
CPUETYUS	001	020
CPUEVMDA	004	00C
CPUEXIST	001	080
CPUHDRLN	001	008
CPUIDVM	001	0FF
CPUKEY	001	040
CPULEN	001	088
CPUNOALL	001	020
CPUNOKEY	001	080
CPUSIZE	001	011

HCPCPVOL— SYSTEM VOLUME LIST ENTRY

DSECT NAME: CPVOL

DESCRIPTIVE NAME: SYSTEM VOLUME LIST ENTRY

FUNCTION: A CPVOL DESCRIBES A VOLUME THAT IS DEDICATED FOR USE BY THE SYSTEM.

LOCATED BY:

CPVNEXT - FIELD OF HCPCPVOL BLOCK USED FOR PAGING REFERENCE TO INDICATE THE NEXT DEVICE OF THE SAME TYPE.
RDEVVOL - FIELD OF HCPRDEV BLOCK
SYSVOLS - CONTAINS THE POINTER TO THE BEGINNING OF CP-OWNED VOLUMES THAT ARE CONTIGUOUS IN STORAGE. THE VOLUME INDEX OF THE ASA CAN BE USED TO INDEX INTO THE TABLE TO DETERMINE THE CORRECT VOLUME FOR THAT ASA. MULTIPLY THE INDEX BY THE SIZE OF A CPVOL.

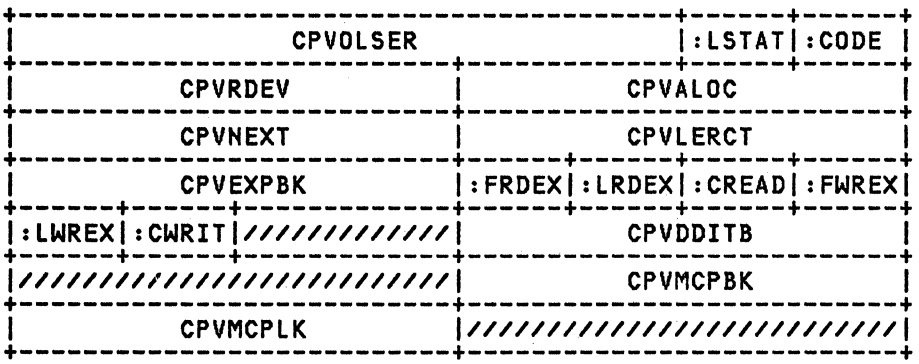
CREATED BY:

HCPGENER MACRO AFTER THE SYSCPVOL MACRO HAS BEEN EXECUTED.

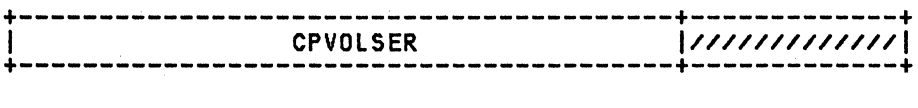
DELETED BY:

THE CPVOL IS NEVER DELETED.

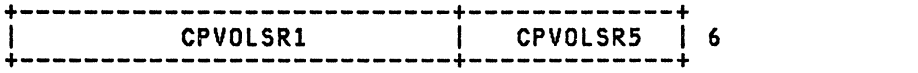
CPVOL - SYSTEM VOLUME LIST ENTRY



REDEFINITION - USERVOL ENTRY



REDEFINITION - REDEF FOR PASSING IN REGISTERS



disp	name	length	description
000	CPVOLSER	006	VOLUME SERIAL IDENTIFIER
006	CPVLSTAT	001	VOLUME STATUS FLAGS

BITS DEFINED IN CPVLSTAT (AT HEX DISPLACEMENT: 6)

80	CPVLPREF	VOLUME CONTAINS PREFERRED SLOTS
40	CPVLDRCT	VOLUME CONTAINS VALID DIRECTORY SLOTS
02	CPVTEMPS	INDICATES THAT THE CPVOL IS TEMPORARILY REMOVED FROM THE ALLOCATION LIST. THE VOLUME DOES NOT HAVE ANY SLOTS AVAILABLE FOR ALLOCATION. (REMOVED LOGICALLY ONLY) FOR A SPOOL DEVICE.
01	CPVTEMPP	INDICATES THAT THE CPVOL IS TEMPORARILY REMOVED FROM THE ALLOCATION LIST. THE VOLUME DOES NOT HAVE ANY SLOTS AVAILABLE FOR ALLOCATION. (REMOVED LOGICALLY ONLY) FOR A PAGING DEVICE.

007	CPVCODE	001	INDEX NUMBER INTO CPVOL LIST
008	CPVRDEV	004	ADDRESS OF THE RDEV BLOCK IF ATTACHED OTHERWISE IT CONTAINS ZEROES
00C	CPVALOC	004	ADDRESS OF THE ALOC BLOCK
010	CPVNEXT	004	NEXT CPVOL OF SAME DEVICE TYPE. THE END POINTER IS ZERO.
014	CPVLERCT	004	THIS FIELD MUST BE UPDATED BY COMPARE AND SWAP LOGIC

EQUATES

06	CPVMAXER	THE MAXIMUN NUMBER OF CONTINUOUS ERRORS ALLOWED

018	CPVEXPBK	004	CONTAINS ADDRESS OF EXPOSURE BLOCK
01C	CPVRDWRI	006	
01C	CPVFRDEX	001	FIRST READ EXPOSURE
01D	CPVLRDEX	001	LAST READ EXPOSURE
01E	CPVCREAD	001	CURRENT AVAILABLE READ EXPOSURE
01F	CPVFWREX	001	FIRST AVAILABLE WRITE EXPOSURES
020	CPVLWREX	001	LAST WRITE EXPOSURE
021	CPVCWRIT	001	CURRENT AVAILABLE WRITE EXPOSURE
022	CPVDEVLM	002	LIMIT TO ALLOCATE
024	CPVDDITB	004	CONTAINS THE POINTER TO A DEVICE DEPENDENT INFORMATION TABLE
028	CPVCTDAL	002	COUNT OF SLOTS DEALLOCATED
028	CPVCTPAG	002	PAGE COUNTS FOR DE-ALLOCATION.
02A	CPVCTSPL	002	SPOOL COUNTS FOR DE-ALLOCATION.
02C	CPVMCPBK	004	POINTER TO MCPBK FOR THIS VOLUME
030	CPVMCPLK	004	LOCKWORD FOR MCPBK
034		F	RESERVED FOR IBM USE.
038	CPVLIST	004	PAGE AND SPOOL LISTS OF CPVOLS.
038	CPVPGNXT	004	PAGE POINTER TO THE NEXT CPVOL CONTAINING PAGEING SLOTS.
03C	CPVSPNXT	004	SPOOL POINTER TO THE NEXT CPVOL CONTAINING SPOOLING SLOTS.
040	CPVLOKAT	004	COUNT OF TIMES THIS VOLUME WAS LOOKED AT WHILE CHOSING A VOLUME FOR ALLOCATION.
044	CPVALOCD	004	COUNT OF TIMES THIS VOLUME WAS CHOSEN FOR ALLOCATION.
048	CPVOLEND	008	END OF CPVOL.

REDEFINITION - USERVOL ENTRY

000		CL6	VOLUME SERIAL IDENTIFIER
006		XL2	RESERVED FOR IBM USE

EQUATES

01	CPVUSIZE	CPVOL SIZE IN DW'S (FOR USER VOLUMES)

REDEFINITION - REDEF FOR PASSING IN REGISTERS

```
000    CPVOLSR1    004       BYTES 1-4 OF CPVOLSER
004    CPVOLSR5    002       BYTES 5 & 6 OF CPVOLSER

                     MORE EQUATES

       009     CPVSIZE      CPVOL ENTRY SIZE IN DOUBLEWORDS
                            (FOR PAGING/SPOOLING SYSTEM VOLUMES)
       048     CPVBSIZE     CPVOL ENTRY SIZE IN BYTES
```

CROSS REFERENCE

Name	Len	Val/Disp
CPVALOC	004	00C
CPVALOCD	004	044
CPVBSIZE	001	048
CPVCODE	001	007
CPVCREAD	001	01E
CPVCTDAL	002	028
CPVCTPAG	002	028
CPVCTSPL	002	02A
CPVCWRIT	001	021
CPVDDITB	004	024
CPVDEVLM	002	022
CPVEXPBK	004	018
CPVFRDEX	001	01C
CPVFWREX	001	01F
CPVLDRCT	001	040
CPVLERCT	004	014
CPVLIST	004	038
CPVLOKAT	004	040
CPVLPREF	001	080
CPVLRDEX	001	01D
CPVLSTAT	001	006
CPVLWREX	001	020
CPVMAXER	001	006
CPVMCPBK	004	02C
CPVMCPLK	004	030
CPVNEXT	004	010
CPVOL	001	000
CPVOLEND	008	048
CPVOLSER	006	000
CPVOLSR1	004	000
CPVOLSR5	002	004
CPVPGNXT	004	038
CPVRDEV	004	008
CPVRDWRI	006	01C
CPVSIZE	001	009
CPVSPNXT	004	03C
CPVTEMPP	001	001
CPVTEMPS	001	002
CPVUSIZE	004	001

CRDREC— CHANNEL REPORT WORD ERROR RECORD

DSECT NAME: CRDREC

DESCRIPTIVE NAME: CHANNEL REPORT WORD ERROR RECORD

FUNCTION: CRDREC PROVIDES STATISTICAL DATA FOR ERROR RECOVERY AND/OR ERROR RECORDING RELATED TO PREVIOUSLY PERFORMED CHANNEL OPERATION THAT DID NOT SUCCESSFULLY COMPLETE.

LOCATED BY:

GPR6 IN HCPRFC AND HCPIOE. THE ADDRESS IS PASSED TO HCPREC IN GPR1.

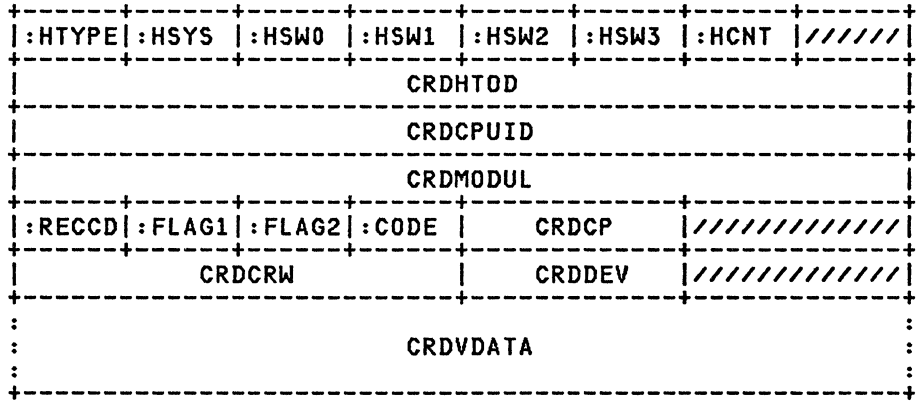
CREATED BY:

HCPRFC

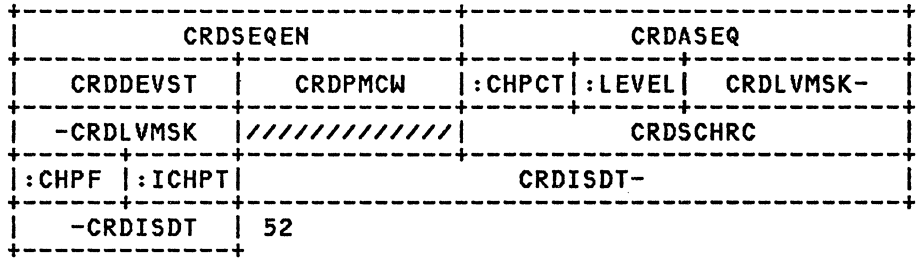
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

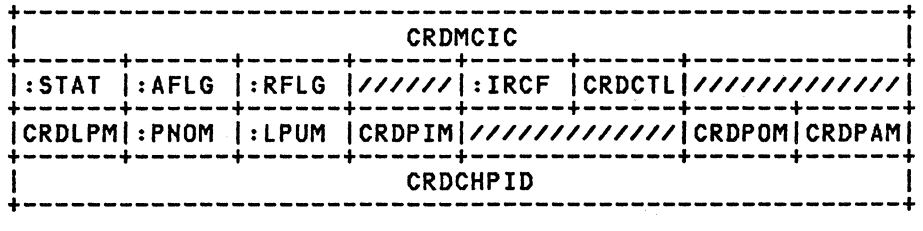
CRDREC - CHANNEL REPORT WORD ERROR RECORD



REDEFINITION - CRDVDATA - UCB DATA FORMAT



REDEFINITION - CRDVDATA - MCIC FORMAT RECORD



```
   50


       REDEFINITION - CRDHTOD

      +---------------------------+---------------------------+
    8 |          CRDHDATE         |          CRDHTIME         |
      +---------------------------+---------------------------+
   10


       REDEFINITION - CRDCPUID

      +------+--------------------+-------------+-------------+
   10 |:HCPID|      CRDHSER       |   CRDHMDL   |   CRDHMCEL  |
      +------+--------------------+-------------+-------------+
   18


       REDEFINITION - CRDMCIC

      +------+------+------+------+------+------+------+------+
   30 |:MCIC0|:MCIC1|:MCIC2|:MCIC3|:MCIC4|:MCIC5|:MCIC6|:MCIC7|
      +------+------+------+------+------+------+------+------+
   38
```

disp	name	length	description
000	CRDHTYPE	001	CLASS/SOURCE
	CODES DEFINED IN CRDHTYPE (AT HEX DISPLACEMENT: 0)		
	25 CRDHTYCR		CRW RECORD
001	CRDHSYS	001	SYSTEM/RELEASE LEVEL
	BITS DEFINED FOR CRDHSYS BY HDRREC HDRHSYS		
002	CRDHSW0	001	RECORD INDEPENDENT SWITCHES
	BITS DEFINED FOR CRDHSW0 BY HDRREC HDRHSW0		
003	CRDHSW1	001	RESERVED REC DEPENDENT SWITCH 1
004	CRDHSW2	001	RESERVED REC DEPENDENT SWITCH 2
005	CRDHSW3	001	RESERVED REC DEPENDENT SWITCH 3
006	CRDHCNT	001	RECORD COUNT
	BITS DEFINED FOR CRDHCNT BY HDRREC HDRHCNT		
007		XL1	RESERVED FOR FUTURE IBM USE
008	CRDHTOD	008	TOD OF SYSTEM FAILURE
010	CRDCPUID	008	CPU ID
018	CRDMODUL	008	CSECT NAME OF MODULE/USERID
020	CRDRECCD	001	CRW RECORD FORMAT CODE
	CODES DEFINED IN CRDRECCD (AT HEX DISPLACEMENT: 20)		
	01 CRDRECUC		UCB DATA FORMAT RECORD
	02 CRDRECMC		MCIC FORMAT RECORD
021	CRDFLAG1	001	FLAG BYTE 1
	BITS DEFINED IN CRDFLAG1 (AT HEX DISPLACEMENT: 21)		
	80 CRDF1HCC		HARDWARE CREATED CRW
	40 CRDF1SCC		SOFTWARE CREATED CRW
	01 CRDF1INV		INVALID CRW RECORDING


```
022   CRDFLAG2   001       FLAG BYTE 2
023   CRDCODE    001       CODE BYTE

        CODES DEFINED IN CRDCODE  (AT HEX DISPLACEMENT: 23)

        01     CRDCOCPM    CRW PENDING MCH
        02     CRDCOSDM    SYSTEM DAMAGE MCH
        03     CRDCOACR    ALTERNATE CPU RECOVERY
        06     CRDCOIRC    HOT I/O RECOVER CHAN PATH
        07     CRDCOIRM    HOT I/O REMOVE CHAN PATH
        08     CRDCOVCP    VARY CHAN PATH - FORCE

024   CRDCP        002       PROCESSOR ADDRESS CRW RETRIEVED
026                H         RESERVED FOR FUTURE IBM USE
028   CRDCRW       004       CRW
02C   CRDDEV       002       DEVICE NUMBER
02E                XL2       RESERVED FOR FUTURE IBM USE
030   CRDVDATA     008       START OF VARIABLE LENGTH DATA

          REDEFINITION - CRDVDATA - UCB DATA FORMAT

030   CRDSEQEN     004       CRW SEQUENCE NUMBER
034   CRDASEQ      004       CRW ASSOCIATED SEQ NBR
038   CRDDEVST     002       UCB DEVICE STATUS FLAGS
03A   CRDPMCW      002       PATH MANAGEMENT CONTROL WORD FROM
                             THE UCB
03C   CRDCHPCT     001       CHANNEL PATH RECOVERY COUNT FROM
                             THE UCB
03D   CRDLEVEL     001       UCB LEVEL VALUE
03E   CRDLVMSK     004       UCB LEVEL BIT MASK
042                XL2       RESERVED FOR FUTURE IBM USE
044   CRDSCHRC     004       UCB SUBCHANNEL RECOVERY ANCHOR
048   CRDCHPF      001       CHANNEL PATH FLAGS
049   CRDICHPT     001       ICHPT FLAGS ASSOCIATED WITH THE
                             CRW CHANNEL PATH ID
04A   CRDISDT      008       COPY OF THE IOSVISDT

                      EQUATES

        52     CRDLENUC    LENGTH OF UCB FORMAT CRDREC
        0B     CRDSIZUC    UCB CRDREC SIZE IN DBL WDS


          REDEFINITION - CRDVDATA - MCIC FORMAT RECORD

030   CRDMCIC      008       MCIC, IF AVAILABLE
038   CRDSTAT      001       DEVICE OPERATION STATUS FLAG FROM
                             RDEV

        BITS DEFINED FOR CRDSTAT BY HCPRDEV RDEVSTAT

039   CRDAFLG      001       DEVICE ALLOCATION CONTROL FLAG
                             FROM RDEV

        BITS DEFINED FOR CRDAFLG BY HCPRDEV RDEVAFLG

03A   CRDRFLG      001       DEVICE ERROR RECOVERY CONTROL
                             FLAG FROM RDEV

        BITS DEFINED FOR CRDRFLG BY HCPRDEV RDEVRFLG

03B                XL1       RESERVED FOR FUTURE IBM USE
03C   CRDIRCF      001       INTERRUPT REQUEST CODE FROM SCHIB

        BITS DEFINED FOR CRDIRCF BY HCPEQUAT CSWIRCF

03D   CRDCTL       001       CONTROL FLAGS FROM SCHIB

        BITS DEFINED FOR CRDCTL BY HCPEQUAT CSWCTL
```

03E		XL2	RESERVED FOR FUTURE IBM USE
040	CRDLPM	001	LOGICAL PATH MASK FROM SCHIB
041	CRDPNOM	001	PATH NOT OPERATIONAL MASK FROM SCHIB
042	CRDLPUM	001	LAST PATH USED MASK FROM SCHIB
043	CRDPIM	001	PATH INVALID MASK FROM SCHIB
044		XL2	RESERVED FOR FUTURE IBM USE
046	CRDPOM	001	PATH OPERATIONAL MASK FROM SCHIB
047	CRDPAM	001	PATH AVAILABLE MASK FROM SCHIB
048	CRDCHPID	008	CHANNEL PATH IDS FROM SCHIB

EQUATES

50	CRDLENMC	LENGTH OF MCIC FORMAT CRDREC
0A	CRDSIZMC	MCIC CRDREC SIZE IN DBL WDS

REDEFINITION - CRDHTOD

008	CRDHDATE	004	SYSTEM DATE OF FAILURE
00C	CRDHTIME	004	SYSTEM TIME OF FAILURE

REDEFINITION - CRDCPUID

010	CRDHCPID	001	MACHINE VERSION CODE
011	CRDHSER	003	CPU SERIAL NUMBER
014	CRDHMDL	002	CPU MACHINE MODEL NUMBER
016	CRDHMCEL	002	RESERVED FOR FUTURE IBM USE

REDEFINITION - CRDMCIC

030	CRDMCIC0	001	COPY OF MCIC BYTE 0.
	BITS DEFINED FOR CRDMCIC0 BY HCPEQUAT MCIC0		
031	CRDMCIC1	001	COPY OF MCIC BYTE 1.
	BITS DEFINED FOR CRDMCIC1 BY HCPEQUAT MCIC1		
032	CRDMCIC2	001	COPY OF MCIC BYTE 2.
	BITS DEFINED FOR CRDMCIC2 BY HCPEQUAT MCIC2		
033	CRDMCIC3	001	COPY OF MCIC BYTE 3.
	BITS DEFINED FOR CRDMCIC3 BY HCPEQUAT MCIC3		
034	CRDMCIC4	001	COPY OF MCIC BYTE 4.
035	CRDMCIC5	001	COPY OF MCIC BYTE 5.
	BITS DEFINED FOR CRDMCIC5 BY HCPEQUAT MCIC5		
036	CRDMCIC6	001	COPY OF MCIC BYTE 6.
037	CRDMCIC7	001	COPY OF MCIC BYTE 7.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
CRDAFLG	001	039	CRDCOACR	001	003	CRDCOSDM	001	002
CRDASEQ	004	034	CRDCOCPM	001	001	CRDCOVCP	001	008
CRDCHPCT	001	03C	CRDCODE	001	023	CRDCP	002	024
CRDCHPF	001	048	CRDCOIRC	001	006	CRDCPUID	008	010
CRDCHPID	008	048	CRDCOIRM	001	007	CRDCRW	004	028

Name	Len	Val/Disp
CRDCTL	001	03D
CRDDEV	002	02C
CRDDEVST	002	038
CRDFLAG1	001	021
CRDFLAG2	001	022
CRDF1HCC	001	080
CRDF1INV	001	001
CRDF1SCC	001	040
CRDHCNT	001	006
CRDHCPID	001	010
CRDHDATE	004	008
CRDHMCEL	002	016
CRDHMDL	002	014
CRDHSER	003	011
CRDHSW0	001	002
CRDHSW1	001	003
CRDHSW2	001	004
CRDHSW3	001	005
CRDHSYS	001	001
CRDHTIME	004	00C
CRDHTOD	008	008
CRDHTYCR	001	025
CRDHTYPE	001	000
CRDICHPT	001	049
CRDIRCF	001	03C
CRDISDT	008	04A
CRDLENMC	001	050
CRDLENUC	001	052
CRDLEVEL	001	03D
CRDLPM	001	040
CRDLPUM	001	042
CRDLVMSK	004	03E
CRDMCIC	008	030
CRDMCIC0	001	030
CRDMCIC1	001	031
CRDMCIC2	001	032
CRDMCIC3	001	033
CRDMCIC4	001	034
CRDMCIC5	001	035
CRDMCIC6	001	036
CRDMCIC7	001	037
CRDMODUL	008	018
CRDPAM	001	047
CRDPIM	001	043
CRDPMCW	002	03A
CRDPNOM	001	041
CRDPOM	001	046
CRDREC	001	000
CRDRECCD	001	020
CRDRECMC	001	002
CRDRECUC	001	001
CRDRFLG	001	03A
CRDSCHRC	004	044
CRDSEQEN	004	030
CRDSIZMC	001	00A
CRDSIZUC	001	00B
CRDSTAT	001	038
CRDVDATA	008	030

HCPCRWBK— CHANNEL REPORT WORD BLOCK

DSECT NAME: CRWBK

DESCRIPTIVE NAME: CHANNEL REPORT WORD BLOCK

FUNCTION: THE CRWBK IS A QUEUE ELEMENT ON THE QUEUE OF PENDING CHANNEL REPORT WORDS AWAITING PRESENTATION (VIA A MACHINE CHECK INTERRUPTION) TO THE VIRTUAL MACHINE.

LOCATED BY:

CHCIORW - ANCHOR OF QUEUE IN CHCBK
MCVCRWS - ANCHOR OF QUEUE IN MCVBK
CRWNEXT - FORWARD POINTER IN PRECEEDING QUEUE ELEMENT

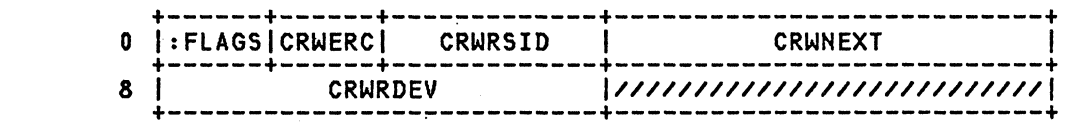
CREATED BY:

HCPVDB - WHEN A DEVICE IS DEFINED FOR A VIRTUAL XA MACHINE
HCPVOF - DURING SIMULATION OF A RCHP INSTRUCTION
HCPRFC - TO PASS ON A CRW FOR A DEDICATED DEVICE TO CONCERNED VIRTUAL MACHINE

DELETED BY:

HCPMCV - WHEN A VIRTUAL MACHINE IS RESET
- WHEN THE CRW IS STORED IN THE VIRTUAL MACHINE DURING SIMULATION OF A MACHINE CHECK INTERRUPT
HCPVOF - DURING SIMULATION OF A STCRW INSTRUCTION

CRWBK - CHANNEL REPORT WORD BLOCK



disp	name	length	description
000	CRWWORD	004	CRW REPORT WORD CONTENTS
000	CRWFLAGS	001	CHANNEL REPORT FLAGS AND CODES

BITS DEFINED IN CRWFLAGS (AT HEX DISPLACEMENT: 0)

40	CRWSOLIC	SOLICITED - FOR EXAMPLE, CHANNEL PATH INITIALIZED IN RESPONSE TO RCHP AS OPPOSED TO CHANNEL PATH INITIALIZED DUE TO LOSS-OF-POWER.
20	CRWOVER	OVERFLOW - ONE OR MORE SUBSEQUENT CHANNEL REPORT WORDS HAVE BEEN LOST.
10	CRWCHAIN	SUBSEQUENT CHANNEL REPORT WORD(S) REQUIRED TO DESCRIBE ONE EVENT. IF A CHAINED CHANNEL REPORT WORD IS LOST FROM OVERFLOW, ALL OF THE CHANNEL REPORT WORDS CHAINED TO THAT CHANNEL REPORT WORD ARE LOST AS WELL.
0F	CRWRSC	REPORTING SOURCE CODE (RSC) MASK
02	CRWMONIT	SOURCE = CHANNEL MONITORING FACILITY
03	CRWSUBCH	SOURCE = SUBCHANNEL. THE SUBCHANNEL NUMBER IS SPECIFIED IN THE REPORTING SOURCE ID.
04	CRWCHPID	SOURCE = CHANNEL PATH. THE CHANNEL PATH IDENTIFIER IS SPECIFIED IN THE REPORTING SOURCE ID.
09	CRWCAF	SOURCE = CONFIGURATION ALERT TEMPORARY ERROR. THE FAILING CHANNEL

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                          PATH IS SPECIFIED IN THE
                          IN THE REPORTING SOURCE ID.

001   CRWERC      001     ERROR REPORTING CODE (ERC)

        CODES DEFINED IN CRWERC   (AT HEX DISPLACEMENT: 1)

        01    CRWAVAIL    000001 - AVAILABLE
        02    CRWINIT     000010 - INITIALIZED, PARAMETERS
                          NOT CHANGED
        03    CRWTEMP     000011 - TEMPORARY
        04    CRWALERT    000100 - INSTALLED,   PARAMETERS
                          INITIALIZED. THE DEVICE
                          VALID BIT AND ANY OTHER
                          FIELD WITHIN THE SUBCH-
                          CHANNEL MAY BE CHANGED.
        05    CRWTERM     000101 - TERMINAL
        07    CRWPERMI    000111 - PERMANENT, INITIALIZED.

002   CRWRSID     002     RESOURCE IDENTIFIER CODE
004   CRWNEXT     004     NEXT CRW IF ANY
008   CRWRDEV     004     ASSOCIATED RDEVBLOK IF ANY
00C               1F      RESERVED FOR FUTURE IBM USE

                   EQUATES

        02    CRWSIZE     CRWBK SIZE IN DOUBLE WORDS
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CROSS REFERENCE

Name	Len	Val/Disp
CRWALERT	001	004
CRWAVAIL	001	001
CRWBK	001	000
CRWCAF	001	009
CRWCHAIN	001	010
CRWCHPID	001	004
CRWERC	001	001
CRWFLAGS	001	000
CRWINIT	001	002
CRWMONIT	001	002
CRWNEXT	004	004
CRWOVER	001	020
CRWPERMI	001	007
CRWRDEV	004	008
CRWRSC	001	00F
CRWRSID	002	002
CRWSIZE	001	002
CRWSOLIC	001	040
CRWSUBCH	001	003
CRWTEMP	001	003
CRWTERM	001	005
CRWWORD	004	000

HCPCSFBK— CHANGE SPOOL FILE ROUTINE COMMUNICATIONS BLOCK

DSECT NAME: CSFBK

DESCRIPTIVE NAME: CHANGE SPOOL FILE ROUTINE COMMUNICATIONS BLOCK

FUNCTION: PASSES COMMAND LINE OPTIONS FROM THE CHANGE AND TRANSFER COMMANDS IN HCPCSC, TO THE ROUTINE HCPCSFCX WHICH SEARCHES THE QUEUES AND EFFECTS THE CHANGES. ALSO PASSES OPTIONS FROM THE SYSTEM DATA FILE CHANGE ROUTINE IN HCPSDFCH TO HCPCSFCX.

LOCATED BY:

REGISTER 4

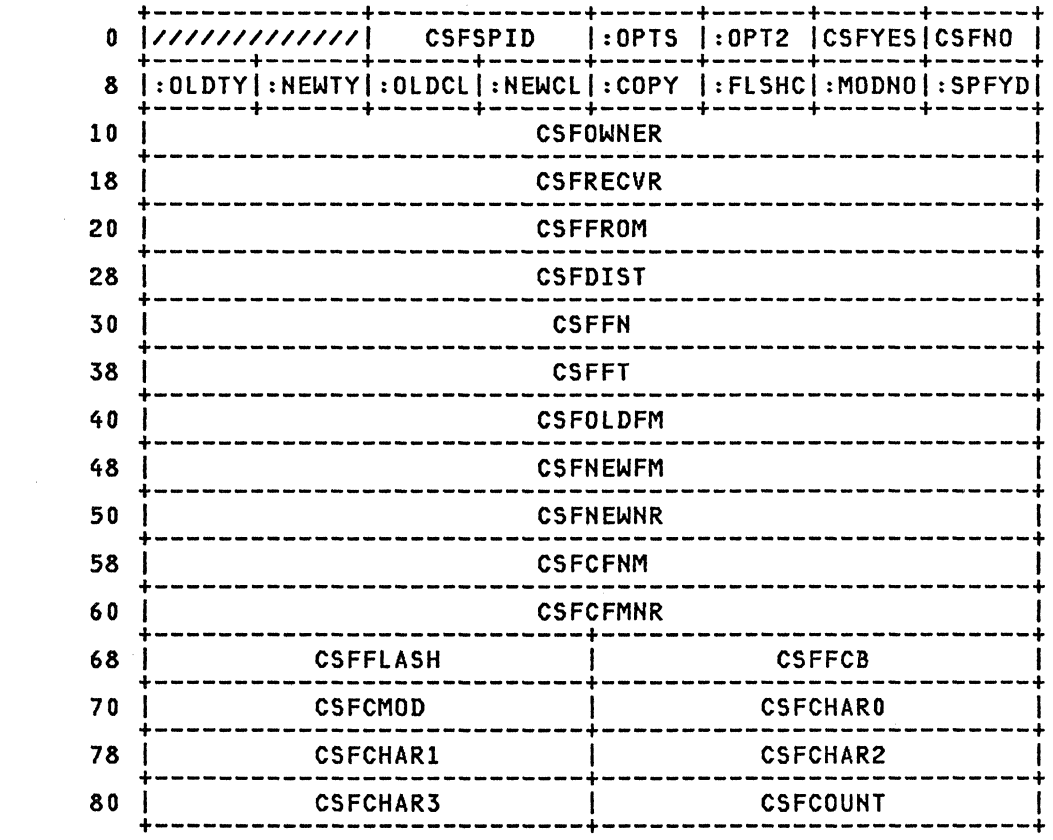
CREATED BY:

HCPCSC - COMMAND PARSING
HCPSDFCH - TO CHANGE THE CHARACTERISTICS OF SYSTEM DATA FILE

DELETED BY:

HCPCSC - AFTER RETURN FROM HCPCSFCX
HCPSDFCH - AFTER RETURN FROM HCPCSFCX

CSFBK - CHANGE SOOL FILE COMMUNICATION BLOCK



disp	name	length	description	
000		1H	RESERVED FOR FUTURE IBM USED	
002	CSFSPID	002	SPOOL ID OF FILE TO BE CHANGED	MARKER
004	CSFOPTS	001	COMMAND OPTIONS	MARKER


```
        BITS DEFINED IN CSFOPTS  (AT HEX DISPLACEMENT: 4)

        80     CSFSYS       SYSTEM SPECIFIED
        40     CSFSPEC      SPECIFIC SPOOLID
        20     CSFNACT      OPTION NOT VALID FOR ACTIVE FILE
        10     CSFINEL      SPID FOUND, FILE NOT ELIGIBLE
        08     CSFCLASS     CLASS SPECIFIED
        04     CSFCHNG      PROCESSING "CHANGE" COMMAND
        02     CSFXFER      PROCESSING "TRANSFER" COMMAND
        01     CSFORIG      SPFORIG DETERMINES OWNERSHIP

005   CSFOPT2     001       COMMAND OPTIONS

        BITS DEFINED IN CSFOPT2  (AT HEX DISPLACEMENT: 5)

        80     CSFFORM      SELECT FILES BY FORM
        40     CSFCFNMR     IF ON, FORM IS OPERATOR FORM NUMBER.
                            IF OFF, FORM IS USER FORM NAME
        20     CSFPGCPY     COPY COUNT IS PAGE COPIES (*NNN)
        10     CSFFLALL     FLASH ALL COPIES OF THE FILE

006   CSFYES      001       POSITIVE OPTIONS

        BITS DEFINED IN CSFYES   (AT HEX DISPLACEMENT: 6)

        80     CSFHO        HOLD OR NOHOLD OPTION
        40     CSFKE        KEEP OR NOKEEP OPTION
        20     CSFMS        MSG OR NOMSG OPTION
        10     CSFDI        DIST OPTION
        08     CSFSY        SYS OR NOSYS OPTION
        04     CSFNA        NAME OR NONAME OPTION

007   CSFNO       001       NEGATIVE OPTIONS

        BITS DEFINED FOR CSFNO BY HCPCSFBK CSFYES

008   CSFOLDTY    001       QUEUE ON WHICH FILES TO BE
                            CHANGED CURRENTLY RESIDE

        BITS DEFINED FOR CSFOLDTY BY HCPSPFBK SPFQUEUE

009   CSFNEWTY    001       QUEUE TO WHICH FILES WILL BE SENT MARKER

        BITS DEFINED FOR CSFNEWTY BY HCPSPFBK SPFQUEUE

00A   CSFOLDCL    001       CLASS OF FILE TO BE CHANGED
00B   CSFNEWCL    001       NEW CLASS TO BE SET ON FILE
00C   CSFCOPY     001       NEW COPY COUNT
00D   CSFFLSHC    001       NEW FLASH COUNT
00E   CSFMODNO    001       NEW COPY MOD CHAR SET NUMBER (0-3)
00F   CSFSPFYD    001       SPECIFIED 3800 OPTIONS

        BITS DEFINED IN CSFSPFYD (AT HEX DISPLACEMENT: F)

        80     CSFFCBS      'FCB' SPECIFIED
        40     CSFCHRSP     'CHARS' SPECIFIED
        20     CSFMODS      'MODIFY' SPECIFIED
        10     CSFFLSHS     'FLASH' SPECIFIED

010   CSFCHFLD    008       CHARACTER FIELDS (INIT TO BLANKS)
010   CSFOWNER    008       CURRENT OWNER OF FILES
018   CSFRECVR    008       USER TO RECIEVE THE FILES
020   CSFFROM     008       USER FROM WHOM TO TAKE FILES
028   CSFDIST     008       NEW DISTRIBUTION CODE TO BE SET
030   CSFFN       008       NEW FILE NAME, IF ANY
038   CSFFT       008       NEW FILE TYPE, IF ANY
040   CSFOLDFM    008       FORM OF FILES TO BE CHANGED
048   CSFNEWFM    008       NEW FORM NAME TO BE SET ON FILE
050   CSFNEWNR    008       NEW FORM NUMBER TO BE SET ON FILE
058   CSFCFNM     008       CONSOLE FORM NAME
060   CSFCFMNR    008       CONSOLE FORM NUMBER
068   CSFFLASH    004       NEW FLASH NAME
06C   CSFFCB      004       NEW FCB NAME
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070    CSFCMOD     004       NEW COPY MODIFICATION MODULE
074    CSFCHARS    016       LENGTH ATTR TO CLEAR CHAR0-CHAR3
074    CSFCHAR0    004       NEW CHARACTER SET NAME (FIRST)
078    CSFCHAR1    004       NEW CHARACTER SET NAME (SECOND)
07C    CSFCHAR2    004       NEW CHARACTER SET NAME (THIRD)
080    CSFCHAR3    004       NEW CHARACTER SET NAME (FOURTH)

                       EQUATES

         74     CSFCHSIZ     SIZE OF CSFCHFLD FIELD

084    CSFCOUNT    004       COUNT OF FILES PROCESSED

                       EQUATES

         11     CSFSIZE      SIZE IN DOUBLE WORDS
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
CSFBK	001	000	CSFOLDCL	001	00A
CSFCFMNR	008	060	CSFOLDFM	008	040
CSFCFNM	008	058	CSFOLDTY	001	008
CSFCFNMR	001	040	CSFOPTS	001	004
CSFCHARS	016	074	CSFOPT2	001	005
CSFCHAR0	004	074	CSFORIG	001	001
CSFCHAR1	004	078	CSFOWNER	008	010
CSFCHAR2	004	07C	CSFPGCPY	001	020
CSFCHAR3	004	080	CSFRECVR	008	018
CSFCHFLD	008	010	CSFSIZE	001	011
CSFCHNG	001	004	CSFSPEC	001	040
CSFCHRSP	001	040	CSFSPFYD	001	00F
CSFCHSIZ	001	074	CSFSPID	002	002
CSFCLASS	001	008	CSFSY	001	008
CSFCMOD	004	070	CSFSYS	001	080
CSFCOPY	001	00C	CSFXFER	001	002
CSFCOUNT	004	084	CSFYES	001	006
CSFDI	001	010			
CSFDIST	008	028			
CSFFCB	004	06C			
CSFFCBS	001	080			
CSFFLALL	001	010			
CSFFLASH	004	068			
CSFFLSHC	001	00D			
CSFFLSHS	001	010			
CSFFN	008	030			
CSFFORM	001	080			
CSFFROM	008	020			
CSFFT	008	038			
CSFHO	001	080			
CSFINEL	001	010			
CSFKE	001	040			
CSFMODNO	001	00E			
CSFMODS	001	020			
CSFMS	001	020			
CSFNA	001	004			
CSFNACT	001	020			
CSFNEWCL	001	00B			
CSFNEWFM	008	048			
CSFNEWNR	008	050			
CSFNEWTY	001	009			
CSFNO	001	007			

HCPCWOEQ— CONSTANTS FOR CHANNEL COMMANDS AND FOR

DSECT NAME: CWOEQ

DESCRIPTIVE NAME: Constants for Channel Commands and for Terminal Orders (CCW Opcode Extentions).

FUNCTION: Contains constants for CCW Operation Codes

LOCATED BY:

Every Host Control Program (HCP) Module

CREATED BY:

This file contains only constants
and definitions to be used elsewhere.
Therefore, it takes up no space
and requires no storage.

DELETED BY:

None

Value	Name	Description
00000001	CWOWRITE	GENERAL WRITE
00000002	CWOREAD	GENERAL READ
00000003	CWONOP	NO OPERATION
00000004	CWOSENSE	SENSE
00000008	CWOTIC	TRANSFER IN CHANNEL (TIC)
0000002B	CWODORNT	ORIENT (2305)
00000013	CWODRCAL	RECALIBRATE
0000005E	CWODRMCK	READ MULTIPLE COUNT KEY DATA
00000007	CWODSEEK	SEEK
0000000B	CWODSKCY	SEEK CYLINDER
0000001B	CWODSKHD	SEEK HEAD
0000000F	CWODSPCT	SPACE COUNT
0000001F	CWODSTFM	SET FILE MASK
00000023	CWODSECT	SET SECTOR
00000017	CWODRSTR	RESTORE (PSEUDO NOP)
00000027	CWODVSNS	VARY SENSING
00000053	CWODDGLD	DIAGNOSE LOAD
00000073	CWODDGWR	DIAGNOSE WRITE
00000002	CWODXIPL	(READ) IPL TRACK
00000022	CWODRSCT	READ SECTOR
000000A4	CWODRLOG	READ BUFFER LOG (33XX)
00000024	CWODRBFR	READ BUFFER LOG (2305)
00000094	CWODRELS	RELEASE THE DEVICE
000000B4	CWODRSRV	RESERVE THE DEVICE
00000044	CWODDIAG	DIAGNOSTIC READ
00000019	CWODWRHA	WRITE HOME ADDRESS
00000015	CWODWRR0	WRITE RECORD ZERO
00000011	CWODERAS	ERASE A TRACK
0000001D	CWODWCKD	WRITE COUNT KEY AND DATA
00000001	CWODWSKD	WRITE SPECIAL COUNT KEY AND DATA
00000005	CWODWDTA	WRITE DATA
0000000D	CWODWRKD	WRITE KEY AND DATA
000000F3	CWODDCTL	DIAGNOSTIC CONTROL
00000063	CWODDEXT	DEFINE EXTENT
00000034	CWODSNPG	SENSE PATH GROUP ID
000000C4	CWODDSNS	DIAGNOSTIC SENSE/READ
000000E4	CWODSNID	SENSE ID
00000085	CWODWUD	WRITE UPDATE RECORD
00000047	CWODLOCR	LOCATE RECORD
00000009	CWODDWHA	DIAGNOSTIC WRITE HOME ADDRESS
0000000A	CWODDRHA	DIAGNOSTIC READ HOME ADDRESS
0000005B	CWODSMPR	SUSPEND MULTIPATH RECONNECTION
0000008D	CWODWUKD	WRITE UPDATE KEY AND DATA
0000009D	CWODWCNT	WRITE CKD NEXT TRACK

0000003E	CWODRTRL	READ TRACK LENGTH
000000DE	CWODRDTR	READ TRACK
000000AF	CWODSTPG	SET PATH GROUP ID
00000014	CWODRSVU	UNCONDITIONAL RESERVE
00000064	CWODRDCH	READ DEVICE CHARACTERISTICS
00000044	CWODRSAL	RESET ALLEGIANCE
00000027	CWODPSF	PERFORM SUBSYSTEM FUNCTION
0000003E	CWODRSD	READ SUBSYSTEM DATA
000000FA	CWODRCD	READ CONFIGURATION DATA
00000054	CWODSUBS	SENSE SUBSYSTEM STATUS
00000074	CWODSUBC	SENSE SUBSYSTEM COUNTS
00000087	CWODSUBM	SET SUBSYSTEM MODE
0000003B	CWODHPSL	SET HI PERFORMANCE STORAGE LIMITS
0000008B	CWODSPP	SET PAGING PARAMETERS
0000008F	CWODDB	DISCARD BLOCK
00000039	CWODSHAE	SEARCH HOME ADDRESS EQUAL
00000031	CWODSIDE	SEARCH IDENTIFIER EQUAL
00000051	CWODSIDH	SEARCH IDENTIFIER HIGH
00000071	CWODSIDX	SEARCH IDENTIFIER EQUAL/HIGH
00000029	CWODSKYE	SEARCH KEY EQUAL
00000049	CWODSKYH	SEARCH KEY HIGH
00000069	CWODSKYX	SEARCH KEY EQUAL OR HIGH
0000002D	CWODSKDE	SEARCH KEY AND DATA EQUAL
0000004D	CWODSKDH	SEARCH KEY AND DATA HIGH
0000006D	CWODSKDX	SEARCH KEY AND DATA EQUAL/HIGH
0000001A	CWODRDHA	READ HOME ADDRESS
00000012	CWODRDCT	READ COUNT
00000016	CWODRDR0	READ RECORD 0
00000006	CWODRDTA	READ DATA
0000000E	CWODRDKD	READ KEY AND DATA
0000001E	CWODRCKD	READ COUNT KEY AND DATA
000000B9	CWODXHAE	SEARCH HOME ADDRESS EQUAL
000000B1	CWODXIDE	SEARCH IDENTIFIER EQUAL
000000D1	CWODXIDH	SEARCH IDENTIFIER HIGH
000000F1	CWODXIDX	SEARCH IDENTIFIER EQUAL/HIGH
000000A9	CWODXKYE	SEARCH KEY EQUAL
000000C9	CWODXKYH	SEARCH KEY HIGH
000000E9	CWODXKYX	SEARCH KEY EQUAL OR HIGH
000000AD	CWODXKDE	SEARCH KEY AND DATA EQUAL
000000CD	CWODXKDH	SEARCH KEY AND DATA HIGH
000000ED	CWODXKDX	SEARCH KEY AND DATA EQUAL/HIGH
0000009A	CWODXRHA	READ HOME ADDRESS
00000092	CWODXRCT	READ COUNT
00000096	CWODXRR0	READ RECORD 0
00000086	CWODXRDT	READ DATA
0000008E	CWODXRKD	READ KEY AND DATA
0000009E	CWODXRCD	READ COUNT KEY AND DATA
00000025	CWO$SCNE	CONTINUE SCAN EQUAL
00000045	CWO$SCNH	CONTINUE SCAN HIGH
00000065	CWO$SCNX	CONTINUE SCAN EQUAL OR EQUAL
00000035	CWO$SCM1	SET COMPARE
00000075	CWO$SCM2	SET COMPARE
00000055	CWO$SNCM	SET NO COMPARE
000000A5	CWO$ZCNE	CONTINUE SCAN EQUAL
000000C5	CWO$ZCNH	CONTINUE SCAN HIGH
000000E5	CWO$ZCNX	CONTINUE SCAN EQUAL OR EQUAL
000000B5	CWO$ZCM1	SET COMPARE
000000F5	CWO$ZCM2	SET COMPARE
000000D5	CWO$ZNCM	SET NO COMPARE
00000001	CWOTWRIT	WRITE
00000002	CWOTREAD	FORWARD READ
0000000C	CWOTBACK	BACKWARD READ
000000E4	CWOTSNID	SENSE ID
000000F4	CWOTRSRV	TAPE RESERVE (3420)
000000D4	CWOTRELS	TAPE RELEASE (3420)
0000001B	CWOTTIE	TRACK IN ERROR
0000008B	CWOTLPWR	LOOP WRITE TO READ (3420)
0000004B	CWOTDIAG	SET DIAGNOSE (3420)
00000007	CWOTRWND	REWIND THE TAPE
0000000F	CWOTRUNL	REWIND AND UNLOAD TAPE
00000017	CWOTEGAP	ERASE A GAP
0000001F	CWOTWRTM	WRITE A TAPE MARK
00000027	CWOTBBLK	BACK SPACE A BLOCK

0000002F	CWOTBFIL	BACK SPACE A FILE
00000037	CWOTFBLK	FORWARD SPACE A BLOCK
0000003F	CWOTFFIL	FORWARD SPACE A FILE
00000097	CWOTESEC	ERASE FOR DATE SECURITY
0000000B	CWOTDMOD	DIAGNOSTIC MODE SET
000000B7	CWOTASSN	ASSIGN
000000E3	CWOTCTLA	CONTROL ACCESS
0000009F	CWOTLDSP	LOAD DISPLAY
000000DB	CWOTMODS	MODE SET
00000022	CWOTRBID	READ BLOCK ID
00000012	CWOTRBUF	READ BUFFER
00000024	CWOTRBLG	READ BUFFER LOG
00000034	CWOTSNPG	SENSE PATH GROUP ID
000000AF	CWOTSTPG	SET PATH GROUP ID
000000C3	CWOTSTWI	SET TAPE-WRITE-IMMEDIATE
0000005B	CWOTSMPR	SUSPEND MULTIPATH RECONNECTION
00000043	CWOTSYNC	SYNCHRONIZE
000000C7	CWOTUNAS	UNASSIGN
00000020	CWOTBSR	BUFF WRT,SUP CMDS,AUTO ERP
00000021	CWOTBSU	BUFF WRT,SUP CMDS,NO AUTO ERP
00000030	CWOTBNR	BUFF WRT,NO SUP CMDS,AUTO ERP
00000031	CWOTBNU	BUFF WRT,NO SUP CMDS,NO AUTO ERP
00000000	CWOTISR	IMM WRT,SUP CMDS,AUTO ERP
00000001	CWOTISU	IMM WRT,SUP CMDS,NO AUTO ERP
00000010	CWOTINR	IMM WRT,NO SUP CMDS,AUTO ERP
00000011	CWOTINU	IMM WRT,NO SUP CMDS,NO AUTO ERP
00000013	CWOT20CN	200 - ODD - CONVERT - NO TRANS.
00000023	CWOT2ELN	200 - EVEN - LEAVE - NO TRANS.
0000002B	CWOT2ELT	200 - EVEN - LEAVE - TRANSLATE
00000033	CWOT20LN	200 - ODD - LEAVE - NO TRANS.
0000003B	CWOT20LT	200 - ODD - LEAVE - TRANSLATE
00000053	CWOT50CN	556 - ODD - CONVERT - NO TRANS.
00000063	CWOT5ELN	556 - EVEN - LEAVE - NO TRANS.
0000006B	CWOT5ELT	556 - EVEN - LEAVE - TRANSLATE
00000073	CWOT50LN	556 - ODD - LEAVE - NO TRANS.
0000007B	CWOT50LT	556 - ODD - LEAVE - TRANSLATE
00000093	CWOT80CN	800 - ODD - CONVERT - NO TRANS.
000000B3	CWOT8ELN	800 - EVEN - LEAVE - NO TRANS.
000000BB	CWOT8ELT	800 - EVEN - LEAVE - TRANSLATE
000000A3	CWOT80LN	800 - ODD - LEAVE - NO TRANS.
000000AB	CWOT80LT	800 - ODD - LEAVE - TRANSLATE
000000CB	CWOT0800	NINE TRACK TAPE - 0800 BPI
000000C3	CWOT1600	NINE TRACK TAPE - 1600 BPI
000000D3	CWOT6250	NINE TRACK TAPE - 6250 BPI
00000009	CWOPS1LA	SPACE 1 LINE AFTER WRITE
0000000B	CWOPS1LI	SPACE 1 LINE IMMEDIATELY
00000011	CWOPS2LA	SPACE 2 LINES AFTER WRITE
00000013	CWOPS2LI	SPACE 2 LINES IMMEDIATELY
00000019	CWOPS3LA	SPACE 3 LINES AFTER WRITE
0000001B	CWOPS3LI	SPACE 3 LINES IMMEDIATELY
00000089	CWOPSC1A	SKIP TO CHANNEL 1 AFTER WRITE
00000091	CWOPSC2A	SKIP TO CHANNEL 2 AFTER WRITE
00000099	CWOPSC3A	SKIP TO CHANNEL 3 AFTER WRITE
000000A1	CWOPSC4A	SKIP TO CHANNEL 4 AFTER WRITE
000000A9	CWOPSC5A	SKIP TO CHANNEL 5 AFTER WRITE
000000B1	CWOPSC6A	SKIP TO CHANNEL 6 AFTER WRITE
000000B9	CWOPSC7A	SKIP TO CHANNEL 7 AFTER WRITE
000000C1	CWOPSC8A	SKIP TO CHANNEL 8 AFTER WRITE
000000C9	CWOPSC9A	SKIP TO CHANNEL 9 AFTER WRITE
000000D1	CWOPS10A	SKIP TO CHANNEL 10 AFTER WRITE
000000D9	CWOPS11A	SKIP TO CHANNEL 11 AFTER WRITE
000000E1	CWOPS12A	SKIP TO CHANNEL 12 AFTER WRITE
00000083	CWOPSC0I	SKIP TO CHANNEL 0 IMMEDIATE
0000008B	CWOPSC1I	SKIP TO CHANNEL 1 IMMEDIATE
00000093	CWOPSC2I	SKIP TO CHANNEL 2 IMMEDIATE
0000009B	CWOPSC3I	SKIP TO CHANNEL 3 IMMEDIATE
000000A3	CWOPSC4I	SKIP TO CHANNEL 4 IMMEDIATE
000000AB	CWOPSC5I	SKIP TO CHANNEL 5 IMMEDIATE
000000B3	CWOPSC6I	SKIP TO CHANNEL 6 IMMEDIATE
000000BB	CWOPSC7I	SKIP TO CHANNEL 7 IMMEDIATE
000000C3	CWOPSC8I	SKIP TO CHANNEL 8 IMMEDIATE
000000CB	CWOPSC9I	SKIP TO CHANNEL 9 IMMEDIATE
000000D3	CWOPS10I	SKIP TO CHANNEL 10 IMMEDIATE

000000DB	CWOPS11I	SKIP TO CHANNEL 11 IMMEDIATE
000000E3	CWOPS12I	SKIP TO CHANNEL 12 IMMEDIATE
00000001	CWOPWRIT	PRINT WITHOUT SPACING
00000002	CWOPDGRD	DIAGNOSTIC READ (1403)
00000002	CWOPRPLB	READ PRINT LINE BUFFER (3203,3211,3262,4245,4248)
00000005	CWOPDGWR	DIAGNOSTIC WRITE (3211,3262,4245,4248)
00000006	CWOPDGRC	CHECK READ (3203,3211,4245,4248)
00000006	CWOPRFCP	READ FCB POINTER (3262)
00000007	CWOPDGGT	DIAGNOSTIC GATE (3203,3211,3262,4245,4248)
0000000A	CWOPRUCS	READ UCS BUFFER (3203,3211,3262,4245)
0000000A	CWOPRBDI	READ BAND ID (4248)
00000012	CWOPRFCB	READ FCB (3203,3211,3262,4245,4248)
00000023	CWOPUFLD	UNFOLD (3203,3211,3262,4245,4248)
00000033	CWOPXORD	EXECUTE ORDER (4248)
00000043	CWOPFOLD	FOLD (3203,3211,3262,4245,4248)
00000063	CWOPLFCB	LOAD FCB (3203,3211,3262,4245,4248)
0000006B	CWOPLIFT	LIFT THE COVER (3203,3211,3262,4245)
0000006B	CWOPSATN	SIGNAL ATTENTION (4248)
00000073	CWOPBLKC	BLOCK DATA CHECK
0000007B	CWOPALDC	ALLOW DATA CHECK
000000EB	CWOPUCSG	UCS GATE LOAD (1403)
000000F3	CWOPLUFL	LOAD UCSBAND FOLD (1403 ONLY)
000000F3	CWOPVBID	VERIFY BAND ID (4248)
000000FB	CWOPUCSB	LOAD UCSB WITHOUT FOLDING
000000FB	CWOPVBI2	VERIFY BAND ID (4248)
00000007	CWOPEOT	END OF TRANSMISSION (3800)
00000014	CWOPSIBF	SENSE INTERMEDIATE BUFFER (3800,4248)
00000017	CWOPMKFM	MARK FORMS (3800)
00000023	CWOPLCNM	LOAD COPY NUMBER (3800)
00000024	CWOPSELG	SENSE ERROR LOG (3800)
00000025	CWOPLGCM	LOAD GRAF CHAR MOD (3800)
00000033	CWOPXCTL	EXECUTE CONTROL (3800)
00000035	CWOPLCMD	LOAD COPY MODIFICATION (3800)
00000037	CWOPINPR	INITIALIZE PRINTER (3800)
00000043	CWOPLFOS	LOAD FORMS OVERLAY SEQUENCE (3800)
00000047	CWOPSTR0	SELECT TRANSLATE TABLE 0 (3800)
00000057	CWOPSTR1	SELECT TRANSLATE TABLE 1 (3800)
00000067	CWOPSTR2	SELECT TRANSLATE TABLE 2 (3800)
00000077	CWOPSTR3	SELECT TRANSLATE TABLE 3 (3800)
00000053	CWOPWCGM	LOAD WCGM (3800)
00000083	CWOPLTRT	LOAD TRANSLATE TABLE (3800)
00000087	CWOPCLPR	CLEAR PRINTER (3262,3800,4245,4248)
000000E4	CWOPSIOT	SENSE I/O TYPE / SENSE ID (3203,3262,3800,4245,4248)
00000033	CWOPXOA	EXECUTE ORDER ANYSTATE
00000097	CWOPSHS	SET HOME STATE
0000000D	CWOPWFC	WRITE FACTORED TEXT CONTROL
0000001D	CWOPLE	LOAD EQUIVALENCE
0000002D	CWOPWT	WRITE TEXT
0000003D	CWOPWIC	WRITE IMAGE CONTROL
0000004D	CWOPWI	WRITE IMAGE
0000005D	CWOPEND	END
0000006D	CWOPLPP	LOAD PAGE POSTION
0000007D	CWOPIO	INCLUDE OVERLAY
0000000F	CWOPLFI	LOAD FONT INDEX
0000001F	CWOPLFC	LOAD FONT CONTROL
0000002F	CWOPLF	LOAD FONT
0000003F	CWOPLFE	LOAD FONT EQUIVALENCE
0000004F	CWOPDF	DELETE FONT
0000005F	CWOPBPS	BEGIN PAGE SEGMENT
0000006F	CWOPDPS	DELETE PAGE SEGMENT
0000007F	CWOPIPS	INCLUDE PAGE SEGMENT
0000008F	CWOPXOH	EXECUTE ORDER HOMESTATE
0000009F	CWOPLCC	LOAD COPY CONTROL

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000000AF    CWOPBP      BEGIN PAGE
000000BF    CWOPEP      END PAGE
000000CF    CWOPLPD     LOAD PAGE DESCRIPTION
000000DF    CWOPBO      BEGIN OVERLAY
000000EF    CWOPDO      DELETE OVERLAY
00000001    CWOKWRNR    WRITE WITHOUT CARRAIGE RETURN
00000009    CWOKWRWR    WRITE WITH CARRAIGE RETURN
0000000A    CWOKREAD    READ INQUIRY
0000000B    CWOKALRM    SOUND AUDIBLE ALARM
00000023    CWORFSS1    FEED SELECT POCKET 1 UNFORMATTED
00000063    CWORFSS2    FEED SELECT POCKET 2 UNFORMATTED
000000A3    CWORFSX2    FEED SELECT POCKET 2 UNFORMATTED
0000002B    CWORFFS1    FEED SELECT POCKET 1   FORMATTED
0000006B    CWORFFS2    FEED SELECT POCKET 2   FORMATTED
000000AB    CWORFFX2    FEED SELECT POCKET 2   FORMATTED
000000D2    CWORDGRD    DIAGNOSTIC READ
00000011    CWORDGWR    DIAGNOSTIC RCE WRITE
00000002    CWORRFS1    READ, FEED, SELECT 1 UNFORMATTED
00000042    CWORRFS2    READ, FEED, SELECT 2 UNFORMATTED
00000082    CWORRFX2    READ, FEED, SELECT 2 UNFORMATTED
000000C2    CWORRFXX    READ ONLY
0000000A    CWORRES1    READ, FEED, SELECT 1   FORMATTED
0000004A    CWORRES2    READ, FEED, SELECT 2   FORMATTED
0000008A    CWORREX2    READ, FEED, SELECT 2   FORMATTED
000000CA    CWORREXX    READ ONLY
00000002    CWORCFS1    READ, FEED, SELECT 1 UNFORMATTED
00000042    CWORCFS2    READ, FEED, SELECT 2 UNFORMATTED
00000082    CWORCFX2    READ, FEED, SELECT 2 UNFORMATTED
000000C2    CWORCFXX    READ ONLY
0000000A    CWORCES1    READ, FEED, SELECT 1   FORMATTED
0000004A    CWORCES2    READ, FEED, SELECT 2   FORMATTED
0000008A    CWORCEX2    READ, FEED, SELECT 2   FORMATTED
000000CA    CWORCEXX    READ ONLY
00000031    CWORWOMR    WRITE OMR FORMAT (3504,3505)
00000001    CWOPCHX1    PUNCH SELECT 1 EBCDIC
00000021    CWOPCHI1    PUNCH SELECT 1 IMAGE
00000041    CWOPCHX2    PUNCH SELECT 2 EBCDIC
00000061    CWOPCHI2    PUNCH SELECT 2 IMAGE
00000081    CWOPCXX2    PUNCH SELECT 2 EBCDIC
000000C1    CWOPCXI2    PUNCH SELECT 2 IMAGE
00000005    CWOPRTLN    (+N)    PRINT A LINE POSITION N (N*8)
00000026    CWOMPRD     PREPARE READ DATA
00000027    CWOMINSY    INTERROGATE SYSTEM
00000041    CWOMDGWR    DIAGNOSTIC WRITE
00000042    CWOMDGRD    DIAGNOSTIC READ
00000043    CWOMDGCN    DIAGNOSTIC CONTROL
00000044    CWOMSWTC    SWITCH
00000087    CWOMEXEC    EXECUTE
000000A3    CWOMMNOP    MODIFIED NO OPERATION
000000A4    CWOMRBL     READ BUFFERED LOG
000000E4    CWOMSNIO    SENSE I/O
00000001    CWOGLWRT    WRITE
00000011    CWOGLWSF    WRITE STRUCTURED FIELD
00000005    CWOGLERS    ERASE WRITE
0000000D    CWOGLEWA    ERASE WRITE/ALTERNATE
00000002    CWOGLRD     READ BUFFER
00000006    CWOGLRMD    READ MODIFIED
0000000F    CWOGLEUN    ERASE UNPROTECTED
0000000B    CWOGLSEL    SELECT
0000001B    CWOGLSRB    SELECT RB
0000002B    CWOGLRMB    SELECT RMB
0000003B    CWOGLRBP    SELECT RBP
0000004B    CWOGLSWR    SELECT WRITE
000000E4    CWOGLSID    SENSE ID
000000F1    CWOGRWRT    WRITE
000000F5    CWOGRERS    ERASE WRITE
0000007E    CWOGREWA    ERASE WRITE/ALTERNATE
000000F2    CWOGRRD     READ BUFFER
000000F6    CWOGRRMD    READ MODIFIED
000000F7    CWOGRCPY    COPY
0000006F    CWOGREUN    ERASE UNPROTECTED
00000031    CWOGAWRT    WRITE
00000035    CWOGAERS    ERASE WRITE
```

0000003D	CWOGAEWA	ERASE WRITE/ALTERNATE
00000032	CWOGARD	READ BUFFER
00000036	CWOGARMD	READ MODIFIED
00000037	CWOGACPY	COPY
0000003F	CWOGAEUN	ERASE UNPROTECTED
00000005	CWOADWRT	DIAGNOSTIC WRITE
00000006	CWOAPREP	PREPARE
00000009	CWOAPOLL	AUTO-POLL
0000000A	CWOAINHB	INHIBIT
0000000D	CWOABRK	BREAK
0000000E	CWOASRCH	SEARCH
00000011	CWOAWRTT	WRITE WITH TIMEOUT
00000013	CWOASAD0	SAD ZERO
00000017	CWOASAD1	SAD ONE
0000001B	CWOASAD2	SAD TWO
0000001E	CWOADDPR	ADDRESS PREPARE
0000001F	CWOASAD3	SAD THREE
00000027	CWOAENAB	ENABLE
00000029	CWOADIAL	DIAL
0000002E	CWOASMOD	SET MODE
0000002F	CWOADISA	DISABLE
00000042	CWOCCRED	READ
00000019	CWO58DIS	DISPLAY DATA (LINE MODE)
00000029	CWO58WRT	WRITE (FULL SCREEN MODE)
0000002A	CWO58RED	READ (FULL SCREEN MODE)
00000049	CWO58DBC	DBCS (LINE MODE)
000000FF	CWO19ERO	ERASE OUTPUT AREA
000000FE	CWO19ERS	ERASE ENTIRE SCREEN
00000080	CWO29ERW	ERASE/WRITE
000000C0	CWO29EWA	ERASE/WRITE ALTERNATE
00000020	CWO29WSF	WRITE STRUCTURED FIELD
00000000	CWO29WRT	WRITE
00000080	CWO2ARDM	READ MODIFIED
00000000	CWO2ARDB	READ BUFFER
000000C0	ORDWCC0	NOTHING...
000000C2	ORDWCC3	RESTORE KEYBOARD
000000C6	ORDWCC56	RESTORE KEYBOARD AND SOUND ALARM
000000F8	ORDWCC8	W.C.C.TO PRINT FOR 80 CHAR LINE
00000004	ORDALRM	BIT TO SOUND ALARM
0000001D	ORDFKAT	3277 FAKE ATTRIBUTE FOR APL/TEXT
00000008	ORDESCP	3278 GRAF ESCAPE CHAR - APL/TEXT
00000011	ORDSBA	SET BUFFER ADDRESS
00000012	ORDEUA	ERASE UNPROTECTED TO ADDRESS
00000013	ORDIC	INSERT CURSOR
0000001D	ORDSF	START FIELD DEFINITION
0000003C	ORDRA	REPEAT CHARACTER TO ADDRESS
00000028	ORDSA	SET ATTRIBUTE
00000029	ORDSFE	START FIELD EXTENDED
0000002C	ORDMF	MODIFY ATTRIBUTE (FIELD)
00000000	ORDEXACA	ALL CHARACTER ATTRIBUTES
000000C0	ORDEXFA	3270 FIELD ATTRIBUTE
000000C1	ORDEXFV	FIELD VALIDATION
00000041	ORDEXHIL	EXTENDED HILIGHT
00000042	ORDEXCOL	EXTENDED COLOR
00000043	ORDEXPSS	PSS SELECT
00000060	ORDPRLO	PROTECTED, LOW INTENSITY
000000E8	ORDPRHI	PROTECTED, HI INTENSITY
000000C1	ORDUPLO	UNPROTECTED, LOW INTENSITY, MDT
0000004D	ORDPRID	PROTECTED, INHIBIT DISPLAY, MDT
00000001	ORDSOH	START OF HEADING
00000002	ORDSTX	START OF TEXT
00000003	ORDETX	END OF TEXT
00000010	ORDDLE	DATA LINK ESCAPE
0000001F	ORDITB	INTERMEDIATE TEXT BLOCK
00000026	ORDETB	END OF BLOCK
00000027	ORDESC	ESCAPE
00000037	ORDEOT	END OF TRANSMISSION
0000002D	ORDENQ	ENQUIRY
0000003D	ORDNAK	NEGATIVE ACKNOWLEDGMENT
0000106B	ORDWACK	WAIT BEFORE TRANSMIT
0000107C	ORDRVI	REVERSE INTERRUPT
00001070	ORDACK0	EVEN ACKNOWLEDGE
00001061	ORDACK1	ODD ACKNOWLEDGE

00000000	ORDFRSPT	RESET PARTITION
00000001	ORDFRDPT	READ PARTITION
00000006	ORDFLPSS	LOAD PSS
00000008	ORDFDACP	DEFINE ALTERNATE CHARACTER PAGE
00000009	ORDFSRM	SET REPLY MODE
0000000B	ORDFSWO	SET WINDOW ORIGIN
0000000C	ORDFCRPT	CREATE PARTITION
0000000D	ORDFDSPT	DESTROY PARTITION
0000000E	ORDFACPT	ACTIVATE PARTITION
00000040	ORDFOUTB	OUTBOUND STRUCTURED FIELD
0000004A	ORDFSFG	SELECT FORMAT GROUP
0000004B	ORDFPAF	PRESENT ABSOLUTE FORMAT
0000004C	ORDFPRF	PRESENT RELATIVE FORMAT
00000080	ORDFINBE	3270E INBOUND DATA STRUCTURE
00000081	ORDFQRSP	QUERY RESPONSE STRUCTURE
00000010	CWOCPPRG	CP-FORCED CHANNEL PROGRAM CHECK
00000020	CWOWRINH	CP-FORCED WRITE INHIBIT
00000030	CWOCMDRJ	CP-FORCED COMMAND REJECT
7FFFFF02	CWOPRGAD	CP-FORCED PROGRAM CHECK
7FFFFF04	CWOPRTAD	CP-FORCED PROTECTION CHECK
7FFFFF06	CWOIFCAD	CP-FORCED INTERFACE CONTROL CHECK
7FFFFF08	CWOICLAD	CP-FORCED INCORRECT LENGTH
FFFFFF02	CWOIDAPG	CP-FORCED PROGRAM CHECK IN IDA
FFFFFF04	CWOIDAPT	CP-FORCED PROTECTION CHECK IN IDA

HCPDAWBK— DATATRACE TYPE DATA WORKAREA

DSECT NAME: DAWBK

DESCRIPTIVE NAME: DATATRACE TYPE DATA WORKAREA

FUNCTION: PROCESSOR LOCAL WORKAREA FOR TYPE DATA EVENT HANDLER

LOCATED BY:

EVTDTWK

CREATED BY:

HCPTXW

DELETED BY:

HCPTXW

DAWBK - DATA TRACE TYPE DATA WORK AREA

disp	name	length	description
000	DAWPATH	008	CODE USED BY HCPTXE TO RETURN

EQUATES

40	DAWSIZB	SIZE OF DAWBK IN BYTES
08	DAWSIZE	SIZE OF DAWBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
DAWBK	001	000
DAWPATH	008	000
DAWSIZB	001	040
DAWSIZE	001	008

HCPDCPU— DIRECTORY CPU BLOCK

DSECT NAME: DCPU

DESCRIPTIVE NAME: DIRECTORY CPU BLOCK

FUNCTION: THE DCPU BLOCK CONTAINS INFORMATION DERIVED FROM ONE DIRECTORY CPU STATEMENT.

LOCATED BY:

DVMDCDAS (DIRECTORY DASD ADDRESS)
DVMDCDSP (OFFSET WITHIN A PAGE)

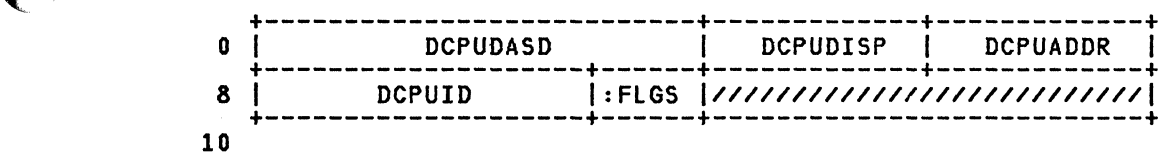
CREATED BY:

HCPDIR, HCPUDS

DELETED BY:

HCPLGN

DCPU - DIRECTORY CPU BLOCK



disp	name	length	description
000	DCPUDASD	004	DASD ADDRESS OF THE NEXT DCPU
004	DCPUDISP	002	OFFSET TO THE NEXT DCPU
006	DCPUADDR	002	CPU ADDRESS. VALID RANGE IS 0-3F.
008	DCPUID	003	CPU ID. BECOMES BITS 8-31 OF THE RESPONSE TO THE STIPD INSTRUCTION.
00B	DCPUFLGS	001	CPU DEFINITION FLAGS.

BITS DEFINED IN DCPUFLGS (AT HEX DISPLACEMENT: B)

80	DCPUVECT	ON IF VECTOR SPECIFIED.
40	DCPUNOVE	ON IF NOVECTOR SPECIFIED.
20	DCPUIDFL	ON IF CPUID SPECIFIED.
10	DCPUDED	ON IF DEDICATE SPECIFIED.
08	DCPUNDED	ON IF NODEDICATE SPECIFIED.

00C		F	RESERVED FOR FUTURE IBM USE.

EQUATES

02	DCPUSIZE	DCPU BLOCK SIZE IN DW'S.
10	DCPULEN	DCPU BLOCK SIZE IN BYTES.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DCPU	001	000	DCPUDASD	004	000	DCPUDISP	002	004
DCPUADDR	002	006	DCPUDED	001	010	DCPUFLGS	001	00B

Name	Len	Val/Disp
DCPUID	003	008
DCPUIDFL	001	020
DCPULEN	001	010
DCPUNDED	001	008
DCPUNOVE	001	040
DCPUSIZE	001	002
DCPUVECT	001	080

HCPDCTBL— DEVICE CHARACTERISTICS TABLE

DSECT NAME: DCTBL

DESCRIPTIVE NAME: DEVICE CHARACTERISTICS TABLE

FUNCTION: THE DEVICE CHARACTERISTICS TABLE IS USED TO MAP STATUS INFORMATION FOR EACH TYPE OF DEVICE SUPPORTED.

LOCATED BY:

VIODDITB - VIOMI POINTER CONTAINING ADDRESS OF THIS TABLE.

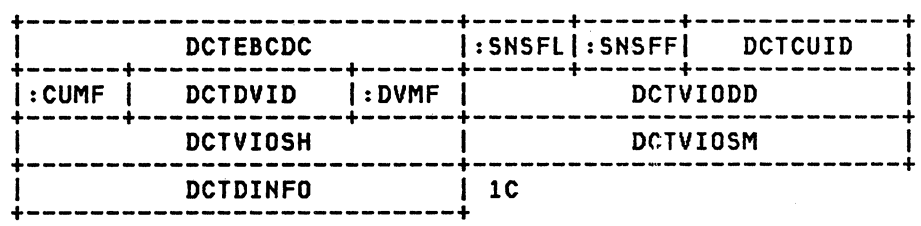
CREATED BY:

DCTBLS ARE GENERATED BY INVOKING THE HCPDCTGN MACRO.

DELETED BY:

DCTBLS ARE NEVER DELETED.

DCTBL - DEVICE CHARACTERISTICS TABLE



disp	name	length	description
000	DCTEBCDC	004	EBCDIC DEVICE TYPE
004	DCTSNSFL	001	SENSE DATA VALIDITY FLAGS
	BITS DEFINED IN DCTSNSFL (AT HEX DISPLACEMENT: 4)		
	80 DCTCUIV		CONTROL UNIT INFO IS VALID
	40 DCTDVIV		DEVICE INFO IS VALID
005	DCTSNSID	007	SENSE ID INFORMATIO :
005	DCTCUINF	004	(X'FF' & CONTROL UNIT INFO)
005	DCTSNSFF	001	'FF'X
006	DCTSNSDT	006	(ACTUAL DATA PORTION)
006	DCTCUID	002	CONTROL UNIT ID
008	DCTCUMF	001	CONTROL UNIT MODEL/FEATURES
009	DCTDVINF	003	(DEVICE INFO)
009	DCTDVID	002	DEVICE ID
00B	DCTDVMF	001	DEVICE MODEL/FEATURES
00C	DCTVIODD	004	ADDRESS OF DEDICATED-DEVICE VIOMI
010	DCTVIOSH	004	ADDRESS OF SHARED-DEVICE VIOMI
014	DCTVIOSM	004	ADDRESS OF SIMULATED-DEVICE VIOMI
018	DCTDINFO	004	ADDRESS OF DEVICE-SPECIFIC INFO
	EQUATES		
	04 DCTSIZE		SIZE, IN DOUBLEWORDS, OF DCTBL

CROSS REFERENCE

Name	Len	Val/Disp
DCTBL	001	000
DCTCUID	002	006
DCTCUINF	004	005
DCTCUIV	001	080
DCTCUMF	001	008
DCTDINFO	004	018
DCTDVID	002	009
DCTDVINF	003	009
DCTDVIV	001	040
DCTDVMF	001	00B
DCTEBCDC	004	000
DCTSIZE	001	004
DCTSNSDT	006	006
DCTSNSFF	001	005
DCTSNSFL	001	004
DCTSNSID	007	005
DCTVIODD	004	00C
DCTVIOSH	004	010
DCTVIOSM	004	014

HCPDDEV— DIRECTORY DEVICE DEFINITION BLOCK

DSECT NAME: DDEV

DESCRIPTIVE NAME: DIRECTORY DEVICE DEFINITION BLOCK

FUNCTION: THE HCPDDEV BLOCK DESCRIBES THE DEVICES ASSOCIATED WITH A VIRTUAL MACHINE AS SPECIFIED IN THE SYSTEM DIRECTORY

LOCATED BY:

DUNIDDAS FIELD OF HCPDUNDX
DUNIDDSP FIELD OF HCPDUNDX

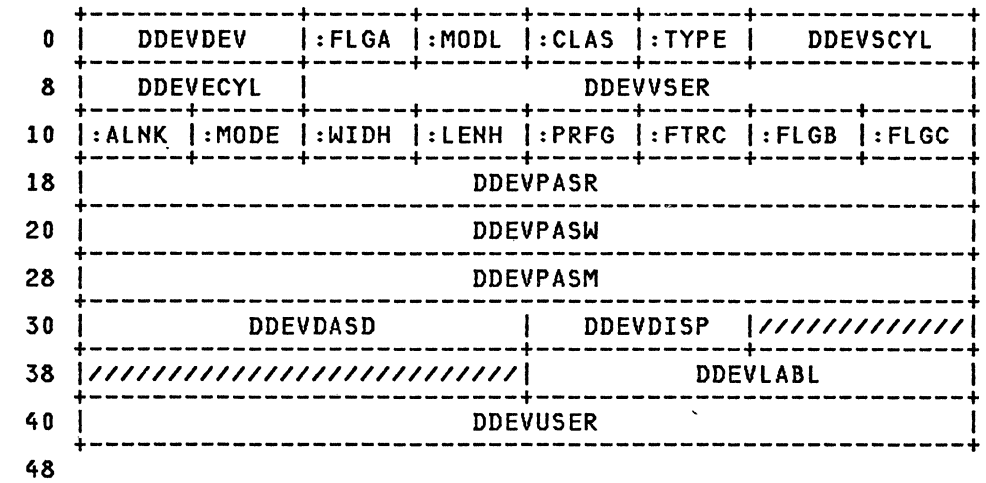
CREATED BY:

HCPDEF, HCPUDR

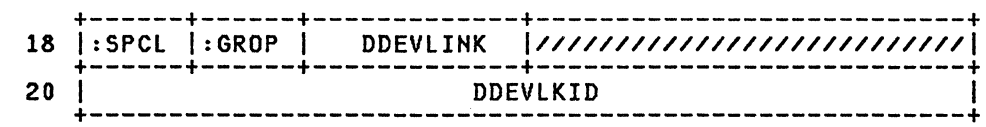
DELETED BY:

HCPDEF, HCPLND, HCPLNK

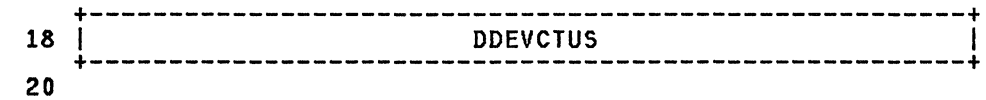
DDEV - DIRECTORY DEVICE DEFINITION BLOCK



REDEFINITION - SPOOL, CONSOLE AND LINK ENTRIES



REDEFINITION - SPECIAL CTCA ENTRIES



disp	name	length	description
000	DDEVDEV	002	VIRTUAL DEVICE ADDRESS
002	DDEVFLGA	001	DIRECTORY DEVICE INFORMATION

BITS DEFINED IN DDEVFLGA (AT HEX DISPLACEMENT: 2)

```
        80     DDEVTMDK     MDISK DIRECTORY ENTRY
        40     DDEVTLNK     LINK DIRECTORY ENTRY
        20     DDEVTSPC     SPECIAL DIRECTORY ENTRY
        10     DDEVTDED     DEDICATE DIRECTORY ENTRY
        08     DDEVTSPL     SPOOL / CONSOLE DIRECTORY ENTRY
        04     DDEVTDSK     T-DISK TO BE ALLOCATED
        02     DDEVRO       DEVICE IS READ ONLY
        01     DDEVRELR     VIRTUAL RESERVE RELEASE REQUESTED

003   DDEVMODL    001       DIRECTORY DEVICE MODEL INFORMATION
004   DDEVCODE    002       VIRTUAL DEVICE CLASS AND TYPE
004   DDEVCLAS    001       VIRTUAL DEVICE CLASS

        BITS DEFINED FOR DDEVCLAS BY HCPDVTYP DEVCLAS

005   DDEVTYPE    001       VIRTUAL DEVICE TYPE

        BITS DEFINED FOR DDEVTYPE BY HCPDVTYP DEVTYPE

006   DDEVEXTN    004       VIRTUAL DASD CYLINDER EXTENTS
006   DDEVSCYL    002       VIRTUAL DASD START CYLINDER
008   DDEVECYL    002       VIRTUAL DASD END CYLINDER
00A   DDEVVSER    006       VOLUME SERIAL NUMBER
010   DDEVALNK    001       TYPES OF LINKS ALLOW TO THIS DEV

        BITS DEFINED IN DDEVALNK (AT HEX DISPLACEMENT: 10)

        80     DDEVLR       READ LINKS ALLOWED
        40     DDEVLW       WRITE LINKS ALLOWED
        20     DDEVLM       MULT-WRITE LINKS ALLOWED

011   DDEVMODE    001       ACCESS MODE

        CODES DEFINED IN DDEVMODE (AT HEX DISPLACEMENT: 11)

        00     DDEVR        'R'  LINK-MODE FOR OWNER
        04     DDEVRR       'RR' LINK-MODE FOR OWNER
        0C     DDEVW        'W'  LINK-MODE FOR OWNER
        10     DDEVWR       'WR' LINK-MODE FOR OWNER
        1C     DDEVM        'M'  LINK-MODE FOR OWNER
        20     DDEVMR       'MR' LINK-MODE FOR OWNER
        24     DDEVMW       'MW' LINK-MODE FOR OWNER

012   DDEVWIDH    001       PAPER WIDTH CODE FOR 3800 PRINTER
013   DDEVLENH    001       PAPER LEN FOR 3800 (HALF-INCHES)
014   DDEVPRFG    001       VIRTUAL 3800 FLAG BYTE

        BITS DEFINED IN DDEVPRFG (AT HEX DISPLACEMENT: 14)

        80     DDEVBTS      BURSTER TRIMMER STACKER (BTS)
        40     DDEVFULL     REFLECT ALL DATA CHECKS (DATCK)

015   DDEVFTRC    001       DEVICE FEATURE CODES

        BITS DEFINED IN DDEVFTRC (AT HEX DISPLACEMENT: 15)

        80     DDEV4WCG     3800 HAS 4 WCGM'S (OFF = 2WCGM)

016   DDEVFLGB    001       ACCESS CONTROL FOR CACHE DASD

        BITS DEFINED IN DDEVFLGB (AT HEX DISPLACEMENT: 16)

        40     DDEVCNA      CACHING NOT AVAILABLE
        20     DDEVSCTL     SUBSYSTEM CONTROL
        10     DDEVDCTL     DEVICE CONTROL
        08     DDEVNCTL     NO CONTROL
        04     DDEVNMDC     NO XSTORE MDC ALLOWED

017   DDEVFLGC    001       EXTENSION OF DIRECTORY DEVICE INFO

        BITS DEFINED IN DDEVFLGC (AT HEX DISPLACEMENT: 17)
```



```
          80     DDEVNOSG     "NOASSIGN" OPTION
          40     DDEVEND      "END" SPECIFIED ON MDISK STATEMENT
          20     DDEVINV      DDEV IS NOT VALID, IT WAS ONLY PARTIALLY
                              FILLED IN AND SHOULD BE IGNORED

018   DDEVPASR    008         PASSWORD FOR READ ACCESS
020   DDEVPASW    008         PASSWORD FOR WRITE ACCESS
028   DDEVPASM    008         PASSWORD FOR MULTIPLE ACCESS

                      EQUATES

          06     DDEVSIZE     DDEV SIZE IN DW'S

030   DDEVDASD    004         SLOT ADDR OF NEXT USER RECORD

                      EQUATES

          30     DDEVCCP      CCP PORTION OF DDEVDASD FIELD

034   DDEVDISP    002         DISP OF NEXT RECORD INTO PAGE
036               1H          RESERVED FOR FUTURE IBM USE
038               1F          RESERVED FOR FUTURE IBM USE
03C   DDEVLABL    004         LABEL TO VALIDATE THIS BLOCK
040   DDEVUSER    008         USERID TO VALIDATE THIS BLOCK

                      EQUATES

          09     DDEVESIZ     EXTENDED DDEVBK SIZE IN DW' S
          48     DDEVESZB     EXTENDED DDEVBK SIZE IN BYTES


           REDEFINITION - SPOOL, CONSOLE AND LINK ENTRIES

018   DDEVSPCL    001         SPOOL DEVICE OUTPUT CLASS
019   DDEVGROP    001         CONSOLE DEFINITION FLAGS

          BITS DEFINED IN DDEVGROP (AT HEX DISPLACEMENT: 19)

          80     DDEVGRCN     GRAPHICS CONSOLE

01A   DDEVLINK    002         USER LINK TO DISK
01C               1F          RESERVED FOR FUTURE IBM USE
020   DDEVLKID    008         USER LINK TO USERID

           REDEFINITION - SPECIAL CTCA ENTRIES

018   DDEVCTUS    008         ALLOWED USERID TO COUPLE TO CTCA
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DDEV	001	000	DDEVECYL	002	008	DDEVINV	001	020
DDEVALNK	001	010	DDEVEND	001	040	DDEVLABL	004	03C
DDEVBTS	001	080	DDEVESIZ	001	009	DDEVLENH	001	013
DDEVCCP	003	030	DDEVESZB	001	048	DDEVLINK	002	01A
DDEVCLAS	001	004	DDEVEXTN	004	006	DDEVLKID	008	020
DDEVCNA	001	040	DDEVFLGA	001	002	DDEVLM	001	020
DDEVCODE	002	004	DDEVFLGB	001	016	DDEVLR	001	080
DDEVCTUS	008	018	DDEVFLGC	001	017	DDEVLW	001	040
DDEVDASD	004	030	DDEVFTRC	001	015	DDEVM	001	01C
DDEVDCTL	001	010	DDEVFULL	001	040	DDEVMODE	001	011
DDEVDEV	002	000	DDEVGRCN	001	080	DDEVMODL	001	003
DDEVDISP	002	034	DDEVGROP	001	019	DDEVMR	001	020

Name	Len	Val/Disp
DDEVMW	001	024
DDEVNCTL	001	008
DDEVNMDC	001	004
DDEVNOSG	001	080
DDEVPASM	008	028
DDEVPASR	008	018
DDEVPASW	008	020
DDEVPRFG	001	014
DDEVR	001	000
DDEVRELR	001	001
DDEVRO	001	002
DDEVRR	001	004
DDEVSCTL	001	020
DDEVSCYL	002	006
DDEVSIZE	001	006
DDEVSPCL	001	018
DDEVTDED	001	010
DDEVTDSK	001	004
DDEVTLNK	001	040
DDEVTMDK	001	080
DDEVTSPC	001	020
DDEVTSPL	001	008
DDEVTYPE	001	005
DDEVUSER	008	040
DDEVVSER	006	00A
DDEVW	001	00C
DDEVWIDH	001	012
DDEVWR	001	010
DDEV4WCG	001	080

HCPDDITB— DASD DEVICE INFORMATION TABLE

DSECT NAME: DDITB

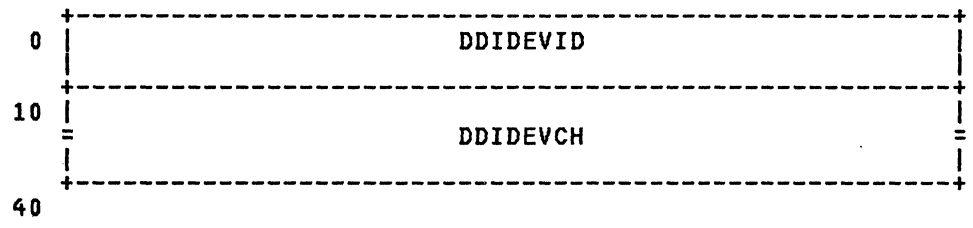
DESCRIPTIVE NAME: DASD DEVICE INFORMATION TABLE

FUNCTION: DDITB MAPS THE DEVICE INFORMATION TABLE ENTRIES IN HCPDDIDS.

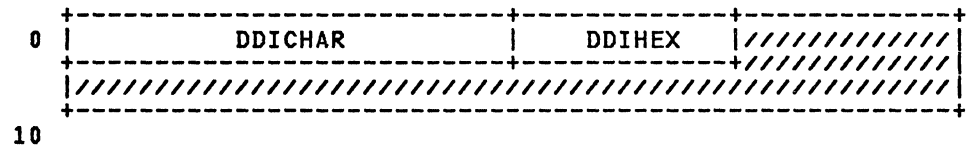
LOCATED BY:

CPVDDIDS - CPVOL POINTER CONTAINING ADDRESS OF THIS BLOCK.

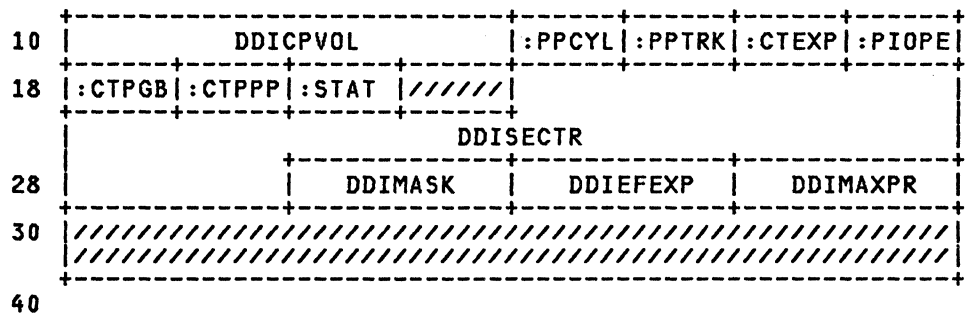
DDITB - DEVICE DEPENDENT INFORMATION TABLE



REDEFINITION - DEVICE INDENTIFICATION INFO



REDEFINITION - GENERAL DEVICE CHARACTERISTICS



disp	name	length	description
000	DDIDEVID	016	DEVICE IDENTIFICATION INFO
010	DDIDEVCH	048	GENERAL DEVICE CHARACTERISTICS

EQUATES

08	DDISIZE	SIZE OF DDITB IN DOUBLEWORDS
40	DDIBSIZE	SIZE OF DDITB IN BYTES

REDEFINITION - DEVICE INDENTIFICATION INFO

000	DDICHAR	004	EBCDIC DEVICE TYPE REPRESENTATION
004	DDIHEX	002	HEX DEVICE TYPE REPRESENTATION
006		XL10	RESERVED FOR IBM USE

REDEFINITION - GENERAL DEVICE CHARACTERISTICS

010	DDICPVOL	004	CPVOL LIST ANCHOR
014	DDIPPCYL	001	NUMBER OF PAGES PER CYLINDER
015	DDIPPTRK	001	NUMBER OF PAGES PER TRACK
016	DDICTEXP	001	NUMBER OF EXPOSURES PER DEVICE

EQUATES

01	DDISNGEX	SINGLE EXPOSURE

017	DDIPIOPE	001	NUMBER OF PIOBKS PER EXPOSURE
018	DDICTPGB	001	NUMBER OF PAGES REQUIRED TO BUILD CCW PACKAGES IN
019	DDICTPPP	001	NUMBER OF PASSES PER PAGE
01A	DDISTAT	001	STATUS FLAG BYTE
01B		X	RESERVED FOR IBM USE
01C	DDISECTR	001	REAL SECTOR NUMBERS FOR CPFORMATTED PACKS
02A	DDIMASK	002	MASK FOR PAGES RESERVED ON CYLINDER 0, TRACK 0 IN PALMAP
02C	DDIEFEXP	002	NUMBER OF PAGING READ EXPOSURES (THE 'EFFECTIVE' NUMBER OF EXPOSURES), INDICATES NUMBER OF USERS THEORETICALLY REQUIRED TO FULLY DRIVE DEVICE
02E	DDIMAXPR	002	MAXIMUM THEORETICAL PAGING RATE
030	DDIDEVLM	002	SLOT ALLOCATION LIMIT FOR THE DEVICE BEFORE SWITCHING TO ANOTHER VOLUME
032		H	RESERVED FOR IBM USE.
034	DDIMLOAD	004	INITIAL MLOAD FOR THE DEVICE.
038		2F	RESERVED FOR IBM USE.

MORE EQUATES

080	DDIPREF	PREFERRED PAGING DEVICE
040	DDIRSTD	DEVICE RESTRICTED TO PAGING USE ONLY
000	DDINPREF	NOT PREFERRED (FOR MACRO IN DDI)
000	DDINRSTD	NOT RESTRICTED (FOR MACRO IN DDI)

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
DDIBSIZE	001	040	DDIRSTD	001	040
DDICHAR	004	000	DDISECTR	001	01C
DDICPVOL	004	010	DDISIZE	001	008
DDICTEXP	001	016	DDISNGEX	001	001
DDICTPGB	001	018	DDISTAT	001	01A
DDICTPPP	001	019	DDITB	001	000
DDIDEVCH	048	010			
DDIDEVID	016	000			
DDIDEVLM	002	030			
DDIEFEXP	002	02C			
DDIHEX	002	004			
DDIMASK	002	02A			
DDIMAXPR	002	02E			
DDIMLOAD	004	034			
DDINPREF	001	000			
DDINRSTD	001	000			
DDIPIOPE	001	017			
DDIPPCYL	001	014			
DDIPPTRK	001	015			
DDIPREF	001	080			

DDRREC— DYNAMIC RECONFIGURATION RECORD

DSECT NAME: DDRREC

DESCRIPTIVE NAME: DYNAMIC RECONFIGURATION RECORD

FUNCTION: DDRREC IS USED IN SVC 76 INITIATED ERROR RECORDING PROCESS FOR TYPE 60 DASD DUMP RESTORE (DDR) DYNAMIC DEVICE REALLOCATION RECORDS. THE REALLOCATION RECORDS CONTAIN THE REPLACEMENT OF THE VIRTUAL "FROM" AND "TO" CONTROL UNIT ADDRESSES (CUA) BY THE REAL ADDRESSES OF THE REAL DASD DEVICES.

LOCATED BY:

GPR9 IN HCPVER. THE ADDRESS IS PASSED TO HCPIOE AND HCPREC IN GPR1.

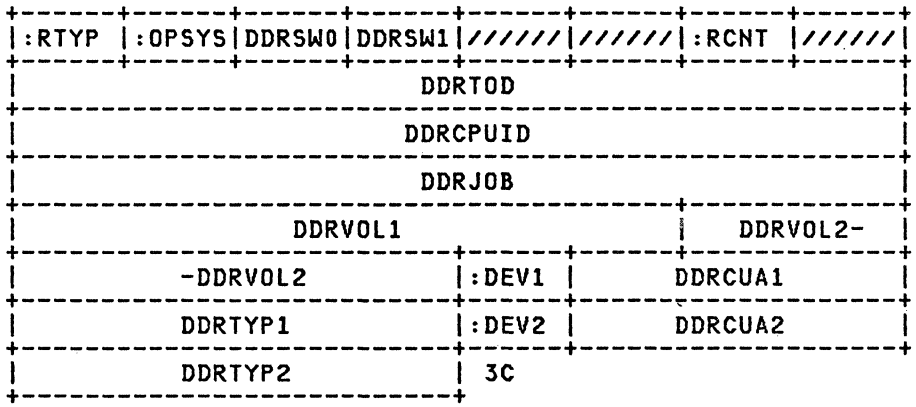
CREATED BY:

GUEST; COPIED TO FREE STORAGE BY HCPVER.

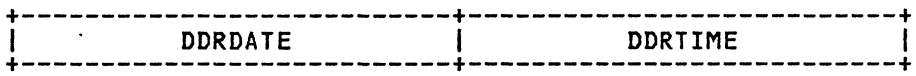
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

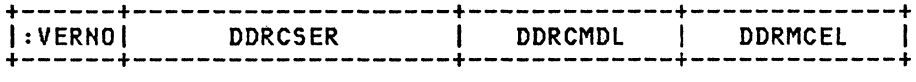
DDRREC - DYNAMIC RECONFIGURATION RECORDING RECORD



REDEFINITION - DDRTOD



REDEFINITION - DDRCPUID



disp	name	length	description
000	DDRRTYP	001	RECORD TYPE

CODES DEFINED IN DDRRTYP (AT HEX DISPLACEMENT: 0)

60 DDRRDDR DDR RECORD

```
001    DDROPSYS    001       OPERATING SYSTEM

         BITS DEFINED FOR DDROPSYS BY HDRREC HDRHSYS

002    DDRSW0      001       SWITCH BYTE 0

         BITS DEFINED FOR DDRSW0 BY HDRREC HDRHSW0

003    DDRSW1      001       SWITCH BYTE 1

         BITS DEFINED IN DDRSW1   (AT HEX DISPLACEMENT: 3)

         80     DDRSWPSR     PRIMARY STORAGE RECONFIGURATION
         40     DDRSWSSR     SECONDARY STORAGE RECONFIGURATION
         20     DDRSWORR     OPERATOR REQUESTED RECONFIGURATION
         10     DDRSWPER     PERMANENT ERROR CAUSED
                             RECONFIGURATION

004                 XL1      RESERVED FOR FUTURE IBM USE
005                 XL1      RESERVED FOR FUTURE IBM USE
006    DDRRCNT      001      RECORD COUNT

         BITS DEFINED FOR DDRRCNT BY HDRREC HDRHCNT

007                 XL1      RESERVED FOR FUTURE IBM USE
008    DDRTOD       008      TOD OF SYSTEM FAILURE
010    DDRCPUID     008      CPU ID
018    DDRJOB       008      USERID USING 'FROM' DEVICE
020    DDRVOL1      006      VOLUME SERIAL 'FROM' DEVICE
026    DDRVOL2      006      VOLUME SERIAL 'TO' DEVICE
02C    DDRDEV1      001      PHYS. DEVICE ID OF 'FROM' DEVICE
02D    DDRCUA1      003      DEVICE NUMBER OF 'FROM' DEVICE
030    DDRTYP1      004      DEVICE TYPE OF 'FROM' DEVICE
034    DDRDEV2      001      PHYS. DEVICE ID OF 'TO' DEVICE
035    DDRCUA2      003      DEVICE NUMBER CUA OF 'TO' DEVICE
038    DDRTYP2      004      DEVICE TYPE OF 'TO' DEVICE

                      EQUATES

         3C     DDRBLEN      SIZE IN BYTES
         08     DDRSIZE      SIZE IN DOUBLE WORDS


          REDEFINITION - DDRTOD

008    DDRDATE      004      DATE OF SYSTEM FAILURE
00C    DDRTIME      004      TIME OF SYSTEM FAILURE

          REDEFINITION - DDRCPUID

010    DDRVERNO     001      MACHINE VERSION CODE
011    DDRCSER      003      CPU SERIAL NUMBER
014    DDRCMDL      002      CPU MACHINE MODEL NUMBER
016    DDRMCEL      002      MAX LENGTH OF MACHINE-DEPENDENT
                             MACHINE CHECK EXTENDED LOGOUT AREA
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DDRBLEN	001	03C	DDRCSER	003	011	DDRDATE	004	008
DDRCMDL	002	014	DDRCUA1	003	02D	DDRDEV1	001	02C
DDRCPUID	008	010	DDRCUA2	003	035	DDRDEV2	001	034

Name	Len	Val/Disp
DDRJOB	008	018
DDRMCEL	002	016
DDROPSYS	001	001
DDRRCNT	001	006
DDRRDDR	001	060
DDRREC	001	000
DDRRTYP	001	000
DDRSIZE	001	008
DDRSWORR	001	020
DDRSWPER	001	010
DDRSWPSR	001	080
DDRSWSSR	001	040
DDRSW0	001	002
DDRSW1	001	003
DDRTIME	004	00C
DDRTOD	008	008
DDRTYP1	004	030
DDRTYP2	004	038
DDRVERNO	001	010
DDRVOL1	006	020
DDRVOL2	006	026

DD4PARM0— ALTERNATE USER SUPPORT INTERFACE FOR DIAG X'D4'.

DSECT NAME: DD4PARM0

DESCRIPTIVE NAME: ALTERNATE USER SUPPORT INTERFACE FOR DIAG X'D4'.

FUNCTION: THIS BLOCK IS USED AS AN INTERFACE TO COMMUNICATE THE USERID OF THE WORKER VIRTUAL MACHINE AND THE USERID OF THE END USER TO DIAG X'D4'.

LOCATED BY:

HCPVDG

CREATED BY:

ANY MODULE PRIOR TO EXECUTION OF DIAG X'D4'.

DELETED BY:

THE MODULE THAT CREATED IT.

disp	name	length	description
000	DD4PTGT	008	USERID OF WORKER WHICH WILL RUN WITH ALTERNATE ID.
008	DD4PALT	008	USERID OF END USER REQUESTING WORK.

EQUATES

10	DD4BSIZE	SIZE IN BYTES
02	DD4DSIZE	SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
DD4BSIZE	001	010
DD4DSIZE	001	002
DD4PALT	008	008
DD4PARM0	001	000
DD4PTGT	008	000

DD8PARM0— PARAMETER LIST DSECT FOR HCPSFB

DSECT NAME: DD8PARM0

DESCRIPTIVE NAME: PARAMETER LIST DSECT FOR HCPSFB

FUNCTION: TO CONTAIN PARAMETERS NEEDED AS INPUT BY HCPSFB (DIAG. D8).

CREATED BY:

ANY MODULE PRIOR TO EXECUTION OF DIAG X'D8'.

DELETED BY:

THE MODULE THAT CREATED IT.

disp	name	length	description
000	DD8PSPID	002	SPOOL FILE ID OF THE PREVIOUS FILE
002	DD8PCODE	002	SUBFUNCTION CODE
004	DD8PBUF	004	USERS BUFFER ADDRESS
008	DD8PUSER	008	OWNER OF FILE IF SELECTING BY USER
010	DD8PTYPE	001	QUEUE TO SEARCH (RDR|PRT|PUN)
	BITS DEFINED IN DD8PTYPE (AT HEX DISPLACEMENT: 10)		
	80 DD8PRINT		SCAN THE PRINT QUEUE
	40 DD8PUNCH		SCAN THE PUNCH QUEUE
	20 DD8READ		SCAN THE READER QUEUE
011	DD8PSIZE	001	SIZE OF USERS BUFFER IN DWORDS
012	DD8PCFLG	001	CONTROL BYTE
	BITS DEFINED IN DD8PCFLG (AT HEX DISPLACEMENT: 12)		
	80 DD8ANYVM		GET NEXT FILE ON 'SYSTEM' QUEUE
	00 DD8USRVM		GET NEXT FILE ON 'USER' QUEUE
013	DD8PRSVD	005	RESERVED, MUST BE 0
	EQUATES		
	18 DD8BSZ		SIZE OF PARM LIST IN BYTES
	03 DD8DSZ		SIZE OF PARM LIST IN DWORDS
	14 DD8DFSZ		DEFAULT SIZE OF BUFFER (DWORDS)

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
DD8ANYVM	001	080	DD8PRSVD	005	013
DD8BSZ	001	018	DD8PSIZE	001	011
DD8DFSZ	001	014	DD8PSPID	002	000
DD8DSZ	001	003	DD8PTYPE	001	010
DD8PARM0	001	000	DD8PUNCH	001	040
DD8PBUF	004	004	DD8PUSER	008	008
DD8PCFLG	001	012	DD8READ	001	020
DD8PCODE	002	002	DD8USRVM	001	000
DD8PRINT	001	080			

HCPDE4PL— DIAGNOSE X'E4' PARAMETER LIST

DSECT NAME: DE4PL

DESCRIPTIVE NAME: DIAGNOSE X'E4' PARAMETER LIST

FUNCTION: DE4PL MAPS THE PARAMETER LIST FOR DIAGNOSE X'E4' REQUESTS

LOCATED BY:

DIAGNOSE-SPECIFIED USER REGISTER "RX"

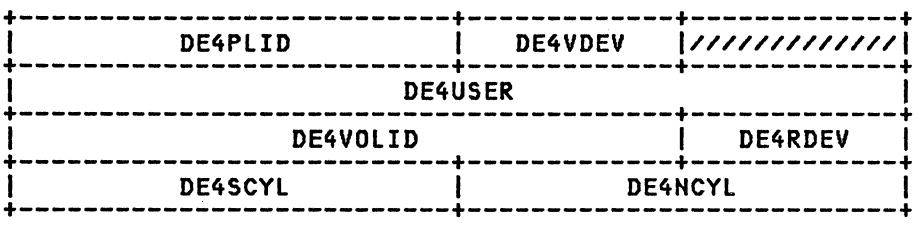
CREATED BY:

A VIRTUAL MACHINE

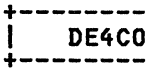
DELETED BY:

THE CREATING VIRTUAL MACHINE

DE4PL - DIAGNOSE X'E4' PARAMETER LIST



REDEFINITION - REDEFINE PARMLIST ID FIELD



disp	name	length	description
000	DE4INPUT	008	INPUT FIELDS BEGIN HERE
000	DE4PLID	004	DIAGNOSE PARAMETER LIST ID
004	DE4VDEV	002	VIRTUAL DEVICE NUMBER
006		XL2	RESERVED FOR FUTURE USE
008	DE4USER	008	USERID OWNING SPECIFIED VIRTUAL DEVICE
010	DE4OUTPT	002	OUTPUT FIELDS BEGIN HERE
010	DE4VOLID	006	DASD VOLUME LABEL
016	DE4RDEV	002	REAL DEVICE NUMBER
018	DE4SCYL	004	STARTING MINIDISK CYLINDER NUMBER
01C	DE4NCYL	004	NUMBER OF MINIDISK CYLINDERS
020	DE4ENDBK	002	END OF BLOCK

EQUATES

20	DE4SIZE	SIZE OF DE4PL IN BYTES

REDEFINITION - REDEFINE PARMLIST ID FIELD

000	DE4CODE	002	DIAGNOSE CODE NUMBER

CODES DEFINED IN DE4CODE (AT HEX DISPLACEMENT: 0)

E4	DE4DIAGC	DIAGNOSE X'E4' CODE

002	DE4FCTN	001	DIAGNOSE X'E4' SUBFUNCTION CODE

CODES DEFINED IN DE4FCTN (AT HEX DISPLACEMENT: 2)

	00	DE4UMLOG	DIAGNOSE X'E4': OBTAIN MINIDISK REAL DEVICE INFORMATION FOR LOGGED-ON USER
003	DE4LENTH	001	SIZE, IN BYTES, OF THIS PARMLIST

CROSS REFERENCE

Name	Len	Val/Disp
DE4CODE	002	000
DE4DIAGC	001	0E4
DE4ENDBK	002	020
DE4FCTN	001	002
DE4INPUT	008	000
DE4LENTH	001	003
DE4NCYL	004	01C
DE4OUTPT	002	010
DE4PL	001	000
DE4PLID	004	000
DE4RDEV	002	016
DE4SCYL	004	018
DE4SIZE	001	020
DE4UMLOG	001	000
DE4USER	008	008
DE4VDEV	002	004
DE4VOLID	006	010

HCPDFIR— DUMP FILE INFORMATION RECORD

DSECT NAME: DFIR

DESCRIPTIVE NAME: DUMP FILE INFORMATION RECORD

FUNCTION: HCPDFIR CONTAINS VITAL SYSTEM REGISTER AND STORAGE LOCATION VALUES NECESSARY TO PROCESS A DUMP TO TAPE DASD

LOCATED BY:

THE DFIR IS THE SECOND RECORD OF A SYSTEM ABEND DUMP TO TAPE OR DASD, OF A STANDALONE DUMP TO TAPE, OR OF AN XA-FORMAT VMDUMP SPOOL FILE.

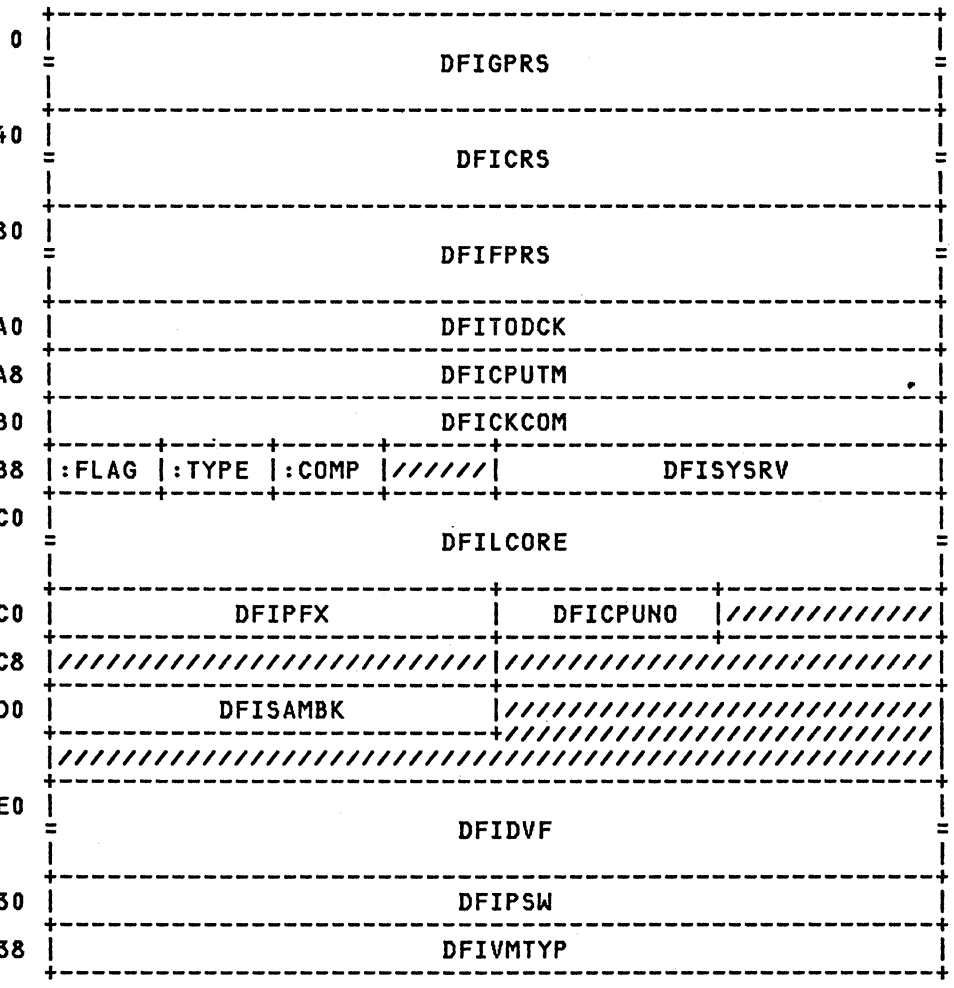
CREATED BY:

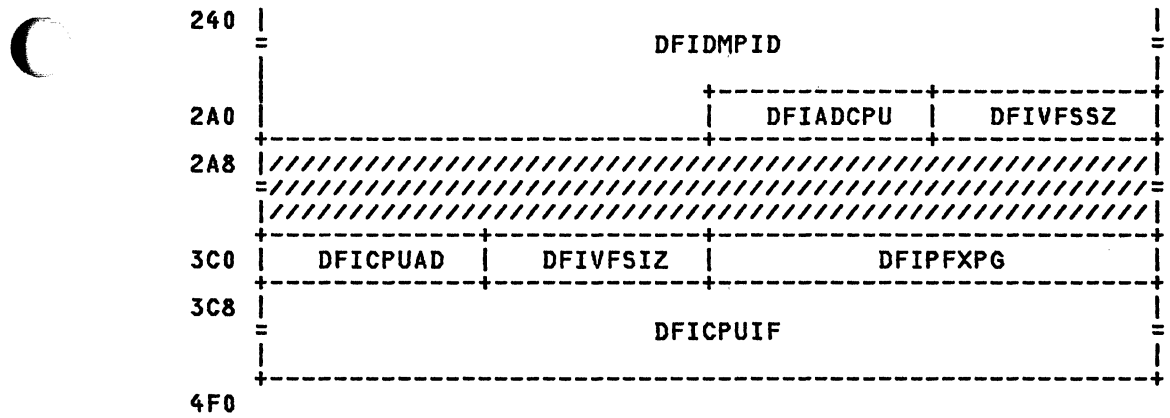
HCPDMP (SYSTEM ABEND DUMP PROCESSOR) DURING A SYSTEM ABEND DUMP
HCPEDM (DUMP PROCESSOR) WHEN PROCESSING A SYSTEM ABEND OR STANDALONE DUMP
HCPSAD (STANDALONE DUMP PROCESSOR) DURING A STANDALONE DUMP
HCPVDU (VIRTUAL MACHINE DUMP PROCESSOR) DURING A VIRTUAL MACHINE DUMP

DELETED BY:

NOT APPLICABLE

DFIR - DUMP FILE INFORMATION RECORD FORMATS





disp	name	length	description
000	DFIGPRS	064	16 GENERAL PURPOSE REGISTERS
040	DFICRS	064	16 CONTROL REGISTERS
080	DFIFPRS	032	4 FLOATING POINT REGISTERS
0A0	DFITODCK	008	TIME OF DAY CLOCK
0A8	DFICPUTM	008	CPU TIMER
0B0	DFICKCOM	008	CLOCK COMPARATOR
0B8	DFIFLAG	001	FLAG BYTE
	BITS DEFINED IN DFIFLAG (AT HEX DISPLACEMENT: B8)		
	80 DFIHALF		LAST RECORD IN DUMP FILE = 2K
	40 DFI370		370 DUMP INDICATOR
	20 DFIXA		XA DUMP INDICATOR
0B9	DFITYPE	001	TYPE OF DUMP FLAG
	CODES DEFINED IN DFITYPE (AT HEX DISPLACEMENT: B9)		
	00 DFICP		CP ABEND OR STAND-ALONE DUMP
	01 DFICPSA		CP SOFT ABEND DUMP
	80 DFIVM		VIRTUAL MACHINE DUMP
0BA	DFICOMP	001	DUMP COMPLETION FLAG
	CODES DEFINED IN DFICOMP (AT HEX DISPLACEMENT: BA)		
	00 DFIDONE		DUMP IS COMPLETE
	40 DFINOLOD		DUMP WAS NOT COMPLETELY LOADED BY THE DUMPLOAD COMMAND
	80 DFIINC		DUMP WAS NOT COMPLETE WHEN CREATED
0BB		1X	RESERVED FOR FUTURE IBM USE
0BC	DFISYSRV	004	SYSTEM GENERATED STORAGE SIZE
0C0	DFILCORE	001	LOCATIONS 0-255 OF REAL MEMORY
1C0	DFIPFX	004	PREFIX ADDR FOR DUMPED SYSTEM
1C4	DFICPUNO	002	NUMBER OF ON-LINE CPUS
1C6		3H	RESERVED FOR FUTURE IBM USE
1CC		F	RESERVED FOR FUTURE IBM USE
1D0	DFISAMBK	004	ADDRESS OF THE SNAP AREA MAP BLOCK
1D4		3F	RESERVED FOR FUTURE IBM USE
1E0	DFIDVF	004	RESERVED FOR USE BY THE VM/XA MA DUMP VIEWING FACILITY
230	DFIPSW	008	PSW OF THE VIRTUAL MACHINE ONLY USED FOR VMDUMPS
238	DFIVMTYP	008	TYPE OF DUMP FROM VMDUMP "FORMAT" OPTION - ONLY USED FOR VMDUMPS
240	DFIDMPID	100	DUMPID FROM VMDUMP "*DUMPID" OPTION ONLY USED FOR VMDUMPS
2A4	DFIADCPU	002	CPU ADDRESS
2A6	DFIVFSSZ	002	SECTION SIZE FOR THE VECTOR FACILITY
2A8		70F	RESERVED FOR FUTURE IBM USE

3C0	DFICPU	304	OTHER CPU INFORMATION
3C0	DFICPUAD	002	CPU ADDRESS
3C2	DFIVFSIZ	002	SECTION SIZE FOR THE VECTOR FACILITY
3C4	DFIPFXPG	004	ADDRESS OF PREFIX PAGE FOR CPU
3C8	DFICPUIF	296	CPU'S REAL STORAGE LOC. 216-511

EQUATES

30	DFICPULN	LENGTH OF OTHER PROCESSOR INFO
9E	DFISIZE	SIZE OF DUMP INFO. RECORD

MORE EQUATES

000	DFIMCPUT	CPU TIMER LOGOUT
008	DFIMCKCP	TOD COMPARATOR LOGOUT
010	DFIMCHIN	MACHINE CHECK INTERRUPT CODE
018	DFISPAR1	RESERVED FOR FUTURE HARDWARE USE
020	DFIMCFSA	MACHINE CHECK FAILING STORAGE ADDRESS
024	DFIMCHRD	MACHINE DEPENDENT REQION CODE
028	DFIFXLOG	MACHINE DEPENDENT FIXED LOGOUT AREA
038	DFISPAR2	RESERVED FOR FUTURE HARDWARE USE
088	DFIFPRLG	FLOATING POINT REGS
0A8	DFIGPRLG	GENERAL REGISTERS
0E8	DFICRLG	CONTROL REGISTERS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
DFIADCPU	002	2A4	DFIMCKCP	008	008
DFICKCOM	008	0B0	DFIMCPUT	008	000
DFICOMP	001	0BA	DFINOLOD	001	040
DFICP	001	000	DFIPFX	004	1C0
DFICPSA	001	001	DFIPFXPG	004	3C4
DFICPU	304	3C0	DFIPSW	008	230
DFICPUAD	002	3C0	DFIR	001	000
DFICPUIF	296	3C8	DFISAMBK	004	1D0
DFICPULN	001	130	DFISIZE	001	09E
DFICPUNO	002	1C4	DFISPAR1	008	018
DFICPUTM	008	0A8	DFISPAR2	080	038
DFICRLG	064	0E8	DFISYSRV	004	0BC
DFICRS	064	040	DFITODCK	008	0A0
DFIDMPID	100	240	DFITYPE	001	0B9
DFIDONE	001	000	DFIVFSIZ	002	3C2
DFIDVF	004	1E0	DFIVFSSZ	002	2A6
DFIFLAG	001	0B8	DFIVM	001	080
DFIFPRLG	032	088	DFIVMTYP	008	238
DFIFPRS	032	080	DFIXA	001	020
DFIFXLOG	016	028	DFI370	001	040
DFIGPRLG	064	0A8			
DFIGPRS	064	000			
DFIHALF	001	080			
DFIINC	001	080			
DFILCORE	001	0C0			
DFIMCFSA	004	020			
DFIMCHIN	008	010			
DFIMCHRD	004	024			

HCPDIUCV— DIRECTORY IUCV BLOCK

DSECT NAME: DIUCV

DESCRIPTIVE NAME: DIRECTORY IUCV BLOCK

FUNCTION: TO PRESERVE INFORMATION FROM THE "IUCV" DIRECTORY CONTROL STATEMENT. THERE WILL BE ONE HCPDIUCV CREATED FOR EACH "IUCV" STATEMENT IN THE SOURCE DIRECTORY.

LOCATED BY:

FIELDS DVMDIDAS AND DVMDIDSP IN DVMD
FIELDS DIUCDASD AND DIUCDISP IN DIUCV
GPR2 IN HCPIUBAC
GPR2 IN HCPIUBCO

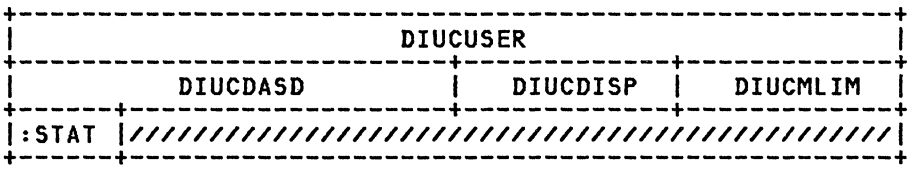
CREATED BY:

HCPDIR, HCPUDRIA

DELETED BY:

HCPIUBAC, HCPIUBCO

DIUCV - DIRECTORY IUCV DEFINITION BLOCK



disp	name	length	description
000	DIUCUSER	008	USERID AUTHORIZED TO CONNECT TO
008	DIUCDASD	004	DASD ADDRESS OF NEXT DIUCV
00C	DIUCDISP	002	DISPLACEMENT OF NEXT DIUCV
00E	DIUCMLIM	002	MESSAGE LIMIT
010	DIUCSTAT	001	FLAGS

BITS DEFINED IN DIUCSTAT (AT HEX DISPLACEMENT: 10)

80	DIUCPRTY	PRIORITY WAS SPECIFIED
011	XL7	RESERVED FOR FUTURE IBM USE

EQUATES

03	DIUCSIZE	DIUCV SIZE IN DW'S
18	DIUCLEN	DIUCV SIZE IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DIUCDASD	004	008	DIUCLEN	001	018	DIUCPRTY	001	080
DIUCDISP	002	00C	DIUCMLIM	002	00E	DIUCSIZE	001	003

Name	Len	Val/Disp
DIUCSTAT	001	010
DIUCUSER	008	000
DIUCV	001	000

DMPINREC— VM/370 SYSTEM PRODUCT DUMP INFORMATION RECORD

DSECT NAME: DMPINREC

DESCRIPTIVE NAME: VM/370 SYSTEM PRODUCT DUMP INFORMATION RECORD

FUNCTION: TO MAP OUT THE VM/370 DUMP INFORMATION RECORD

LOCATED BY:

FIRST RECORD IN A 370-FORMAT VIRTUAL MACHINE DUMP (VMDUMP) READER SPOOL FILE

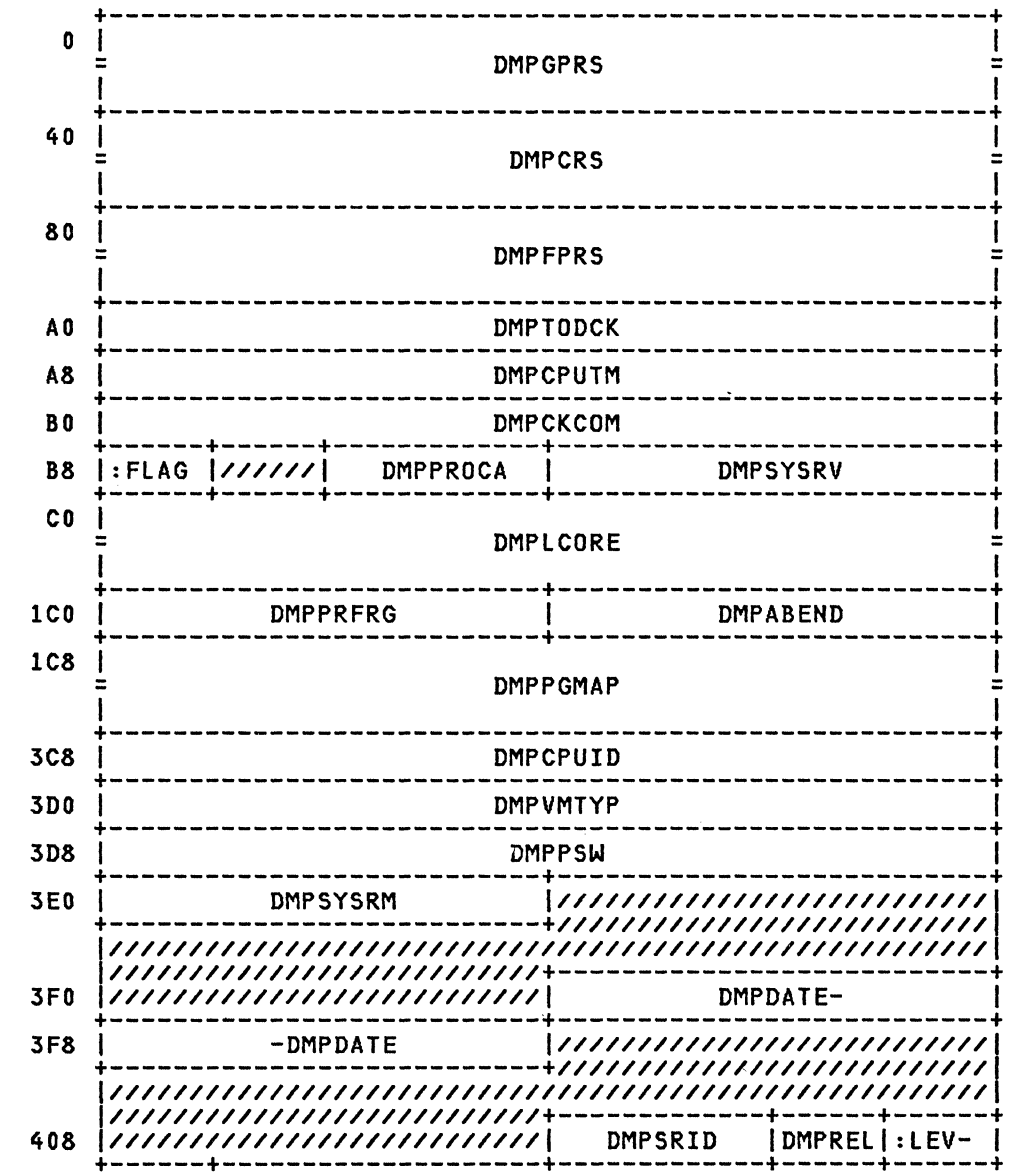
CREATED BY:

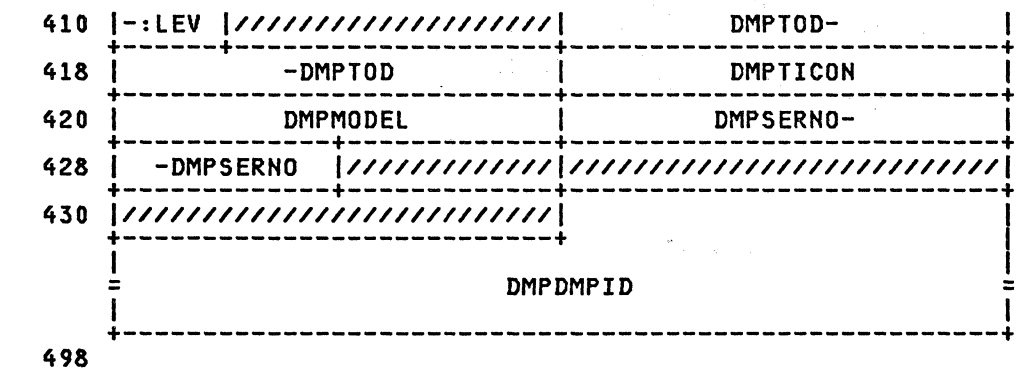
HCPVDUMP - WHEN CREATING A 370-FORMAT VIRTUAL MACHI DUMP USING THE VMDUMP COMMAND

DELETED BY:

NOT DELETED

DMPINREC - VM/370 SYSTEM PRODUCT DUMP INFORMATION RECORD





disp	name	length	description
000	DMPGPRS	064	16 GENERAL PURPOSE REGISTERS
040	DMPCRS	064	16 CONTROL REGISTERS
080	DMPFPRS	032	4 FLOATING POINT REGISTERS
0A0	DMPTODCK	008	TIME-OF-DAY CLOCK
0A8	DMPCPUTM	008	CPU TIMER
0B0	DMPCKCOM	008	TIME-OF-DAY CLOCK COMPARATOR
0B8	DMPFLAG	001	FLAG BYTE
0B9		1X	RESERVED FOR FUTURE IBM USE
0BA	DMPPROCA	002	ABENDING PROCESSOR ADDRESS (NOT USED FOR VMDUMPS)
0BC	DMPSYSRV	004	SYSTEM GENERATED STORAGE SIZE
0C0	DMPLCORE	001	LOCATIONS 0-256 OF REAL MEMORY (NOT USED FOR VMDUMPS)
1C0	DMPPRFRG	004	PREFIX REGISTER
1C4	DMPABEND	004	ABEND CODE FOR FAILING PROCESSOR
1C8	DMPPGMAP	512	PAGE MAP -INDICATES WHICH PAGES WERE DUMPED. EACH BIT REPRESENTS ONE 4K PAGE
3C8	DMPCPUID	008	CPU IDENTIFICATION FROM REAL CPU
3D0	DMPVMTYP	008	ID OF VM MACHINE TYPE, OBTAINED FROM 'FORMAT' PARAMETER ONLY FOR VMDUMPS NOT CP DUMPS
3D8	DMPPSW	008	PSW OF VIRTUAL MACHINE ONLY FOR VMDUMPS NOT CP DUMPS
3E0	DMPSYSRM	004	REAL SIZE OF STORAGE...IT IS THE HARDWARE SIZE OF THE MACHINE FOR CP DUMPS AND THE VIRTUAL MACHINE (INCLUDING DISCONTIGUOUS SAVED SEGMENTS) FOR VMDUMPS
3E4	DMPIPCS	080	RESERVED FOR USE BY IPCS
3E4		4F	RESERVED FOR USE BY IPCS; NOT USED BY THE VMDUMP COMMAND
3F4	DMPDATE	008	DATE OF FAILURE IN FORM MM/DD/YY
3FC		4F	RESERVED FOR USE BY IPCS; NOT USED BY THE VMDUMP COMMAND
40C	DMPSRID	002	'SR' SYMPTOM RECORD ID
40E	DMPREL	001	CP RELEASE NUMBER
40F	DMPLEV	002	CP FEATURE (SERVICE) LEVEL
411		XL3	RESERVED FOR USE BY IPCS
414	DMPTOD	004	LOCAL MIDNIGHT IN TOD CLOCK VALUE
41C	DMPTICON	004	LOCAL TIME ZONE CONVERSION FACTOR
420	DMPMODEL	004	CPU MODEL NUMBER
424	DMPSERNO	006	CPU SERIAL NUMBER
42A		1H	RESERVED FOR FUTURE IBM USE
42C		2F	RESERVED FOR USE BY IPCS; NOT USED BY THE VMDUMP COMMAND
434	DMPDMPID	100	DUMP IDENTIFIER SPECIFIED ON THE VMDUMP COMMAND LINE, PADDED ON THE RIGHT WITH BLANKS IF NECESSARY

MORE EQUATES

080	DMPHALF	ON MEANS LAST RECORD IN DUMP FILE = 2K

CROSS REFERENCE

Name	Len	Val/Disp
DMPABEND	004	1C4
DMPCKCOM	008	0B0
DMPCPUID	008	3C8
DMPCPUTM	008	0A8
DMPCRS	064	040
DMPDATE	008	3F4
DMPDMPID	100	434
DMPFLAG	001	0B8
DMPFPRS	032	080
DMPGPRS	064	000
DMPHALF	001	080
DMPINREC	001	000
DMPIPCS	080	3E4
DMPLCORE	001	0C0
DMPLEV	002	40F
DMPMODEL	004	420
DMPPGMAP	512	1C8
DMPPRFRG	004	1C0
DMPPROCA	002	0BA
DMPPSW	008	3D8
DMPREL	001	40E
DMPSERNO	006	424
DMPSRID	002	40C
DMPSYSRM	004	3E0
DMPSYSRV	004	0BC
DMPTICON	004	41C
DMPTOD	004	414
DMPTODCK	008	0A0
DMPVMTYP	008	3D0

HCPDNSA— DIRECTORY NSS/DCSS AUTHORIZATION BLOCK

DSECT NAME: DNSA

DESCRIPTIVE NAME: DIRECTORY NSS/DCSS AUTHORIZATION BLOCK

FUNCTION: THE DIRECTORY NSS/DCSS AUTHORIZATION BLOCK DEFINES THE PROTECTED SYSTEMS THAT A USER MAY ACCESS AS SPECIFIED IN THE SYSTEM DIRECTORY FILE

LOCATED BY:

DVMDNDAS FIELD OF HCPDVMD
DVMDNDSP FIELD OF HCPDVMD
DNSANADD FIELD OF HCPDNSA
DNSANOFF FIELD OF HCPDNSA

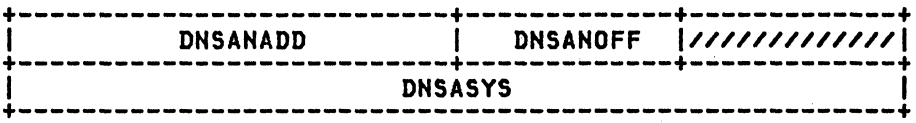
CREATED BY:

HCPDIR, HCPUDRNS

DELETED BY:

HCPUDRNS

DNSA - DIRECTORY NSS/DCSS AUTHORIZATION BLOCK



disp	name	length	description
000	DNSANADD	004	DASD ADDRESS OF THE NEXT DNSA
004	DNSANOFF	002	OFFSET TO THE NEXT DNSA
006		2X	RESERVED FOR FUTURE IBM USE
008	DNSASYS	008	NSS/DCSS THIS USER CAN USE

EQUATES

02	DNSASIZE	DNSA BLOCK SIZE IN DW'S
10	DNSALEN	DNSA BLOCK SIZE IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp
DNSA	001	000
DNSALEN	001	010
DNSANADD	004	000
DNSANOFF	002	004
DNSASIZE	001	002
DNSASYS	008	008

HCPDPLID— DIAGNOSE PARAMETER LIST IDENTIFIER

DSECT NAME: DPLID

DESCRIPTIVE NAME: DIAGNOSE PARAMETER LIST IDENTIFIER

FUNCTION: DPLID MAPS THE PARAMETER LIST IDENTIFIER FOR DIAGNOSE PARAMETER LISTS.

LOCATED BY:

DIAGNOSE-SPECIFIED USER REGISTER "RX"

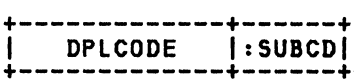
CREATED BY:

A VIRTUAL MACHINE

DELETED BY:

THE CREATING VIRTUAL MACHINE

DPLID - DIAGNOSE PARAMETER LIST IDENTIFICATION



disp	name	length	description
000	DPLCODE	002	DIAGNOSE CODE NUMBER
002	DPLSUBCD	001	DIAGNOSE FUNCTION CODE
003	DPLLENTH	001	SIZE, IN BYTES, OF THIS PARMLIST

EQUATES

04	DPLSIZE	SIZE, IN BYTES, OF PARM LIST ID

CROSS REFERENCE

Name	Len	Val/Disp
DPLCODE	002	000
DPLID	001	000
DPLLENTH	001	003
DPLSIZE	001	004
DPLSUBCD	001	002

HCPDSLBK— DISJOINT STORAGE LIST

DSECT NAME: DSLBK

DESCRIPTIVE NAME: DISJOINT STORAGE LIST

FUNCTION: A DSLBK IS BUILT FOR EACH AREA OF USER STORAGE REQUESTED TO BE DUMPED.

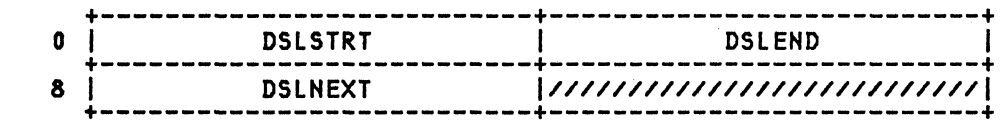
LOCATED BY:

DSLBK IS A TEMPORARY BLOCK AND IS USUALLY
LOCATED BY A POINTER IN A REGISTER

CREATED BY:

HCPVMDMP, HCPNSBMP

DSLBK - DISJOINT STORAGE LIST



disp	name	length	description
000	DSLSTRT	004	ADDRESS OF FIRST PAGE
004	DSLEND	004	ADDRESS OF LAST PAGE
008	DSLNEXT	004	ADDRESS OF NEXT BLOCK OR 0
00C		F	RESERVED FOR FUTURE IBM USE

EQUATES

02	DSLSIZE	BLOCK SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
DSLBK	001	000
DSLEND	004	004
DSLNEXT	004	008
DSLSIZE	001	002
DSLSTRT	004	000

HCPDSRBK— DUMP SYMPTOM RECORD BLOCK

DSECT NAME: DSRBK

DESCRIPTIVE NAME: DUMP SYMPTOM RECORD BLOCK

FUNCTION: THE INFORMATION IN THIS RECORD IS DESIGNED TO GIVE AN INDICATION OF THE STATE OF THE SYSTEM WHEN THE PROBLEM CAUSING THE DUMP WAS ENCOUNTERED. IT WILL BE USED BY CUSTOMER AND IBM SERVICE PERSONNEL TO DETERMINE IF DUPLICATE PROBLEMS EXIST.

LOCATED BY:

THE DSRBK IS THE FIRST RECORD OF A SYSTEM ABEND DUMP TO TAPE OR DASD, A STANDALONE DUMP TO TAPE, OR A 370-XA FORMAT VIRTUAL MACHINE DUMP IN A SPOOL FILE. ALL CMS FILES CREATED BY THE DUMPLOAD COMMAND HAVE THE SYMPTOM RECORD AS THE FIRST RECORD.

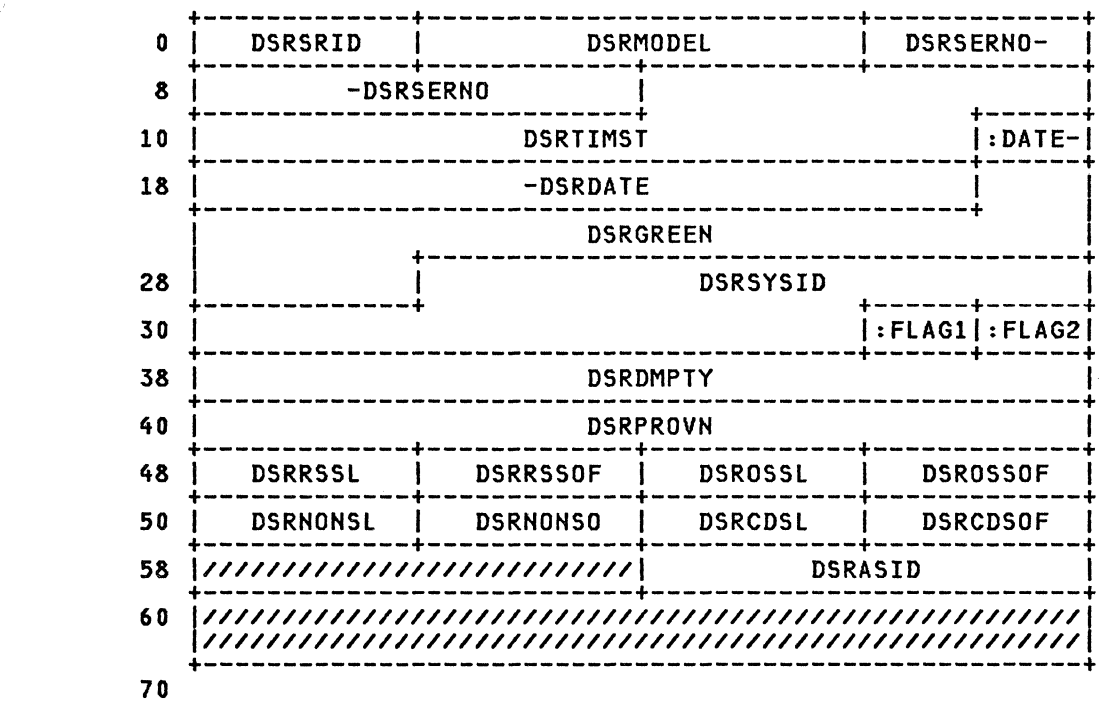
CREATED BY:

HCPDMP (SYSTEM ABEND DUMP PROCESSOR) DURING A SYSTEM ABEND DUMP
HCPEDM (DUMPLOAD COMMAND PROCESSOR) WHEN CONVERTING A 370 FORMAT VIRTUAL MACHINE DUMP TO A 370-XA FORMAT VIRTUAL MACHINE DUMP
HCPSAD (STANDALONE DUMP PROCESSOR) DURING A STANDALONE DUMP
HCPVDU (VIRTUAL MACHINE DUMP) DURING A 370-XA FORMAT VIRTUAL MACHINE DUMP

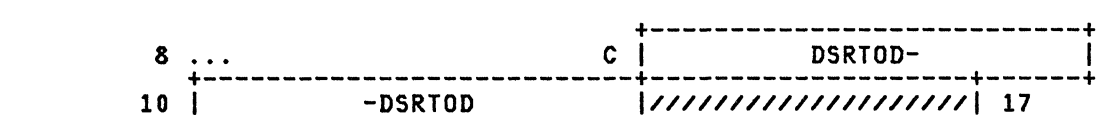
DELETED BY:

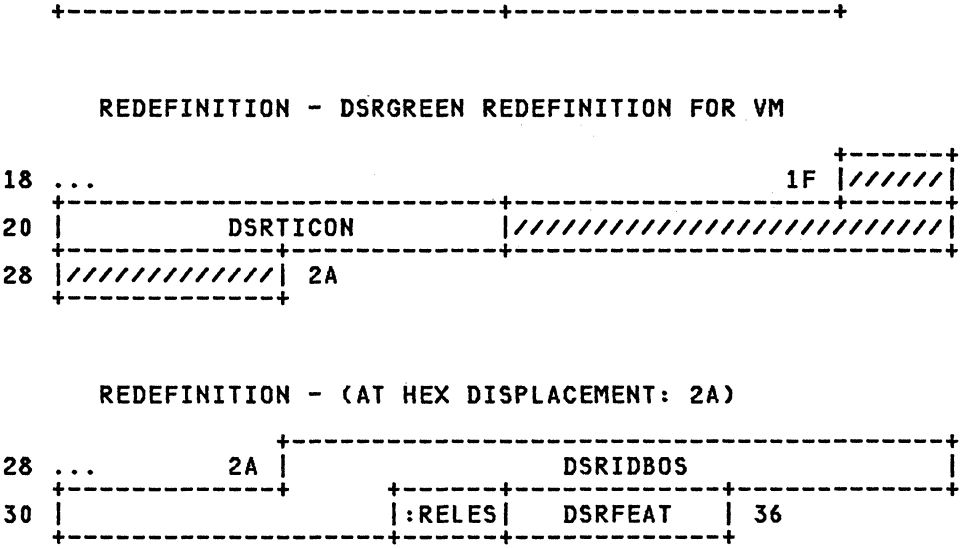
NOT APPLICABLE

DSRBK - DUMP SYMPTOM RECORD BLOCK



REDEFINITION - REDEFINITION OF DSRTIMST FOR VM





disp	name	length	description
000	DSRSRID	002	'SR' SYMPTOM RECORD ID
002	DSRMODEL	004	CPU MODEL NUMBER
006	DSRSERNO	006	CPU SERIAL NUMBER
00C	DSRTIMST	011	LOCAL TIME STAMP (HH:MM:SS:TH)
017	DSRDATE	008	DATE (YY/MM/DD)
01F	DSRGREEN	011	GREENWICH MEAN TIME
02A	DSRSYSID	012	SYSTEM IDENTIFIER
036	DSRFLAG1	001	SYMPTOM RECORD FLAG 1
	BITS DEFINED IN DSRFLAG1 (AT HEX DISPLACEMENT: 36)		
	80 DSRMORE2		SYMPTOM RECORD EXCEEDS 2K
	40 DSRGUEST		SYMPTOM REC FROM GUEST MACHINE
	00 DSRHOST		SYMPTOM REC IS IN 2K AND COMES FROM HOST MACHINE
037	DSRFLAG2	001	SYMPTOM RECORD FLAG 2
	BITS DEFINED IN DSRFLAG2 (AT HEX DISPLACEMENT: 37)		
	80 DSRFLTOD		USING REDEFINTIONS OF FIELDS ENCTIMST, DSRDATE, AND DSRGREEN
038	DSRDMPTY	008	TYPE OF DUMP, LEFT JUSTIFIED AND PADDED
040	DSRPROVN	008	PROBLEM NUMBER
	EQUATES		
	48 DSRSIZ1		SIZE OF DSRBK SECTION 1 IN BYTES
048	DSRRSSL	002	LENGTH (IN BYTES) OF REQUIRED SYMPTOM STRING AREA (PART 3 OF SYMPTOM RECORD)
04A	DSRRSSOF	002	OFFSET TO 1ST BYTE OF REQUIRED SYMPTOM STRING AREA
04C	DSROSSL	002	LENGTH (IN BYTES) OF OPTIONAL SDB-FORMAT SYMPTOM STRING AREA (PART 4 OF SYMPTOM RECORD)
04E	DSROSSOF	002	OFFSET TO 1ST BYTE OF OPTIONAL SDB-FORMAT SYMPTOM STRING AREA
050	DSRNONSL	002	LENGTH (IN BYTES) OF NON-SDB SECTION (PART 5 OF SYMPTOM REC)
052	DSRNONSO	002	OFFSET TO 1ST BYTE OF NON-SDB


```
                                SECTION
054    DSRCDSL     002          LENGTH OF COMPONENT DEPENDENT
                                SYMPTOM AREA (PART 6 OF SYMPTOM
                                RECORD)
056    DSRCDSOF    002          OFFSET TO 1ST BYTE OF COMPONENT
                                DEPENDENT SYMPTOM RECORD
058                1F           RESERVED FOR FUTURE IBM USE
05C    DSRASID     004          ASID OF COMPONENT DEPENDENT
                                SYMPTOM AREA (MVS ONLY)
060                4F           RESERVED FOR FUTURE IBM USE

                      EQUATES

         28     DSRSIZ2        SIZE OF DSRBK SECTION 2 IN BYTES

070    DSRPART3    001          START OF SECTION 3 (VARIABLE
                                LENGTH) OF SYMPTOM RECORD

                      EQUATES

         70     DSRBKSIZ       SIZE OF DSRBK IN BYTES
         0E     DSRSIZE        SIZE OF DSRBK IN DOUBLEWORDS


          REDEFINITION - REDEFINITION OF DSRTIMST FOR VM


          4898           ORG   DSRTIMST      REDEFINITION OF DSRTIMST FOR VM


          REDEFINITION - DSRGREEN REDEFINITION FOR VM

01F                1C           RESERVED FOR FUTURE IBM USE
020    DSRTICON    004          LOCAL TIME CONVERSION FACTOR
024                CL6          RESERVED FOR FUTURE IBM USE

          REDEFINITION - (AT HEX DISPLACEMENT: 2A)

02A    DSRIDBOS    009          COMPONENT ID OF BASE OPERATING
                                SYSTEM
033    DSRRELES    001          RELEASE
034    DSRFEAT     001          FEATURE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DSRASID	004	05C	DSRNONSL	002	050	DSRTOD	008	00C
DSRBK	001	000	DSRNONSO	002	052			
DSRBKSIZ	001	070	DSROSSL	002	04C			
DSRCDSL	002	054	DSROSSOF	002	04E			
DSRCDSOF	002	056	DSRPART3	001	070			
DSRDATE	008	017	DSRPROVN	008	040			
DSRDMPTY	008	038	DSRRELES	001	033			
DSRFEAT	001	034	DSRRSSL	002	048			
DSRFLAG1	001	036	DSRRSSOF	002	04A			
DSRFLAG2	001	037	DSRSERNO	006	006			
DSRFLTOD	001	080	DSRSIZE	001	00E			
DSRGREEN	011	01F	DSRSIZ1	001	048			
DSRGUEST	001	040	DSRSIZ2	001	028			
DSRHOST	001	000	DSRSRID	002	000			
DSRIDBOS	009	02A	DSRSYSID	012	02A			
DSRMODEL	004	002	DSRTICON	004	020			
DSRMORE2	001	080	DSRTIMST	011	00C			

HCPDSVBK— DISPATCH VECTOR BLOCK

DSECT NAME: DSVBK

DESCRIPTIVE NAME: DISPATCH VECTOR BLOCK

FUNCTION: THE DSVBK MAPS THE FORMAT OF A PROCESSOR LOCAL DISPATCH VECTOR (PLDV). THERE IS ONE PLDV FOR EACH REAL CPU, PLUS AN ADDITIONAL ONE TO CONTAIN MASTER- ONLY WORK. THIS DSECT MAPS THE STORAGE DEFINED IN THE MODULE HCPDSV.

LOCATED BY:

HCPDSVMS IS THE ADDRESS OF THE MASTER-ONLY PLDV.
HCPDSVST IS THE STARTING ADDRESS OF THE OTHER PLDVS.
THEY ARE CONTIGUOUS IN STORAGE.

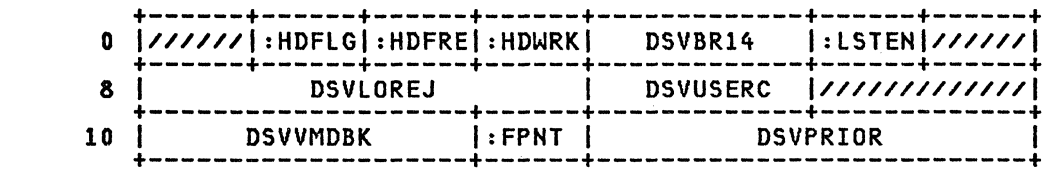
CREATED BY:

THE PLDVS ARE DCED IN MODULE HCPDSV.

DELETED BY:

NEVER DELETED

DSVBK - DISPATCH VECTOR BLOCK



disp	name	length	description
000	DSVHDWKB	001	BYTE OF WORK BITS
	BITS DEFINED IN DSVHDWKB (AT HEX DISPLACEMENT: 0)		
	80 DSVDSCAN		A STEAL TASK MAY NEED TO BE STARTED
001	DSVHDFLG	001	FLAG BYTE FOR PLDV STATUS
	BITS DEFINED IN DSVHDFLG (AT HEX DISPLACEMENT: 1)		
	80 DSVHDOFL		SET WHEN PLDV HAS "OVERFLOWED"
	40 DSVTIDLE		SET TO INDICATE THAT A SCAN ..SHOULD BE MADE OF THE ..TEST-IDLE USERS BY HCPDSP.
	20 DSVSTLST		WE MUST SET UP THE 'LAST ENTRY ..IN THE PLDV'. THIS FLAG IS ..USED DURING ADD TO PLDV ..PROCESSING
	10 DSVIMBAL		POSSIBLE PROCESSOR WORKLOAD IMBALANCE
002	DSVHDFRE	001	ANCHOR OF THE "ENTRIES NOT IN ..USE" QUEUE.
003	DSVHDWRK	001	ANCHOR OF THE "ENTRIES IN USE" ..QUEUE.
004	DSVBR14	002	THIS IS REALLY THE FOLLOWING:
006	DSVLSTEN	001	LAST ENTRY IN THE PLDV
007		AL1	RESERVED FOR FUTURE IBM USE
008	DSVLOREJ	004	LOWEST-VALUE (BEST) PRIORITY ..WHICH WAS REJECTED FROM THIS ..PLDV
00C	DSVUSERC	002	USER COUNT - NUMBER OF VMDBKS IN


```
                                ..THIS PLDV
00E                 H           RESERVED FOR FUTURE IBM USE

                        EQUATES

          10      DSVHDLEN      LENGTH IN BYTES OF THE PLDV
                                ..HEADER.

010     DSVVMDBK    003         BITS 0 TO 19 OF THE USER'S VMDBK
                                ..ADDRESS.  BITS 20 TO 31 ARE
                                ..KNOWN TO BE ZERO AND NEED NOT
                                ..BE STORED IN THE VECTOR ENTRY.

          BITS DEFINED IN DSVVMDBK (AT HEX DISPLACEMENT: 10)

          80      DSVINUSE      HIGH-ORDER BIT IS SET WHEN THE
                                ..PLDV ENTRY IS "IN USE",
                                ..WHENEVER THE ENTRY IS IN THE
                                ..CHAIN STARTING FROM DSVHDWRK.

012     DSVFLAGS    001         A FLAG NIBBLE

                        EQUATES

          08      DSVNOSTL      SET WHEN WORK MUST NOT BE STOLEN,
                                IN ORDER TO RESPECT VMDBK'S
                                AFFINITY REQUIREMENTS

013     DSVFPNT     001         FORWARD POINTER TO NEXT ENTRY
                                ..IN QUEUE.  ZERO IF THIS IS THE
                                ..LAST ENTRY.
014     DSVPRIOR    004         A REPRESENTATION OF THIS VMDBK'S
                                ..PRIORITY IN THE DISPATCH LIST.
                                ..THE VALUE IN THIS FIELD IS A
                                ..FUNCTION OF THE VMDBK'S
                                ..VMDDPRTY.

                        EQUATES

          08      DSVENTLN      LENGTH IN BYTES OF A PLDV ENTRY
          0E      DSVMAXUS      MAXIMUM NUMBER OF USERS IN A
                                ..PLDV
          80      DSVLEN        LENGTH IN BYTES OF
                                ..A PLDV.
          10      DSVSIZE       SIZE IN DOUBLEWORDS OF A PLDV


                      MORE EQUATES

         000      DSVHEADR      BASE VALUE TO BE USED WHEN
                                ..REFERENCING THE PLDV HEADER.
         010      DSVENTRY      BASE VALUE TO BE USE WHEN
                                ..REFERENCING A PLDV ENTRY.
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DSVBK	001	000	DSVFPNT	001	013	DSVHDWRK	001	003
DSVBR14	002	004	DSVHDFLG	001	001	DSVHEADR	001	000
DSVDSCAN	001	080	DSVHDFRE	001	002	DSVIMBAL	001	010
DSVENTLN	001	008	DSVHDLEN	001	010	DSVINUSE	001	080
DSVENTRY	001	010	DSVHDOFL	001	080	DSVLEN	001	080
DSVFLAGS	001	012	DSVHDWKB	001	000	DSVLOREJ	004	008

Name	Len	Val/Disp
DSVLSTEN	001	006
DSVMAXUS	001	00E
DSVNOSTL	001	008
DSVPRIOR	004	014
DSVSIZE	001	010
DSVSTLST	001	020
DSVTIDLE	001	040
DSVUSERC	002	00C
DSVVMDBK	003	010

HCPDTLBK— DATALINK SOURCE

DSECT NAME: DTLBK

DESCRIPTIVE NAME: DATALINK SOURCE

FUNCTION: A VARIABLE LENGTH BUFFER CONTAINING THE DATALINK SOURCE FOR A TRACEID. EACH BUFFER CONTAINS ONE DATALINK. FOR MULTIPLE DATALINKS THE DTLBKS ARE CHAINED.

LOCATED BY:

TRCDTLBK

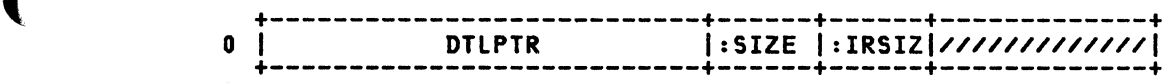
CREATED BY:

HCPTXD

DELETED BY:

HCPTXD

DTLBK - DATALINK SOURCE



disp	name	length	description
000	DTLPTR	004	POINTER TO NEXT DTLBK
004	DTLSIZE	001	SIZE (IN BYTES) OF THE DATALINK
005	DTLIRSIZ	001	LENGTH OF DATALINK INTERNAL REPRESENTATION IN TRCBK
006		1H	RESERVED FOR IBM USE
008	DTLDISP	004	DATALINK SOURCE

CROSS REFERENCE

Name	Len	Val/Disp
DTLBK	001	000
DTLDISP	004	008
DTLIRSIZ	001	005
DTLPTR	004	000
DTLSIZE	001	004

HCPDUNDX— DIRECTORY USER INDEX BLOCK

DSECT NAME: DUNDX

DESCRIPTIVE NAME: DIRECTORY USER INDEX BLOCK

FUNCTION: THE DIRECTORY USER INDEX BLOCK CONTAINS ACCESS INFORMATION TO A USER'S HCPDDEV AND HCPDVMD BLOCKS

LOCATED BY:

DUNUFPNT CHAINED
SYSDINDX FIELD OF HCPSYSCM BLOCK

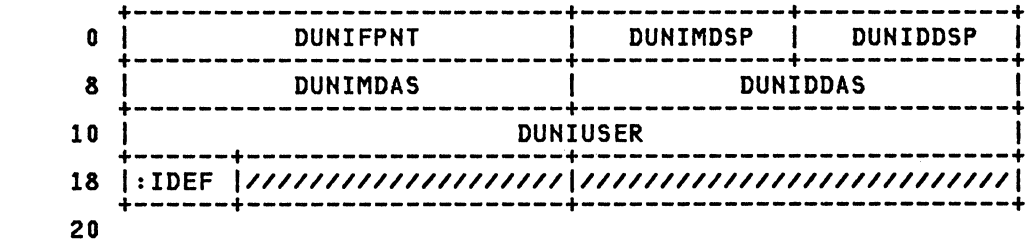
CREATED BY:

HCPDIR, HCPUDR

DELETED BY:

HCPUDR

DUNDX - DIRECTORY USER INDEX BLOCK



disp	name	length	description
000	DUNIFPNT	004	OPEN QUEUE PTR FOR USE BY HCPUDR
004	DUNIMDSP	002	DISP OF DVMD BLOCK IN PAGE
006	DUNIDDSP	002	DISP OF DDEV BLOCK IN PAGE
008	DUNIMDAS	004	SLOT ADDR OF USER DVMD BLOCK
00C	DUNIDDAS	004	SLOT ADDR OF 1ST USER DDEV BLOCK
010	DUNIUSER	008	VIRTUAL MACHINE USERID
018	DUNIDEF	001	VIRTUAL MACHINE DEFINITION FLAGS
			X'20' ..1. .... DVMDNLG VIRTUAL MACHINE'S PSWD IS NOLOG

BITS DEFINED FOR DUNIDEF BY HCPDVMD DVMDDEF

019	3X	RESERVED FOR FUTURE IBM USE
01C	1F	RESERVED FOR FUTURE IBM USE

EQUATES

04	DUNISIZE	DUNDX BLOCK SIZE IN DW'S

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
DUNDX	001	000	DUNIDDSP	002	006	DUNIFPNT	004	000
DUNIDDAS	004	00C	DUNIDEF	001	018	DUNIMDAS	004	008

Name	Len	Val/Disp
DUNIMDSP	002	004
DUNISIZE	001	004
DUNIUSER	008	010

HCPDVIOP— DASD VIRTUAL I/O PARAMETER LIST

DSECT NAME: DVIOP

DESCRIPTIVE NAME: DASD VIRTUAL I/O PARAMETER LIST

FUNCTION: DESCRIBE THE FIXED PARAMETERS OF A MINI DISK CACHE REQUEST

LOCATED BY:

N/A

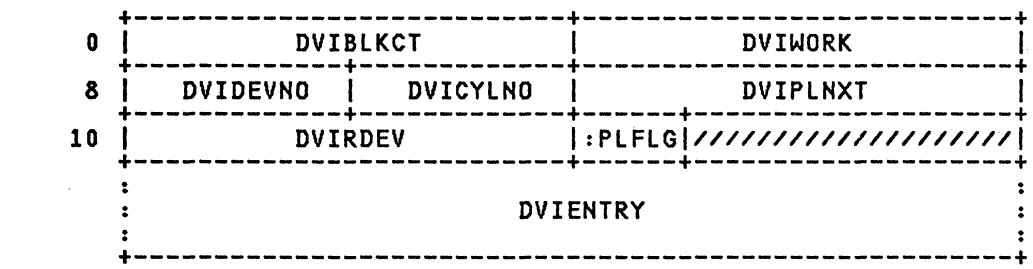
CREATED BY:

THE PROGRAM ISSUING THE MINIDISK CACHE REQUEST
OR HCPCIN (FOR DIAGNOSE X'20' OR X'A8')

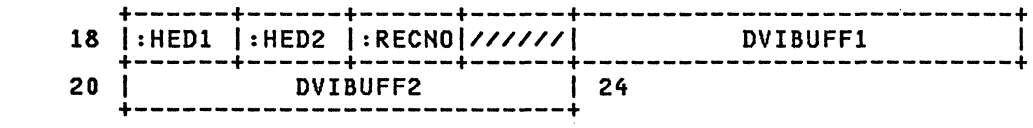
DELETED BY:

THE PROGRAM ISSUING THE MINIDISK CACHE REQUEST

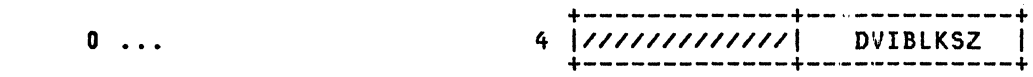
DVIOP - DASD VIRTUAL I/O PARAMETER LIST



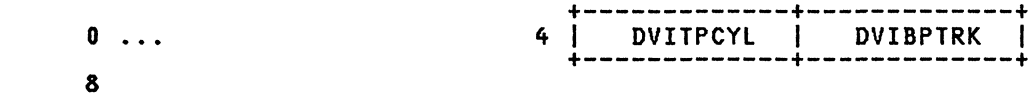
REDEFINITION - START OF PLIST ENTRY



REDEFINITION - REDEFINE FOR BLOCK SIZE



REDEFINITION - REDEFINE FOR MDCCI CALL



disp	name	length	description
000	DVIBLKCT	004	THE NUMBER OF BLOCKS TO BE PROCESSED. THERE IS ONE DVIENTRY FOR EACH BLOCK
004	DVIWORK	004	WORK AREA, CONTENTS VARY


```
                                  WITH FUNCTION
008    DVIDVCYL    004            NAME FOR MOVING BOTH
                                  DVIDEVNO+DVICYLNO IN ONE STEP
008    DVIDEVNO    002            THE DEVICE NUMBER OF THE
                                  VOLUME CONTAINING THE BLKS
00A    DVICYLNO    002            THE CYLINDER LOCATION OF
                                  THE BLOCKS
00C    DVIPLNXT    004            POINTER TO THE NEXT DVIOP
                                  PARAMETER LIST, IF IT EXISTS
010    DVIRDEV     004            ADDRESS OF RDEV, WHICH
                                  CONTAINS POINTER TO
                                  CYLINDER BIT MAP
014    DVIPLFLG    001            FLAG BYTE
015                3X             RESERVED FOR IBM USE

                       EQUATES

         18     DVIHDRSZ          LENGTH (IN BYTES) OF
                                  PARAMETER LIST HEADER
         03     DVIHSIZE          LENGTH IN DOUBLE WORDS OF
                                  PARAMETER LIST HEADER

018    DVIENTRY    004            START OF VARIABLE LENGTH DATA

          REDEFINITION - START OF PLIST ENTRY

018    DVIBLKID    003            BLOCKID - THE HEAD AND RECORD
                                  LOCATION OF THE BLOCK - HHR
018    DVIHEDNO    002            THE HEAD NUMBER - HH
018    DVIHED1     001            THE 1ST BYTE OF HEAD NUMBER
019    DVIHED2R    002            NAME FOR MOVING BOTH
                                  DVIHED2+DVIRECNO IN ONE STEP
019    DVIHED2     001            THE 2ND BYTE OF HEAD NUMBER
01A    DVIRECNO    001            THE RECORD NUMBER - R
01B                X              RESERVED FOR IBM USE

                       EQUATES

         04     DVIIDLEN          LENGTH (IN BYTES) OF HHRX

01C    DVIBUFF1    004            REAL ADDRESS OF DATA BUFFER
020    DVIBUFF2    004            REAL ADDRESS OF SECOND BUFFER, WHICH
                                  MUST BE PAGE ALIGNED.
                                  IF FIRST IS NOT PAGE ALIGNED

                       EQUATES

         0C     DVIBLLEN          LENGTH (IN BYTES) OF ENTRY

024    DVIENXT     004            START OF NEXT DVIENTRY

          REDEFINITION - REDEFINE FOR BLOCK SIZE

004                H              RESERVED
006    DVIBLKSZ    002            HALFWORD CONTAINING SIZE
                                  (MAX = 4096)

          REDEFINITION - REDEFINE FOR MDCCI CALL

004    DVITPCYL    002            NUMBER OF TRACKS PER CYLINDER
006    DVIBPTRK    002            NUMBER OF BLOCKS PER TRACK

                       MORE EQUATES

        080     DVIRDINS          READ-MISS CALL TO HCPMDCWR
```

CROSS REFERENCE

Name	Len	Val/Disp
DVIBLKCT	004	000
DVIBLKID	003	018
DVIBLKSZ	002	006
DVIBLLEN	001	00C
DVIBPTRK	002	006
DVIBUFF1	004	01C
DVIBUFF2	004	020
DVICYLNO	002	00A
DVIDEVNO	002	008
DVIDVCYL	004	008
DVIENTRY	004	018
DVIENXT	004	024
DVIHDRSZ	001	018
DVIHEDNO	002	018
DVIHED1	001	018
DVIHED2	001	019
DVIHED2R	002	019
DVIHSIZE	001	003
DVIIDLEN	001	004
DVIOP	001	000
DVIPLFLG	001	014
DVIPLNXT	004	00C
DVIRDEV	004	010
DVIRDINS	001	080
DVIRECNO	001	01A
DVITPCYL	002	004
DVIWORK	004	004

HCPDVMD— GUEST VIRTUAL MACHINE DIRECTORY BLOCK

DSECT NAME: DVMD

DESCRIPTIVE NAME: GUEST VIRTUAL MACHINE DIRECTORY BLOCK

FUNCTION: THE GUEST VIRTUAL MACHINE DIRECTORY BLOCK DEFINES A USER'S VIRTUAL MACHINE ENVIRONMENT AS SPECIFIED IN THE SYSTEM DIRECTORY FILE

LOCATED BY:

DUNIMDAS FIELD OF HCPDUNDX
DUNIMDAS FIELD OF HCPDUNDX

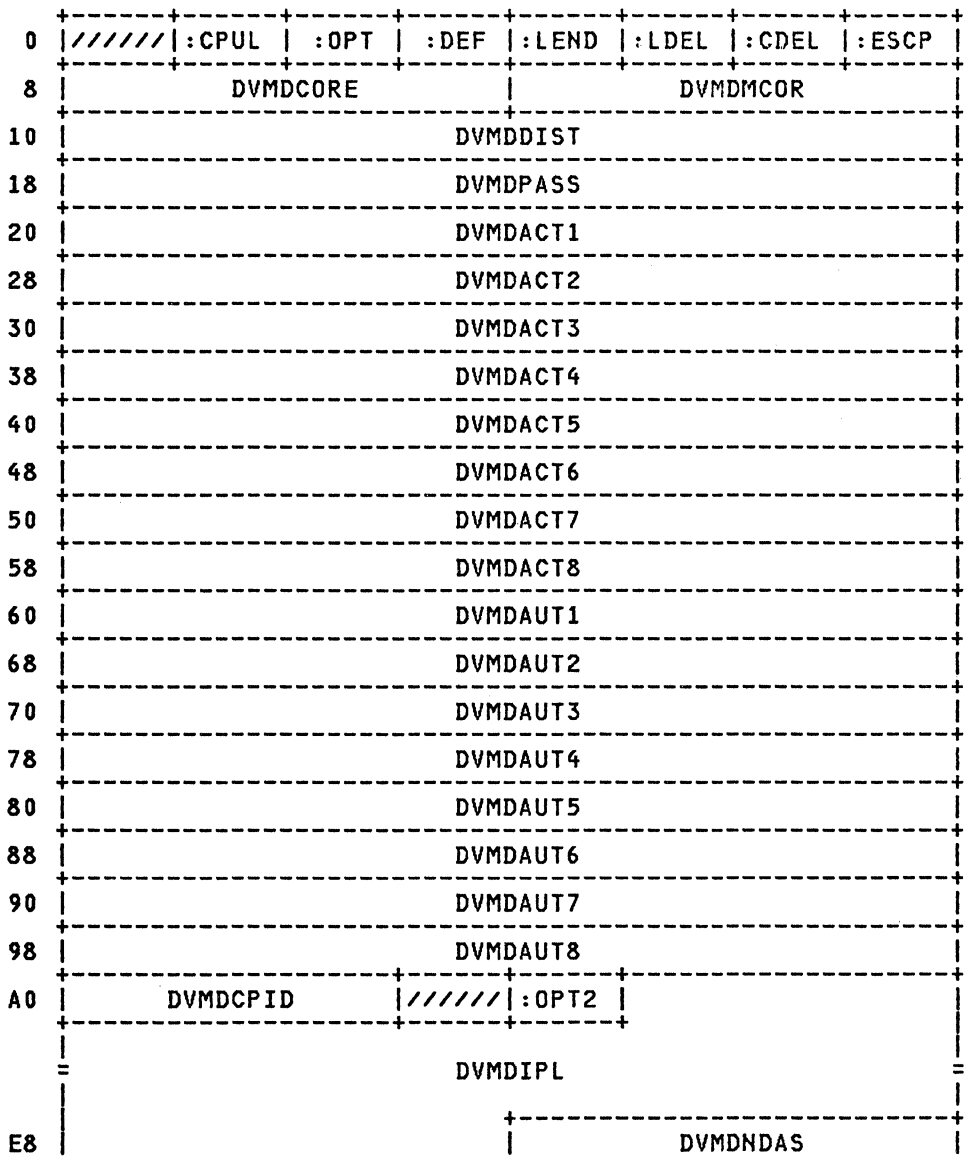
CREATED BY:

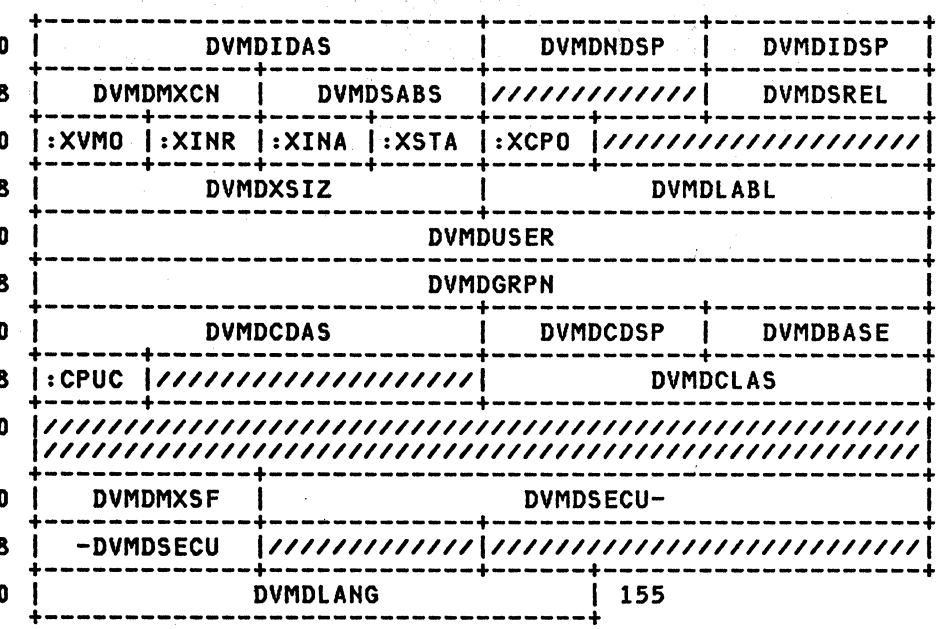
HCPDIR, HCPUDR

DELETED BY:

HCPCFS, HCPCSC, HCPCSP, HCPDEF, HCPHVD, HCPLOG, HCPUDR

DVMD - GUEST VIRTUAL MACHINE DIRECTORY BLOCK





disp	name	length	description
000		1X	RESERVED FOR FUTURE IBM USE
001	DVMDCPUL	001	MAX NO OF CPU'S - 1
002	DVMDOPT	001	VIRTUAL MACHINE OPTION FLAGS
	BITS DEFINED IN DVMDOPT (AT HEX DISPLACEMENT: 2)		
	80 DVMDNOVF		NO VIRTUAL VECTOR FACILITY .. ALLOWED FOR THIS USER
	40 DVMDCPU		CPUID ON OPTION STATEMENT
	20 DVMDMIH		MIH ON OPTION STATEMENT
	10 DVMDVROP		VIRTUAL = REAL STORAGE OPTIONS
	08 DVMDACC		ACCOUNTING OPTION
	04 DVMDCONC		CONCEAL OPTION
	02 DVMDQDSP		QUICKDSP OPTION
	01 DVMDVTOD		TODENABLE OPTION
003	DVMDDEF	001	VIRTUAL MACHINE DEFINITION FLAGS
	BITS DEFINED IN DVMDDEF (AT HEX DISPLACEMENT: 3)		
	80 DVMDXSTR		EXTENDED STORAGE FACILITY ALLOWED
	40 DVMDNOP		'NOPDATA' STATEMENT IN ENTRY
	20 DVMDNLG		VIRTUAL MACHINE'S PSWD IS NOLOG
	04 DVMDYES		USER HAS AT LEAST ONE DDEV
	02 DVMDVXA		GUEST IS A VIRTUAL XA
	01 DVMDV370		GUEST IS A VIRTUAL 370
004	DVMDLEND	001	TERMINAL LINE END SYMBOL
005	DVMDLDEL	001	TERMINAL LINE DELETE SYMBOL
006	DVMDCDEL	001	TERMINAL CHARACTER DELETE SYMBOL
007	DVMDESCP	001	TERMINAL ESCAPE CHARACTER
008	DVMDCORE	004	VIRTUAL MEMORY SIZE IN BYTES
00C	DVMDMCOR	004	MAX VIRTUAL MEMORY SIZE IN BYTES
010	DVMDDIST	008	USER MACHINE DISTRIBUTION CODE
018	DVMDPASS	008	USER MACHINE LOGON PASSWORD
020	DVMDACT1	008	VIRTUAL MACHINE ACCT NUMBER (1)
028	DVMDACT2	008	VIRTUAL MACHINE ACCT NUMBER (2)
030	DVMDACT3	008	VIRTUAL MACHINE ACCT NUMBER (3)
038	DVMDACT4	008	VIRTUAL MACHINE ACCT NUMBER (4)
040	DVMDACT5	008	VIRTUAL MACHINE ACCT NUMBER (5)
048	DVMDACT6	008	VIRTUAL MACHINE ACCT NUMBER (6)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050   DVMDACT7   008       VIRTUAL MACHINE ACCT NUMBER (7)
058   DVMDACT8   008       VIRTUAL MACHINE ACCT NUMBER (8)

                    EQUATES

        40     DVMDACLN    NUM OF CONTIGUOUS BYTES OF ACCT
        08     DVMDACNM    NUMBER OF ACCOUNT NUMBERS

060   DVMDAUT1   008       AUTHORIZED AUTOLOG ID (1)
068   DVMDAUT2   008       AUTHORIZED AUTOLOG ID (2)
070   DVMDAUT3   008       AUTHORIZED AUTOLOG ID (3)
078   DVMDAUT4   008       AUTHORIZED AUTOLOG ID (4)
080   DVMDAUT5   008       AUTHORIZED AUTOLOG ID (5)
088   DVMDAUT6   008       AUTHORIZED AUTOLOG ID (6)
090   DVMDAUT7   008       AUTHORIZED AUTOLOG ID (7)
098   DVMDAUT8   008       AUTHORIZED AUTOLOG ID (8)

                    EQUATES

        40     DVMDATLN    NUM OF CONTIGUOUS BYTES OF AUTOLOG
        08     DVMDATNM    NUMBER OF AUTOLOG IDS ALLOWED

0A0   DVMDCPID   003       CPUID SERIAL NUMBER IN BINARY
0A3              1X        RESERVED FOR FUTURE IBM USE
0A4   DVMDOPT2   001       VIRTUAL MACHINE OPTION FLAGS

      BITS DEFINED IN DVMDOPT2 (AT HEX DISPLACEMENT: A4)

        80     DVMDAG98    DIAG98 OPTION
        40     DVMDSVMS    REPRESENTS THE SVMSTAT OPTION OF THE
                           DIRECTORY OPTION STATEMENT
        20     DVMDVFOP    VIRTUAL = FIXED STORAGE OPTION
        10     DVMDDED     ON IF DEDICATE ON OPTION STMT
        08     DVMDNDED    ON IF NODEDICATE ON OPTION STMT
        04     DVMDLAN     LANG ON OPTION STATEMENT

0A5   DVMDIPL    071        IPL STATEMENT FROM DIR. SOURCE

                    EQUATES

        09     DVMDIPSD    DVMDIPL SIZE IN DW'S

0EC   DVMDNDAS   004        DASD ADDRESS OF FIRST DNSA BLOCK
0F0   DVMDIDAS   004        DASD ADDRESS OF FIRST DIUCV BLOCK
0F4   DVMDNDSP   002        DISPLACEMENT TO FIRST DNSA BLOCK
0F6   DVMDIDSP   002        DISPLACEMENT TO FIRST DIUCV BLOCK
0F8   DVMDMXCN   002        MAXCONN VALUE FROM OPTION STATMNT
0FA   DVMDSABS   002        ABSOLUTE SHARE OF THE SYSTEM
0FC              H          RESERVED FOR IBM USE
0FE   DVMDSREL   002        RELATIVE SHARE OF THE SYSTEM
100   DVMDXVMO   001        VM OUTPUT
101   DVMDXINR   001        INPUT REDISPLAY
102   DVMDXINA   001        INPUT AREA
103   DVMDXSTA   001        STATUS AREA
104   DVMDXCPO   001        CP OUTPUT
105              3X         RESERVED FOR FUTURE IBM USE
108   DVMDXSIZ   004        SIZE IN MEGABYTES, OF REQUESTED
                           ..AMOUNT OF EXPANDED STORAGE, OR
                           ..4X'00' IF 'ALL' WAS SPECIFIED.
10C   DVMDLABL   004        LABEL TO VALIDATE THIS BLOCK
110   DVMDUSER   008        USERID TO VALIDATE THIS BLOCK
118   DVMDGRPN   008        ACI GROUPNAME
120   DVMDCDAS   004        DASD ADDRESS OF FIRST DCPU BLOCK
124   DVMDCDSP   002        DISPLACEMENT TO FIRST DCPU BLOCK
126   DVMDBASE   002        BASE CPU ADDRESS FOR THIS USER
128   DVMDCPUC   001        COUNT OF DCPUS FOR THIS USER
129              XL3        RESERVED FOR FUTURE IBM USE
12C   DVMDCLAS   004        USER COMMAND CLASS(ES)
130              4F         RESERVED FOR FUTURE IBM USE
140   DVMDMXSF   002        MAX NUMBER OF SPOOL FILES ALLOWED
142   DVMDSECU   008        SECONDARY USER USERID
14A              H          RESERVED FOR FUTURE IBM USE
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14C                 F       RESERVED FOR FUTURE IBM USE
150   DVMDLANG      005     LANGID FROM OPTION STATEMENT
```

EQUATES

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        2B     DVMDSIZE     DVMD BLOCK SIZE IN DW'S
        55     DVMDBSIZ     DVMD BLOCK SIZE IN BYTES
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
DVMD	001	000	DVMDMXCN	002	0F8
DVMDACC	001	008	DVMDMXSF	002	140
DVMDACLN	001	040	DVMDNDAS	004	0EC
DVMDACNM	001	008	DVMDNDED	001	008
DVMDACT1	008	020	DVMDNDSP	002	0F4
DVMDACT2	008	028	DVMDNLG	001	020
DVMDACT3	008	030	DVMDNOP	001	040
DVMDACT4	008	038	DVMDNOVF	001	080
DVMDACT5	008	040	DVMDOPT	001	002
DVMDACT6	008	048	DVMDOPT2	001	0A4
DVMDACT7	008	050	DVMDPASS	008	018
DVMDACT8	008	058	DVMDQDSP	001	002
DVMDAG98	001	080	DVMDSABS	002	0FA
DVMDATLN	001	040	DVMDSECU	008	142
DVMDATNM	001	008	DVMDSIZE	001	02B
DVMDAUT1	008	060	DVMDSREL	002	0FE
DVMDAUT2	008	068	DVMDSVMS	001	040
DVMDAUT3	008	070	DVMDUSER	008	110
DVMDAUT4	008	078	DVMDVFOP	001	020
DVMDAUT5	008	080	DVMDVROP	001	010
DVMDAUT6	008	088	DVMDVTOD	001	001
DVMDAUT7	008	090	DVMDVXA	001	002
DVMDAUT8	008	098	DVMDV370	001	001
DVMDBASE	002	126	DVMDXCPO	001	104
DVMDBSIZ	001	155	DVMDXINA	001	102
DVMDCDAS	004	120	DVMDXINR	001	101
DVMDCDEL	001	006	DVMDXSIZ	004	108
DVMDCDSP	002	124	DVMDXSTA	001	103
DVMDCLAS	004	12C	DVMDXSTR	001	080
DVMDCONC	001	004	DVMDXVMO	001	100
DVMDCORE	004	008	DVMDYES	001	004
DVMDCPID	003	0A0			
DVMDCPU	001	040			
DVMDCPUC	001	128			
DVMDCPUL	001	001			
DVMDDED	001	010			
DVMDDEF	001	003			
DVMDDIST	008	010			
DVMDESCP	001	007			
DVMDGRPN	008	118			
DVMDIDAS	004	0F0			
DVMDIDSP	002	0F6			
DVMDIPL	071	0A5			
DVMDIPSD	001	009			
DVMDLABL	004	10C			
DVMDLAN	001	004			
DVMDLANG	005	150			
DVMDLDEL	001	005			
DVMDLEND	001	004			
DVMDMCOR	004	00C			
DVMDMIH	001	020			

HCPDVTYP— CONSTANTS FOR DEVICE TYPE INFORMATION

DSECT NAME: DVTYP

DESCRIPTIVE NAME: CONSTANTS FOR DEVICE TYPE INFORMATION

FUNCTION: CONTAINS CONSTANTS FOR DEVICE TYPE, MODEL AND FEATURE INFORMATION

LOCATED BY:

N/A

CREATED BY:

THIS FILE CONTAINS ONLY CONSTANTS
AND DEFINITIONS TO BE USED ELSEWHERE.
THEREFORE, IT TAKES UP NO SPACE
AND REQUIRES NO STORAGE.

DELETED BY:

NONE

Value	Name	Description
00000080	CLASTERM	TERMINAL DEVICE CLASS
00000040	CLASGRAF	GRAPHIC DISPLAY DEVICE CLASS
00000041	CLASGRFR	GRAPHIC DISPLAY DEVICE CLASS (REMOTE)
00000020	CLASPOOL	UNIT RECORD SPOOLING DEVICE CLASS
00000008	CLASTAPE	MAGNETIC TAPE DEVICE CLASS
00000004	CLASDASD	DIRECT ACCESS STORAGE DEVICE CLASS
00000002	CLASSPEC	SPECIAL DEVICE CLASS
00000080	TYP2700	TERM - 2700 BISYNC LINE
00000088	TYPBSC	TERM - BISYNC LINE FOR 3270 REMOTE STATION
00000040	TYPCONS	TERM - CONSOLE DEVICE
00000040	TYP3215	TERM - 3215 CONSOLE
00000040	TYP1052	TERM - 1052 CONSOLE
00000020	TYPTTY	TERM - USASCII-8 TELEGRAPH TERMINAL
00000010	TYPIBM1	TERM - IBM TERMINAL CONTROL TYPE 1
0000001C	TYPUNDEF	TERM - TERMINAL TYPE UNDEFINED
00000018	TYP2741	TERM - 2741 COMMUNICATIONS TERMINAL
00000018	TYP3767	TERM - 3767 IN 2741 COMPATIBILITY MOD
00000014	TYP1050	TERM - 1050 COMMUNICATIONS TERMINAL
00000040	TYP3270	GRAF - 3270 GENERIC DISPLAY STATION
00000080	TYP3277	GRAF - 3277 DISPLAY STATION
00000040	TYP3278	GRAF - 3278 DISPLAY STATION
00000040	TYP3178	GRAF - 3178 DISPLAY STATION
00000040	TYP3279	GRAF - 3279 DISPLAY STATION
00000040	TYP3179	GRAF - 3179 DISPLAY STATION
00000040	TYP3180	GRAF - 3180 DISPLAY STATION
00000040	TYP3290	GRAF - 3290 DISPLAY STATION
00000040	TYP3190	GRAF - 3190 DISPLAY STATION
00000020	TYP3271	GRAF - 3271 CONTROLLER (REMOTE)
00000010	TYP3275	GRAF - 3275 DISPLAY STATION
00000008	TYP3284	GRAF - 3284 PRINTER
00000008	TYP3286	GRAF - 3286 PRINTER
00000009	TYP3287	GRAF - 3287 PRINTER
00000008	TYP3288	GRAF - 3288 PRINTER
00000009	TYP3289	GRAF - 3289 PRINTER
00000008	TYP3287L	GRAF - 3287 LOGICAL PRINTER
00000008	TYP3289L	GRAF - 3289 LOGICAL PRINTER
00000004	TYP2250	GRAF - 2250 DISPLAY UNIT
00000004	TYP3250	GRAF - 3250 DISPLAY UNIT
00000006	TYP5080	GRAF - 5080 DISPLAY UNIT
00000036	TYPCLUST	GRAF - CLUSTER CTLR (3271 OR 3275)
00000080	TYPRDR	SPOL - CARD READER DEVICE
00000081	TYP2501	SPOL - 2501 CARD READER

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00000082    TYP2540R    SPOL - 2540 CARD READER
00000084    TYP3505     SPOL - 3505 CARD READER
00000040    TYPPUN      SPOL - CARD PUNCH DEVICE
00000042    TYP2540P    SPOL - 2540 CARD PUNCH
00000044    TYP3525     SPOL - 3525 CARD PUNCH
00000020    TYPPRT      SPOL - PRINTER TYPE DEVICE
00000021    TYP1403     SPOL - 1403 PRINTER
00000022    TYP32XX     SPOL - 3203 OR 3211 PRINTER
00000026    TYP3203     SPOL - 3203 PRINTER
00000022    TYP3211     SPOL - 3211 PRINTER
00000028    TYP3800     SPOL - 3800 PRINTER
00000023    TYP3262     SPOL - 3262 PRINTER
00000024    TYP4245     SPOL - 4245 PRINTER
00000029    TYP4248     SPOL - 4248 PRINTER
00000010    TYPSYS      SPOL - SYSTEM VIRT DEVICE FOR DUMPS

00000010    TYP3420     TAPE - 3420 TAPE DRIVE
00000020    TYP3430     TAPE - 3430 TAPE DRIVE
00000040    TYP3480     TAPE - 3480 TAPE DRIVE

00000040    TYP3330     DASD - 3330 DISK STORAGE FACILITY
00000020    TYP3340     DASD - 3340 DISK STORAGE FACILITY
00000010    TYP3350     DASD - 3350 DISK STORAGE FACILITY
00000011    TYP3350C    DASD - 3350 4 X 8 PAGING STORAGE
00000012    TYP3350D    DASD - 3350 4 X 4 PAGING STORAGE
00000008    TYP2305     DASD - 2305 FIXED HEAD
                        STORAGE FACILITY
00000004    TYP3380     DASD - 3380 DISK STORAGE FACILITY
00000080    TYP3375     DASD - 3375 DISK STORAGE FACILITY
00000002    TYP3370     DASD - 3370 DISK STORAGE FACILITY

00000080    TYPCTCA     SPEC - CHANNEL TO CHANNEL ADAPTER
00000040    TYP3704     SPEC - 3704 PROGRAMMABLE
                        COMMUNICATION CONTROL UNIT
00000040    TYP3705     SPEC - 3705 PROGRAMMABLE
                        COMMUNICATION CONTROL UNIT
00000002    TYP3851     SPEC - MSS MASS STORAGE COMMUNICATOR
00000008    TYP3890     SPEC - 3890 DOCUMENT PROCESSOR
00000001    TYPUNSUP    SPEC - DEVICE UNSUPPORTED BY          *
                        THE VM/ 370 MIGRATION AID
00000080    FTROPRDR    GRAF - OPERATOR ID CARD READER
00000001    FTRDIAL     GRAF - 3275 WITH SWITCHED
                        LINE SUPPORT

00000001    FTRUCS      SPOL - UCS FEATURE
00000080    FTR4WCGM    SPOL - 3800 WITH FOUR WRITEABLE
                        CHARACTER GENERATION MODULES

00000080    FTR7TRK     TAPE - 7-TRACK FEATURE
00000040    FTRDUAL     TAPE - DUAL DENSITY FEATURE
00000020    FTRTRAN     TAPE - TRANSLATE FEATURE
00000010    FTRCONV     TAPE - DATA CONVERSION FEATURE

00000080    FTRRPS      DASD - ROTATIONAL POSITIONAL SENSING
00000040    FTRDYNP     DASD - DYNAMIC PATHING
00000020    FTRVUA      DASD - 3330V THAT MAY BE DEDICATED
                        TO A VIRTUAL MACHINE
00000008    FTR35MB     DASD - 35 MB DATA MODULE (3340)
00000004    FTR70MB     DASD - 70 MB DATA MODULE (3340)
00000002    FTRRSRL     DASD/TAPE RESERVE?RELEASE CCW FEATURE
00000001    FTRCOMP     DASD - 3350 IN 3330 COMPAT. MODE

00000080    FTRTERM     SPEC - UNSUPPORTED TERMINAL DEVICE
00000040    FTRGRAF     SPEC - UNSUPPORTED GRAPHIC DISPLAY
                        DEVICE
00000020    FTRSPOOL    SPEC - UNSUPPORTED UNIT RECORD
                        SPOOLING DEVICE
00000008    FTRTAPE     SPEC - UNSUPPORTED MAGNETIC TAPE
                        DEVICE
00000004    FTRDASD     SPEC - UNSUPPORTED DIRECT ACCESS
                        DEVICE
00000010    FTRTYP1     SPEC - TYPE ONE CHANNEL ADAPTER
00000040    FTRTYP4     SPEC - TYPE FOUR CHANNEL ADAPTER
```



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00000002    M230502     DASD - 2305 model 2
00000001    M333001     DASD - 3330 model 1 (404 cylinders)
00000001    M333002     DASD - 3330 model 2 (404 cylinders)
00000011    M333011     DASD - 3330 model 11(808 cylinders)
0000000A    M3380E      DASD - 3380 model E
0000001E    M3380K      DASD - 3380 model K

00000001    M380001     SPOL - 3800 printer model 1
00000003    M380003     SPOL - 3800 printer model 3
00000008    M380008     SPOL - 3800 printer model 8

00000002    M327702     GRAF - 3277 display station model 2
00000039    PAG3330     PAGES PER CYLINDER PER 3330
00000018    PAG3340     PAGES PER CYLINDER PER 3340
00000078    PAG3350     PAGES PER CYLINDER PER 3350
00000060    PAG3375     PAGES PER CYLINDER PER 3375
00000096    PAG3380     PAGES PER CYLINDER PER 3380
00000018    PAG2305     PAGES PER CYLINDER PER 2305

                        PGPTRK CODE DEFINITIONS  NUMBER OF PAGES PER TRACK

00000003    PPT3330     PAGES PER TRACK PER 3330
00000002    PPT3340     PAGES PER TRACK PER 3340
00000004    PPT3350     PAGES PER TRACK PER 3350
00000008    PPT3375     PAGES PER TRACK PER 3375
0000000A    PPT3380     PAGES PER TRACK PER 3380
00000003    PPT2305     PAGES PER TRACK PER 2305

                        CYLPDEV CODE DEFINITIONS  NUMBER OF CYLINDERS PER SPINDLE

00000194    CYL3330     CYLINDERS PER 3330 NOT MOD 11
00000328    CYL3331     CYLINDERS PER 3330 MOD 11
0000015C    CYL3340     CYLINDERS PER 3340 35 MB
000002B8    CYL3347     CYLINDERS PER 3340 70 MB
0000022B    CYL3350     CYLINDERS PER 3350
000003BF    CYL3375     CYLINDERS PER 3375
00000375    CYL3380     CYLINDERS PER 3380
00000375    CYL3380A    CYLINDERS PER 3380 MOD A
00000375    CYL3380D    CYLINDERS PER 3380 MOD D
000006EA    CYL3380E    CYLINDERS PER 3380 MOD E
00000375    CYL3380J    CYLINDERS PER 3380 MOD J
00000A5F    CYL3380K    CYLINDERS PER 3380 MOD K
00000060    CYL2352     CYLINDERS PER 2305 MOD 2

                        TCYLDEV CODE DEFINITIONS  TOTAL NUMBER OF CYLINDERS

00000060    TCYL2352    TOTAL CYLINDERS 2305 MOD 2
0000019B    TCYL3330    TOTAL CYLINDERS 3330 NOT MOD 11
0000032F    TCYL3331    TOTAL CYLINDERS 3330 MOD 11
0000015D    TCYL3340    TOTAL CYLINDERS 3340 35 MB
000002BA    TCYL3347    TOTAL CYLINDERS 3340 70 MB
00000230    TCYL3350    TOTAL CYLINDERS 3350
000003C0    TCYL3375    TOTAL CYLINDERS 3375
00000376    TCYL3380    TOTAL CYLINDERS 3380
00000376    TCYL338A    TOTAL CYLINDERS 3380 MOD A
00000376    TCYL338D    TOTAL CYLINDERS 3380 MOD D
000006EB    TCYL338E    TOTAL CYLINDERS 3380 MOD E
00000376    TCYL338J    TOTAL CYLINDERS 3380 MOD J
00000A60    TCYL338K    TOTAL CYLINDERS 3380 MOD K
```

HCPEMSBK— EMERGENCY SIGNAL SIGP TASK BLOCK

DSECT NAME: EMSBK

DESCRIPTIVE NAME: EMERGENCY SIGNAL SIGP TASK BLOCK

FUNCTION: HCPEMSBK REPRESENTS A REQUEST MADE BY ONE PROCESSOR FOR ANOTHER PROCESSOR TO PERFORM A PARTICULAR FUNCTION.

LOCATED BY:

PFXEMSAN	FIELD OF HCPPFXPG (ANCHOR FOR EMSBK CHAIN)
EMSFWDPT	FORWARD CHAINED

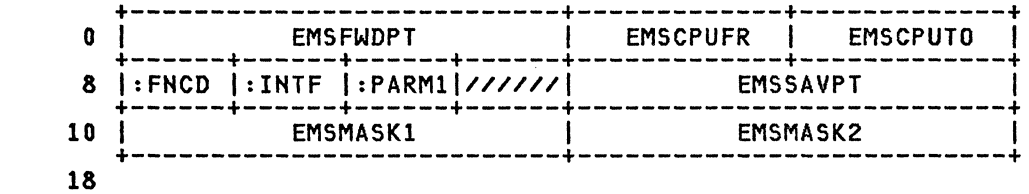
CREATED BY:

HCPSGP	WHEN ANOTHER PROCESSOR SHOULD PERFORM A FUNCTION

DELETED BY:

HCPSGP	WHEN THE TARGET PROCESSOR HAS RECEIVED THE REQUEST TO PERFORM THE FUNCTION
HCPMPS	WHEN A PROCESSOR'S STORAGE IS RELEASED DURING VARY OFF OF THE PROCESSOR

EMSBK - EMERGENCY SIGNAL SIGP TASK BLOCK



disp	name	length	description
000	EMSFWDPT	004	FORWARD POINTER TO NEXT EMSBK
004	EMSCPUAD	004	EMS TO AND FROM CPU ADDRESSES
004	EMSCPUFR	002	CPU FROM -- SIGNALING PROCESSOR
006	EMSCPUTO	002	CPU TO -- SIGNALLED PROCESSOR
008	EMSCODES	004	EMS CODES
008	EMSFNCD	001	FUNCTION CODE
	CODES DEFINED IN EMSFNCD (AT HEX DISPLACEMENT: 8)		
	02 EMSFNAPR		FUNCTION ALTERNATE PROC RECOVERY
	03 EMSFNLC		FUNCTION LOAD CONTROL REGISTER
	04 EMSFNSWM		FUNCTION SWITCH MASTER PROCESSOR
	05 EMSFNSWP		FUNCTION SWITCH PROCESSOR
009	EMSINTF	001	EMSBK INTERRUPT STATUS FIELD
	CODES DEFINED IN EMSINTF (AT HEX DISPLACEMENT: 9)		
	00 EMSINTNR		INTERRUPT NOT YET RECEIVED DO NOT UNSTACK THE BLOCK
	FF EMSINTR		INTERRUPT HAS BEEN RECEIVED UNSTACK THE BLOCK
00A	EMSPARM1	001	BYTE PARAMETER
00B		X	RESERVED FOR FUTURE IBM USE
00C	EMSSAVPT	004	POINTER TO SAVEAREA FOR RETURN ALSO USED TO HOLD CONTROL REG DATA FOR LOAD CNTL FUNCTION
010	EMSMASK1	004	FOR LCTL FUNCTION: SGPLCORN - BITS TO TURN ON SGPLCOFF - BITS TO TURN OFF SGPLCREP - BITS TO BE REPLACED
014	EMSMASK2	004	FOR LCTL FUNCTION:

SGPLCREP - BITS FOR REPLACEMENT

EQUATES

03 EMSSIZE SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
EMSBK	001	000
EMSCODES	004	008
EMSCPUAD	004	004
EMSCPUFR	002	004
EMSCPUTO	002	006
EMSFNAPR	001	002
EMSFNCD	001	008
EMSFNLC	001	003
EMSFNSWM	001	004
EMSFNSWP	001	005
EMSFWDPT	004	000
EMSINTF	001	009
EMSINTNR	001	000
EMSINTR	001	0FF
EMSMASK1	004	010
EMSMASK2	004	014
EMSPARM1	001	00A
EMSSAVPT	004	00C
EMSSIZE	001	003

HCPEQUAT— EQUATE SYMBOLS

DSECT NAME: EQUAT

DESCRIPTIVE NAME: EQUATE SYMBOLS

FUNCTION: PROVIDE STANDARDIZED EQUATE SYMBOLS FOR COMMONLY USED DEFINITIONS AND CODES

LOCATED BY:

EVERY HOST CONTROL PROGRAM (HCP) MODULE

CREATED BY:

THIS COPY FILE IS NOT A DSECT,
AND CONSISTS ONLY OF COMMENTS
AND ASSEMBLER EQUATE (EQU)
STATEMENTS. THEREFORE, IT
TAKES UP NO SPACE AND REQUIRES
NO STORAGE.

DELETED BY:

NONE

Value	Name	Description
00000080	CCWDC	CHAIN DATA ADDRESS AND COUNT
00000040	CCWCC	COMMAND CHAIN
00000020	CCWSILI	SUPPRESS INCORRECT LENGTH
00000010	CCWSKIP	SUPPRESS INBOUND DATA TRANSFER
00000008	CCWPCIR	REQUEST PC INTERRUPTION
00000004	CCWIDA	INDIRECT DATA ADDRESSING
00000003	CCWINVAL	I/O UNDEFINED PAIR OF BITS
00000002	CCWSUSPN	I/O SUSPENSION/RESUMPTION
00000001	CCWUNDEF	I/O UNDEFINED BIT
		CSWSKEY BIT DEFINITIONS SUBCHANNEL KEY AND COND. CODE
000000F0	CSWKEY	KEY OF I/O OPERATION (0-15)
0000000F	CSWRQCLR	MUST BE CLEAR AT INITIATION
00000008	CSWSRENA	SUSPEND-RESUME ENABLEMENT
00000004	CSWESTAT	1=EXTENDED STATUS, 0=TIME
00000003	CSWDFCC	DEFERRED CC EXTRACT MASK
00000000	CSWCC0	DEFERRED CC CODE 0
00000001	CSWCC1	DEFERRED CC CODE 1
00000002	CSWCC2	DEFERRED CC CODE 2
00000003	CSWCC3	DEFERRED CC CODE 3
		CSWFPIZN BIT DEFINITIONS FORMAT,PREFETCH AND RESPONSES
000000F8	CSWSUMRY	SUMMARY TEST FIELD
00000080	CSWFORMT	FORMAT OF CCW
00000040	CSWPREF	UNLIMITED PREFETCH ALLOWED.
00000020	CSWRESPN	INITIAL STATUS RESPONSE PRESENTED
00000010	CSWLMODE	ADDRESS LIMIT IS IN EFFECT
00000008	CSWSUPSI	SUPPRESS SUSPENDED INTERRUPTION
00000004	CSWZCC	CONFIRMED ZERO CONDITION CODE
00000002	CSWELOG	EXTENDED I/O LOGOUT STORED
00000001	CSWPNOPR	NOT-OPERATION PATH ENCOUNTERED
		CSWFCTL BIT DEFINITIONS FUNCTION CONTROLS
00000040	CSWSFCN	START SUBCHANNEL FUNCTION
00000020	CSWHFCN	HALT SUBCHANNEL FUNCTION
00000010	CSWCFCN	CLEAR SUBCHANNEL FUNCTION
00000008	CSWRPND	RESUME SUBCHANNEL PENDING
00000004	CSWSPND	START SUBCHANNEL PENDING
00000002	CSWHPND	HALT SUBCHANNEL PENDING

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00000001    CSWCPND     CLEAR SUBCHANNEL PENDING

                        CSWACTL BIT DEFINITIONS     ACTIVITY CONTROLS

00000080    CSWSCACT    SUBCHANNEL ACTIVE
00000040    CSWDVACT    DEVICE     ACTIVE
00000020    CSWSUSPN    SUBCHANNEL SUSPENDED
00000010    CSWALERT    ALERT STATUS
00000008    CSWISTAT    INTERMEDIATE STATUS
00000004    CSWPSTAT    PRIMARY      STATUS
00000002    CSWNSTAT    SECONDARY    STATUS
00000001    CSWSTPND    STATUS PENDING

                        CSWDVST BIT DEFINITIONS     BYTE 8 DEVICE STATUS BYTE

00000080    CSWATTN     ATTENTION
00000040    CSWSM       STATUS MODIFIER
00000020    CSWCUE      CONTROL UNIT END
00000010    CSWBUSY     BUSY
00000008    CSWCE       CHANNEL END
00000004    CSWDE       DEVICE END
00000002    CSWUC       UNIT CHECK
00000001    CSWUE       UNIT EXCEPTION
0000000C    CSWCEDE     CHANNEL END AND DEVICE END
0000002C    CSWCEDC     CHANNEL END,DEVICE END,AND CUE
00000050    CSWSMBSY    CONTROL UNIT BUSY
00000070    CSWCBS      CONTROL UNIT BUSY AND END
00000084    CSWDEA      DEVICE END AND ATTENTION

                        CSWSCST BIT DEFINITIONS     BYTE 9 CHANNEL STATUS BYTE

00000080    CSWPCI      PROGRAM CONTROLLED INTERRUPTION
00000040    CSWIL       INCORRECT LENGTH INDICATION
00000020    CSWPRG      CHANNEL PROGRAM CHECK
00000010    CSWPROT     STORAGE PROTECTION CHECK
00000008    CSWCDC      CHANNEL DATA CHECK
00000004    CSWCCC      CHANNEL CONTROL CHECK
00000002    CSWIFCC     INTERFACE CONTROL CHECK
00000001    CSWCHC      CHANNEL CHAINING CHECK
0000000E    CSWHCE      CDC+CCC+IFCC HARDWARE ERRORS
00000031    CSWPCE      PRG+CHC+PROT PROGRAM  ERRORS

                        CSWECF BIT DEFINITIONS ERROR CHECK FLAGS

00000040    CSWKEYCK    INVALID CBC ON STORAGE KEY
00000020    CSWMBPCK    ADDRESSING EXCEPTION ON MBI
00000010    CSWMBDCK    INVALID CBC ON MEASURE BLOCK
00000008    CSWMBACK    ACCESS EXCEPTION OF MEASURE BLK
00000004    CSWCCWCK    INVALID CBC ON CCW FIELDS
00000002    CSWIDACK    INVALID CBC ON IDAL FIELDS
00000001    CSWSALCK    INVALID ADDRESS LIMIT SET

                        CSWFVF BIT DEFINITIONS FIELD VALIDITY FLAGS

00000040    CSWFVFLP    LAST-PATH-USED IS VALID
00000020    CSWFVFTC    TERMINATION CODE IS VALID
00000010    CSWFVFSC    SEQUENCE CODE IS VALID
00000008    CSWFVFDS    DEVICE STATUS IS VALID
00000004    CSWFVFCA    CCW ADDRESS IS VALID
00000003    CSWSACOD    STORAGE ACCESS CODE:
00000000    CSWSAUNK    00 - UNKNOWN TYPE
00000001    CSWSARD     01 - READ
00000002    CSWSAWRT    02 - WRITE
00000003    CSWSARDB    03 - READ BACKWARDS
00000002    CSWFVFCN    S/370-ONLY: CHANNEL
00000001    CSWFVFDN    S/370-ONLY: DEVICE
0000001C    CSWFVFCM    common fields

                        CSWTMSEQ BIT DEFINITIONS    TERMINATION AND SEQUENCE CODES

000000C0    CSWTMCOD    TERMINATION CODE :
00000000    CSWTMCID    00 - INTERFACE DISCONNECT
00000040    CSWTMCST    01 - STOP, STACK, NORMAL TERM
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00000080    CSWTMCSR    10 - SELECTIVE RESET
000000C0    CSWTMXXX    11 - RESERVED
00000010    CSWSECER    SECONDARY ERROR
00000008    CSWEALRT    LOGOUT IS FROM I/O ERROR ALERT
00000007    CSWSQCOD    SEQUENCE CODE :
00000000    CSWSQXXX    000 - RESERVED
00000001    CSWSQCOA    001 - COMMAND-OUT & ADDRESS-IN
00000002    CSWSQCAC    010 - COMMAND ACCEPTED
00000003    CSWSQDTR    011 - DATA TRANSFERRED
00000004    CSWSQCNA    100 - COMMAND NOT ACCEPTED
00000005    CSWSQCAQ    101 - COMMAND ACCEPTED BUT DATA
                        TRANSFER UNKNOWN
00000006    CSWSQYYY    110 - RESERVED
00000007    CSWSQZZZ    111 - RESERVED

                        CSWDETCT BIT DEFINITIONS    S/370 LCL DETECTION FIELD

00000008    CSWDTCPU    DETECTED BY THE CPU
00000004    CSWDTCHN    DETECTED BY THE CHANNEL
00000002    CSWDTMSC    DETECTED BY MAIN STORAGE CONTROL
00000001    CSWDTMSM    DETECTED BY MAIN STORAGE

                        CSWSOURC BIT DEFINITIONS    S/370 LCL SOURCE FIELD

00000080    CSWSCCPU    SOURCE IS WITHIN THE CPU
00000040    CSWSCCHN    SOURCE IS WITHIN THE CHANNEL
00000020    CSWSCMSC    SOURCE IS WITHIN MAIN STORAGE CONTROL
00000010    CSWSCMSM    SOURCE IS WITHIN MAIN STORAGE
00000008    CSWSCCU     SOURCE IS WITHIN THE CONTROL UNIT
00000001    CSWSCXTL    EXTENDED LOGOUT SUCCESSFULLY STORED

                        CSWERW0 BIT DEFINITIONS     EXTENDED REPORT WORD VALIDITY

00000002    CSWFSAFV    Failing Storage Address Validity

                        CSWIRCF BIT DEFINITIONS     INTERRUPTION SUBCLASS FIELD

00000038    CSWIRC      INTERRUPTION SUBCLASS EXTRACT MASK
00000001    CSWABC      ALTERNATE BLOCK CONTROL BIT

                        CSWIRCF CODE DEFINITIONS    INTERRUPTION SUBCLASS FIELD

00000000    CSWISC0     INTERRUPTION SUBCLASS 0 = ..000...
00000008    CSWISC1     INTERRUPTION SUBCLASS 1 = ..001...
00000010    CSWISC2     INTERRUPTION SUBCLASS 2 = ..010...
00000018    CSWISC3     INTERRUPTION SUBCLASS 3 = ..011...
00000020    CSWISC4     INTERRUPTION SUBCLASS 4 = ..100...
00000028    CSWISC5     INTERRUPTION SUBCLASS 5 = ..101...
00000030    CSWISC6     INTERRUPTION SUBCLASS 6 = ..110...
00000038    CSWISC7     INTERRUPTION SUBCLASS 7 = ..111...
00000000    CSWISCCP    CP INTERRUPTION SUBCLASS
00000020    CSWISCRP    REPLACEMENT INTERRUPTION SUBCLASS
00000008    CSWISCVR    PREFERRED INTERRUPTION SUBCLASS
00000008    CSWISCFP    FULL PACK MINIDISK INTERRUPTION SUBCL

                        CSWCTL BIT DEFINITIONS SUBCHANNEL STATUS INFORMATION

00000080    CSWENB      INTERRUPTIONS ENABLED
00000060    CSWLM       PREFERRED LIMIT MODE
00000040    CSWLOW      PROG CHECK IF ADDR .GE. LIMIT
00000020    CSWHIGH     PROG CHECK IF ADDR .LT. LIMIT
00000018    CSWMM       MEASUREMENT FLAGS
00000010    CSWMSP      MEASUREMENT PERMITTED
00000008    CSWTIM      TIMING      PERMITTED
00000004    CSWDYNPT    DYNAMIC PATHING AVALIABLE
00000002    CSWTIMFC    TIMING FACILITY AVALIABLE
00000001    CSWVLD      VALID DEVICE NUMBER ASSIGNED

                        CSWVISC BIT DEFINITIONS SCHIB WORD 6 - BYTE 1

00000003    CSWVISCA    SHIFT ALIGNMENT FOR VISC

                        CSWIC BIT DEFINITIONS  SCHIB WORD 6 - BYTE 3
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00000080    CSWIIC      INTERRUPTION INTERLOCK CONTROL

                        CR0B0 BIT DEFINITIONS  BYTE 0 SYSTEM CONTROLS

00000080    CR0BMPX     BLOCK MULTIPLEXING CONTROL
00000040    CR0SSMP     SYSTEM MASK SUPPRESSION CONTROL
00000020    CR0SYNC     TOD CLOCK SYNCH CONTROL
00000010    CR0LAP      LOW ADDRESS PROTECTION CONTROL
00000008    CR0EXAUT    EXTRACTION AUTHORITY CONTROL
00000004    CR0SSCTL    SECONDARY SPACE CONTROL
00000002    CR0LAFPI    LOW ADDRESS FETCH PROTECTION INHIBIT
00000001    CR0KEY4     ALLOW A 370 GUEST TO USE ALL KEY OPS

                        CR0B1 BIT DEFINITIONS  BYTE 1 TRANSLATION CONTROLS

00000080    CR0PG4K     TRANSLATE WITH 4096-BYTE PAGE
00000040    CR0PG2K     TRANSLATE WITH 2048-BYTE PAGE
00000020    CR0PTE4     FOUR-BYTE PAGE TABLE ENTRIES
00000010    CR0SG1M     MEGABYTE SEGMENTS
00000008    CR0SG64     64K-BYTE SEGMENTS
00000004    CR0PFA      MVSA PAGE FAULT ASSIST CONTROL
00000002    CR0VFENA    VECTOR FACILITY ENABLED

                        CR0B2 BIT DEFINITIONS  BYTE 2 MACHINE CHECK CONTROLS

00000080    CR0MFAM     MALFUNCTION ALERT MASK
00000040    CR0EMSM     EMERGENCY SIGNAL MASK
00000020    CR0ECLM     EXTERNAL CALL MASK
00000010    CR0TSYN     TOD SYNCH CHECK MASK
00000008    CR0CKCM     TOD CLOCK COMPARATOR MASK
00000004    CR0CPTM     CPU TIMER MASK
00000002    CR0SVSG     SERVICE PROCESSOR SIGNAL MASK
00000002    CR0PVM      VM PASS-THROUGH LOGICAL DEVICE
                        EXTERNAL INTERRUPTION MASK

                        CR0B3 BIT DEFINITIONS  BYTE 3 INTERRUPT MASKS

00000080    CR0INTM     S/370 INTERVAL TIMER MASK
00000040    CR0EXKY     EXTERNAL INTERRUPT KEY MASK
00000020    CR0SIGM     S/360 EXTERNAL SIGNALS 2-7 MASK
00000002    CR0IUCV     INTER-USER COMMUNICATION VEHICLE
                        EXTERNAL INTERRUPTION MASK
00000001    CR0VMCF     VIRTUAL MACHINE COMMUNICATION
                        FACILITY EXTERNAL INTERRUPTION MASK

                        CR1B0 BIT DEFINITIONS  BYTE 0 CROSS MEMORY CONTROL

00000080    CR1SSXA     370/XA SPACE SWITCH EVENT MASK


                        CR1B3 BIT DEFINITIONS  BYTE 3 CROSS MEMORY CONTROL

00000001    CR1SS370    370 SPACE SWITCH EVENT MASK

                        CR6B0 BIT DEFINITIONS  BYTE 0 CHANNEL CLASS INTERRUPT MASKS

000000FF    CR6IOMSK    FLOATING CHANNEL INTERRUPT MASK
00000080    CR6IOCL0    FLOATING CHANNEL INTERRUPT CLASS 0
00000040    CR6IOCL1    FLOATING CHANNEL INTERRUPT CLASS 1
00000020    CR6IOCL2    FLOATING CHANNEL INTERRUPT CLASS 2
00000010    CR6IOCL3    FLOATING CHANNEL INTERRUPT CLASS 3
00000008    CR6IOCL4    FLOATING CHANNEL INTERRUPT CLASS 4
00000004    CR6IOCL5    FLOATING CHANNEL INTERRUPT CLASS 5
00000002    CR6IOCL6    FLOATING CHANNEL INTERRUPT CLASS 6
00000001    CR6IOCL7    FLOATING CHANNEL INTERRUPT CLASS 7
000000C0    CR6IOHST    HOST ISCS

                        CR9B0 BIT DEFINITIONS  BYTE 0 PROGRAM EVENT MONITORING

00000080    CR9SUBR     MONITOR SUCCESFUL BRANCHES
00000040    CR9IFET     MONITOR INSTRUCTION FETCH
00000020    CR9SALT     MONITOR STORAGE ALTERATION
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00000010     CR9GPRS     MONITOR REGISTER ALTERATION
                         GENERAL REGISTER MASK BITS

                         CRCB0 BIT DEFINITIONS  BYTE 0 BRANCH TRACING CONTROLS

00000080     CRCBRCTL    BRANCH TRACE CONTROL BIT. WHEN ON,
                         ALL BALR, BASR AND BASSM INST
                         ARE TRACED BY THE HARDWARE.

                         CRCB3 BIT DEFINITIONS  BYTE 3 ADDRESS SPACE TRACING CONTROLS
                         AND EXPLICIT TRACING CONTROLS

00000002     CRCASCTL    ADDRESS SPACE TRACE CONTROL BIT.
                         WHEN ON, ALL PC, PT AND SSAR INST
                         ARE TRACED BY THE HARDWARE.
00000001     CRCEXCTL    EXPLICIT TRACE CONTROL BIT. WHEN
                         ON, ALL TRACE INST ARE EXECUTED BY
                         THE HARDWARE.

                         CREB0 BIT DEFINITIONS  BYTE 0 RECOVERY CONTROLS

00000080     CRESTOP     HARD STOP ON MACHINE CHECK (370 GUEST)
00000040     CRESYNC     SYNCHRONOUS EXTENDED LOGOUT CONTROL
00000020     CREIOLG     I/O LOGOUT CONTROL          (370 GUEST)
00000010     CRECRWM     REPRESSIBLE CRW MASK (370/XA ONLY)
00000008     CRERCVY     RECOVERY-REPORT MASK
00000004     CRECNFG     DEGRADATION-REPORT MASK
00000002     CREDAMG     EXTERNAL-DAMAGE-REPORT MASK
00000001     CREWARN     WARNING CONDITION REPORT MASK

                         CREB1 BIT DEFINITIONS  BYTE 1 LOGOUT CONTROLS

00000080     CREXLOG     ASYNCH EXTENDED LOGOUT CONTROL
00000040     CREFLOG     ASYNCH FIXED LOGOUT CONTROL

                         EXTICODE CODE DEFINITIONS  EXTERNAL INTERRUPT TYPE CODE

00000040     EXTIKEY     CODE X'0040' INTERRUPT KEY
00000080     EXTITMR     CODE X'0080' 370 INTERVAL TIMER
00000003     EXTITSYN    CODE X'1003' TOD SYNCH CHECK
00000004     EXTICKC     CODE X'1004' CLOCK COMPARATOR
00000005     EXTICPU     CODE X'1005' CPU TIMER
00000000     EXTIMALF    CODE X'1200' MALFUNCTION ALERT
00000001     EXTIEMGS    CODE X'1201' EMERGENCY SIGNAL
00000002     EXTICALL    CODE X'1202' EXTERNAL CALL
00000001     EXTISVSG    CODE X'2401' SERVICE SIGNAL
00000002     EXTIPVM     CODE X'2402' PVM LOGICAL DEVICE
00000000     EXTIIUCV    CODE X'4000' IUCV INTERRUPTION
00000001     EXTIVMCF    CODE X'4001' VMCF INTERRUPTION
00000002     EXTIACCT    CODE X'4002' VMCF ACCOUNTING
                         INTERRUPTION
00000003     EXTIEREP    CODE X'4003' VMCF EREP INTERRUPT.

                         EXTICLAS CODE DEFINITIONS  EXTERNAL INTERRUPT CLASS CODE

00000000     EXTICL00    CLASS 00 EXTERNAL INTERRUPTS
                         (INTERRUPT KEY, INTERVAL TIMER)
00000010     EXTICL10    CLASS 10 EXTERNAL INTERRUPTS
                         (TIMER, COMPARATOR, TOD SYNCH)
00000012     EXTICL12    CLASS 12 EXTERNAL INTERRUPTS
                         (MULTI-CPU SIGNALS)
00000024     EXTICL24    CLASS 24 EXTERNAL INTERRUPTS
                         (SERVICE SIGNALS)
00000040     EXTICL40    CLASS 40 EXTERNAL INTERRUPTS
                         (VMCF AND IUCV COMMUNICATION)

                         MCIC0 BIT DEFINITIONS  BYTE 0  MACHINE CHECK DAMAGE INFO.

000000FF     MCIPRIM0
                         PRIMARY MACHINE CHECK BITS - BYTE 0
00000080     MCICSD      SYSTEM DAMAGE BIT.
00000040     MCICPD      PROCESSING DAMAGE BIT.
00000020     MCICSR      SYSTEM RECOVERY BIT.
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00000010    MCICITD     INTERVAL TIMER DAMAGE.    (370 GUESTS)
00000008    MCICCD      TIMING (CLOCK) FACILITY DAMAGE.
00000004    MCICED      EXTERNAL DAMAGE.
00000002    MCICVFF     VECTOR FACILITY FAILURE
00000001    MCICDG      DEGRADATION BIT.

                        MCIC1 BIT DEFINITIONS  BYTE 1  CHANNEL DAMAGE & OTHER STUFF

000000F0    MCIPRIM1
                        PRIMARY MACHINE CHECK BITS - BYTE 1
00000080    MCICW       WARNING BIT.
00000040    MCICCRW     PENDING-CRW REPORT.
00000020    MCICSP      SERVICE PROCESSOR DAMAGE.
00000010    MCICCSD     CHANNEL-SUBSYSTEM DAMAGE.
00000004    MCICVFS     VECTOR FACILITY SOURCE
00000002    MCICBU      'BACKED UP' BIT.
00000001    MCICDL      'DELAYED' BIT.            (370 GUESTS)

                        MCIC2 BIT DEFINITIONS  BYTE 2  STORAGE ERRORS & VALIDITY BITS

00000080    MCICSE      STORAGE ERROR UNCORRECTED.
00000040    MCICSC      STORAGE ERROR CORRECTED.
00000020    MCICKE      STORAGE-KEY ERROR UNCORRECTED.
00000010    MCICSDG     STORAGE DEGRADATION.  MODIFIES
                        STORAGE ERROR CORRECTED.
00000008    MCICVWP     BITS 12-15 OF MC OLD PSW VALID.
00000004    MCICVMS     SYSTEM MASK & KEY OF MC OLD PSW VALID.
00000002    MCICVPM     PROGRAM MASK & CC OF MC OLD PSW VALID.
00000001    MCICVIA     INSTR ADDR OF MC OLD PSW IS VALID.

                        MCIC3 BIT DEFINITIONS  BYTE 3  VALIDITY BITS

00000080    MCICVFA     FAILING STORAGE ADDRESS IS VALID.
00000020    MCICVED     EXTERNAL-DAMAGE CODE IS VALID.
00000010    MCICVFP     FP REGISTERS STORED ARE VALID.
00000008    MCICVGR     GP REGISTERS STORED ARE VALID.
00000004    MCICVCR     CONTROL REGISTERS STORED VALID.
00000002    MCICVLG     EXTENDED LOGOUT AREA IS VALID.
00000001    MCICVST     INST. MODIFIED STORAGE IS VALID.

                        MCIC4 BIT DEFINITIONS  BYTE 4  RESERVED FOR FUTURE USE

00000040    MCICVAR     RESERVED FOR FUTURE IBM USE
00000020    MCICDA      DELAYED ACCESS EXCEPTION BIT

                        MCIC5 BIT DEFINITIONS  BYTE 5  TIMING FACILITIES VALIDITY

00000002    MCICVCT     CPU TIMER STORED IS VALID.
00000001    MCICVCC     CLOCK COMPARATOR STORED IS VALID.

                        MCEXTDMC BIT DEFINITIONS   EXTERNAL DAMAGE CODE BITS

00000080    MCEXTDXN    EXTENDED STORAGE NOT OPERATIONAL
00000040    MCEXTDXF    EXTENDED STORAGE CONTROL FAILURE

                        ORBORB7 BIT DEFINITIONS OPERATION REQUEST BLOCK CONTROL BITS

00000080    ORBIOILF    IGNORE INC. LEN. ON IMMED. OPERATIONS

                        PRGICODE CODE DEFINITIONS  PROGRAM INTERRUPT TYPE CODE

00000000    PRGICCLR    USED TO CLEAR PRGICODE

00000001    PRGIOPER    OPERATION
00000002    PRGIPRIV    PRIVILEGED OPERATION
00000003    PRGIEXEC    EXECUTE
00000004    PRGIPROT    PROTECTION
00000005    PRGIADDR    ADDRESSING
00000006    PRGISPEC    SPECIFICATION
00000007    PRGIDATA    DATA
00000008    PRGIFXDV    FIXED POINT OVERFLOW
00000009    PRGIFDIV    FIXED POINT DIVIDE
0000000A    PRGIDECO    DECIMAL OVERFLOW
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0000000B    PRGIDDIV    DECIMAL DIVIDE
0000000C    PRGIEXPO    EXPONENT OVERFLOW
0000000D    PRGIEXPU    EXPONENT UNDERFLOW
0000000E    PRGISGNF    SIGNIFICANCE
0000000F    PRGIFPDV    FLOATING POINT DIVIDE
00000010    PRGISEG     SEGMENT TRANSLATION
00000011    PRGIPAGE    PAGE TRANSLATION
00000012    PRGITSPC    TRANSLATION SPECIFICATION
00000013    PRGISPOP    SPECIAL OPERATION
00000014    PRGIPPF     PSEUDO-PAGE-FAULT (SOFTWARE ONLY)
00000015    PRGIOPND    OPERAND (370/XA ONLY)
00000016    PRGITRAC    TRACE TABLE FULL (370/XA ONLY)
00000017    PRGIASNT    ASN TRANSLATION SPECIFICATION
                        EXCEPTION
00000019    PRGIVOP     VECTOR OPERATION EXCEPTION
0000001C    PRGISPSW    SPACE SWITCH EVENT
0000001E    PRGIUNOP    UNNORMALIZED OPERAND EXCEPTION
00000020    PRGIAFXT    AFX TRANSLATION
00000021    PRGIASXT    ASX TRANSLATION
00000022    PRGILXTR    LX TRANSLATION
00000023    PRGIEXTR    EX TRANSLATION
00000024    PRGIPRIA    PRIMARY AUTHORITY
00000025    PRGISECA    SECONDARY AUTHORITY
00000040    PRGIMC      MONITOR CALL
0000007F    PRGICMSK    MASK TO ISOLATE PROGRAM CHECK
00000080    PRGIPER     PROGRAM EVENT RECORDING, POSSIBLY
                        WITH ANOTHER EXCEPTION CODE
00008000    PRGIARPC    ARITHMETIC PARTIAL COMPLETION BIT
                        OF THE EXCEPTION EXTENSION CODE
                        (BIT 0 OF THE PROGRAM CHECK
                        INTERRUPT CODE)
                        CODE NUMBER (X'007F')

                        PSW0 BIT DEFINITIONS   BYTE 0 (EC MODE) INTERRUPT MASK

00000040    PSWPERA     PROGRAM EVENT RECORDING ACTIVE
00000004    PSWTRAN     ADDRESS TRANSLATE MODE ACTIVE
00000002    PSWIOSM     I/O INTERRUPTION SUMMARY MASK
00000001    PSWEXSM     EXTERNAL INTERRUPT SUMMARY MASK

                        PSW1 BIT DEFINITIONS   BYTE 1 ENABLE MASK AND MODE

000000F0    PSWKEY      PSW ACCESS KEY EXTRACTION MASK
00000008    PSWECMD     EXTENDED CONTROL MODE ACTIVE
00000004    PSWMCHK     MACHINE CHECK SUMMARY MASK
00000002    PSWWAIT     PROGRAM WAIT STATE
00000001    PSWPROB     PROGRAM PROBLEM STATE

                        PSW2 BIT DEFINITIONS   BYTE 2 (EC MODE) EXECEPTIONS

00000080    PSWSMODE    SECONDARY MODE
00000030    PSWCOND     PSW CONDITION CODE
00000020    PSWCOND2    PSW CONDITION CODE BIT FOR CC=2,3
00000010    PSWCOND1    PSW CONDITION CODE BIT FOR CC=1,3
0000000F    PSWPMSK     FIXO+DECO+EXUN+SIGN     PROGRAM MASK
00000008    PSWFIXO     FIXED-PT OVERFLOW INTRPT MASK
00000004    PSWDECO     DECIMAL OVERFLOW INTRPT MASK
00000002    PSWEXUN     EXPONENT UNDERFLOW INTRPT MASK
00000001    PSWSIGN     SIGNIFICANCE INTERRUPT MASK

                        PSW4 BIT DEFINITIONS   BYTE 4 (EC MODE) ADDRESSING MODE AND
                        THE INSTRUCTION COUNTER
00000080    PSW31BT     31-BIT LOGICAL ADDRESSING MODE
0000007F    PSWHIADR    INSTRUCTION COUNTER BITS 1-7
                        MUST BE ZERO IN 24-BIT MODE.
80000000    PSW31AMF    ADDRESS MODE FULLWORD MASK
                        CORRESPONDS TO PSW31BT

                        PSW0B BIT DEFINITIONS  BYTE 0 (BC MODE) INTERRUPT MASK

000000FC    PSWIOMSK    CHANNEL MASK, CHANNELS 0-5
00000002    PSWIOSMB    I/O SUMMARY MASK, CHANNEL 6-15
00000001    PSWEXSMB    EXTERNAL INTERRUPT SUMMARY MASK
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                                PSW23B BIT DEFINITIONS BYTES 2 AND 3 (BC MODE)
                                - INTERRUPTION CODE
                                NOTE: THE CORRESPONDING HLL CONSTRUCT IS
                                PSWBCCOD. THERE ARE NO EQUATES DEFINED ON
                                THAT MAPPING.

                                PSW4B BIT DEFINITIONS  BYTE 4 (BC MODE) PROGRAM MASK

000000C0        PSWILCBC        INSTRUCTION LENGTH CODE (ILC)
00000080        PSWILCB4        BC MODE ILC, 4 BYTE LENGTH
00000040        PSWILCB2        BC MODE ILC, 2 BYTE LENGTH
00000030        PSWCONDB        PSW CONDITION CODE
00000020        PSWCONB2        PSW CONDITION CODE BIT FOR CC=2,3
00000010        PSWCONB1        PSW CONDITION CODE BIT FOR CC=1,3
0000000F        PSWPMSKB        FIXOB+DECOB+EXUNB+SIGNB PROGRAM MASK
00000008        PSWFIXOB        FIXED-PT OVERFLOW INTRPT MASK
00000004        PSWDECOB        DECIMAL OVERFLOW INTRPT MASK
00000002        PSWEXUNB        EXPONENT UNDERFLOW INTRPT MASK
00000001        PSWSIGNB        SIGNIFICANCE INTERRUPT MASK

                                SIGP CODES DEFINITIONS SIGNAL PROCESSOR CODES

00000001        SIGPSENS        SIGP SENSE
00000002        SIGPEXTC        SIGP EXTERNAL CALL
00000003        SIGPEMER        SIGP EMERGENCY SIGNAL
00000004        SIGPSTRT        SIGP START
00000005        SIGPSTOP        SIGP STOP
00000006        SIGPRSTR        SIGP RESTART
00000007        SIGPIPR         SIGP INITIAL PROGRAM RESET
00000008        SIGPPR          SIGP PROGRAM RESET
00000009        SIGPSSTT        SIGP STOP AND STORE STATUS
0000000B        SIGPICPU        SIGP INITIAL CPU RESET
0000000C        SIGPCPU         SIGP CPU RESET
0000000D        SIGPSPFX        SIGP SET PREFIX
0000000E        SIGPSSTS        SIGP STORE STATUS AT ADDRESS

                                SIGPSNS BIT DEFINITIONS     SIGP SENSE RETURN CODES

80000000        SIGSEQCK        SIGP SENSE EQUIPMENT CHECK
00000200        SIGSISTS        SIGP SENSE INCORRECT STATE
00000100        SIGSIPRM        SIGP SENSE INVALID PARAMETER
00000080        SIGSPECL        SIGP SENSE EXTERNAL-CALL PENDING
00000040        SIGSSTOP        SIGP SENSE CPU STOP STATE
00000020        SIGSINTV        SIGP SENSE OPERATOR INTERVENING
00000010        SIGSCKST        SIGP SENSE CHECK STOP
00000004        SIGSINOP        SIGP SENSE ORDER CODE INOPERATIVE
00000002        SIGSINVO        SIGP SENSE INVALID ORDER CODE
00000001        SIGSRCVK        SIGP SENSE RECEIVER CHECK
00000080        ABNHARD         FORCE ALL SOFT ABENDS TO HARD

                                ABNDS BIT DEFINITIONS    OPTIONS FOR HCPABNDS

                                SYMBOLS FOR THE HCPABEND MACRO
                                PARAMETER LIST FOR SOFT ABEND
                                OPTIONS

00000080        ABNASYNC        DUMP ASYNCHRONOUSLY
00000000        ABNSYNC         DUMP SYNCHRONOUSLY

00000040        ABNNCFM         DON'T CHANGE THE VMDBK DISPATCH
                                SETTINGS
00000000        ABNCFM          PLACE VMDBK IN CONSOLE FUNCTION
                                MODE

00000020        ABNSDPL         SNAP DATA PARAMATER LIST SPECIFIED
00000000        ABNNSDPL        NO SNAP DATA PARAMATER LIST

00000010        ABNSVAR         DUMP STANDARD SAVEAREAS
00000000        ABNNSVAR        DON'T DUMP STANDARD SAVEAREAS

                                ACO BIT DEFINITIONS    OPTIONS FOR HCPACO
```

```
00000020    ACOALTVM    ACCOUNT RECORD FOR ALTERNATE VMDBK
00000020    ACOHIPR     WRITE THIS MESSAGE IMMEDIATELY

                        AFFPF BIT DEFINITIONS  OPTIONS FOR HCPAFFPF

00000008    AFFLOAFF    LOSS OF AFFINITY
00000004    AFFSTLST    STATE LOST
00000000    AFFUNLD     UNLOAD

                        ALLVM BIT DEFINITIONS  OPTIONS FOR HCPALLVM

00000080    ALLVMDBK    ALL LOGGED-ON USERS AND THEIR
                        ADJUNCT VMDBKS
00000040    ALLVMURS    ALL LOGGED ON USER VMDBKS
00000020    ALLVMALL    All VMDBKs regardless of status (modif
                        above bits

                        ALLVN BIT DEFINITIONS  OPTIONS FOR HCPALLVN

00000000    ALLVNDYN    MAKE A DYNAMIC CALL
00000100    ALLVNSTC    MAKE A STATIC CALL

                        BIESC BIT DEFINITIONS  OPTIONS FOR HCPBIESC

00000080    BIEFORCE    FORCE CONSTRUCTION OF AN SCABK

                        BMSIN CODE DEFINITIONS   OPTIONS FOR HCPBMSIN

00000000    BMSSTABL    BMSBK CONTAINS A FIXED NUMBER OF
                        BUFFERS
00000004    BMSVARI     BMSBK CONTAINS A VARIABLE NUMBER OF
                        BUFFERS

                        BMSTM CODE DEFINITIONS   OPTIONS FOR HCPBMSTM

00000000    BMSCNRLS    CONDITIONALLY RELEASE AND TERMINATE
00000004    BMSUNRLS    UNCONDITIONALLY RELEASE AND TERMINATE

                        BVM BIT DEFINITIONS    OPTIONS FOR HCPBVM

00000037    BVMVRVM     REQUEST TO BUILD VMDBK FOR V=R GUEST
00000047    BVMVFVM     REQUEST TO BUILD VMDBK FOR V=F GUEST

                        CPU BIT DEFINITIONS    OPTIONS FOR HCPCPUNO

00000080    CPUNOKEY    ANY NON-ADDRESS OPERAND DELIMITS
                        THE CPU ADDRESS LIST (NO KEYWORD)
00000040    CPUKEY      A KEYWORD LIST WILL BE USED TO
                        DELIMIT CPU ADDRESS LIST
00000020    CPUNOALL    'ALL' SHOULD NOT BE ACCEPTED AS A
                        CPU ADDRESS EXPRESSION

                        CQF BIT DEFINITIONS    OPTIONS FOR HCPCQFFI

00000080    CQFSYS      QUERY SYSTEM FILES AT OPERATOR LOGON

                        CQP BIT DEFINITIONS    OPTIONS FOR HCPCQPRS AND HCPCQPRX

00000040    CQPORIG     ORIGINID NEEDED IN RESPONSE
00000020    CQPSRD      SHORT RESPONSE - CLASS D USER
00000010    CQPSRG      SHORT RESPONSE - CLASS G USER

                        DSTORE BIT DEFINITIONS OPTIONS FOR DISPLAY/STORE

00000080    DSTVMODE    TREAT REFERENCES AS 'V' MODE
00000040    DSTRMODE    TREAT REFERENCES AS 'R' MODE
00000020    DSTWMODE    TREAT REFERENCES AS 'W' MODE
00000010    DSTHMODE    TREAT REFERENCES AS 'H' MODE
00000008    DSTLMODE    TREAT REFERENCES AS 'L' MODE

                        WARNING - DO NOT ADD OR CHANGE ERM BITS WITHOUT QCN CHECK

                        ERM CODE DEFINITIONS   CALLING PARAMETERS OPTIONS FOR HCPERM
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```
                                -----              BYTE ZERO OF CALLING PARAMETERS

00000080    ERMNOSUP    DON'T SUPPRESS MESSAGE ACCORDING TO
                        THE EMSG SETTING
00000040    ERMIMSG     PROCESS MESSAGE ACCORDING TO IMSG SETT

00000020    ERMMODID    R9 ADDRESS THE ALTERNATE MODULE NAME
00000008    ERMCMND     OUTPUT BEING DISPLAYED FOR A COMMAND

                                -----              BYTES ONE AND TWO

00008000    ERMDATA     DATA INSTEAD OF ADDRESS IN R1
00004000    ERMBRITE    BRITE ON SCREEN, 3 SPACE ON 2741
00002000    ERMALTVM    ERROR MESSAGE FOR DIFFERENT USER
00001000    ERMALTID    ALTERNATE USERID SUPPLIED
00000800    ERMEMSG     ERROR MESSAGE FOR HCPQCN
00000400    ERMSYNC     SYNCHRONOUS CALL TO HCPERM
00000200    ERMINFO     EDITING ONLY ERM REQUEST
00000100    ERMOPER     OPERATOR MESSAGE FOR HCPQCN
00000020    ERMHIPR     HIGH PRIORITY FOR HCPQCN
00000004    ERMNOCR     SUPPRESS AUTOMATIC CARRIAGE RETURN
00000002    ERMALRM     AUDIBLE ALARM FOR HCPQCN
00000001    ERMTIME     ADD TIMESTAMP TO MESSAGE

                        GIRR2 BIT DEFINITIONS  OPTIONS FOR HCPGIRVR, IN R2

00000004    GIRLOOK     SEARCH AND RETURN I/O INTERRUPT ADDR
00000002    GIRUNSTK    SEARCH AND UNSTACK I/O INTERRUPTION
00000001    GIRFIND     SEARCH FOR I/O INTERRUPTION

                        GIRR0 CODE DEFINITIONS DEVICE

00000F00    GIRCH       SEARCH ON CHANNEL ADDRESS
00000FF0    GIRCU16     SEARCH ON 16-DEVICE CONTROL UNIT
00000FF8    GIRCU8      SEARCH ON 8-DEVICE CONTROL UNIT
00000FFF    GIRDV       SEARCH ON DEVICE ADDRESS

                        GSRRUWU CODE DEFINITIONS OPTIONS FOR HCPGSRRU AND HCPGSRWU

00000000    GSRVVIRT    HCPPTRAN SHOULD BE CALLED
00000100    GSRRVIRT    VIRTUAL ADDRESS ALREADY TRANSLATED.

                        GSVSL BIT DEFINITIONS  OPTIONS FOR HCPGSVSL

00000001    GSVSET      SET ADDRESS LIMITS
00000002    GSVRESET    RESET ADDRESS LIMITS

                        MCSFH BIT DEFINITIONS  OPTIONS FOR HCPMCSFH

00000000    MCSFRMER    Failing storage error
00000001    MCSKEYER    Failing key error

                        MPCFL BIT DEFINITIONS  OPTIONS FOR HCPMPCFL

00000001    MPCLOGVY    LOGICAL VARY OFF REQUEST

                        MSG   BIT DEFINITIONS  OPTIONS FOR HCPMSG

00000000    MSGMSS      INDICATE *MSG PATH
00000001    MSGMALL     INDICATE *MSGALL PATH

                        NLDR CODE DEFINITIONS  OPTIONS FOR HCPNLD

00000040    NLDAUTO     AUTOMATIC LOAD

                        NSC BIT DEFINITIONS    OPTIONS FOR HCPNSCID, HCPNSCNM, AND
                        HCPNSCAL
00000001    NSCDCSS     PROCESS DISCONTIGUOUS SAVED SEGMENTS
00000002    NSCIMG      PROCESS IMAGE FILES
00000004    NSCNSS      PROCESS NAMED SAVED SYSTEM FILES
00000008    NSCNLS      Process NLS files
00000001    NSCMATCH    Find an associate which has an
```

		entry in it with the same name as the input SNTBK's name.
00000002	NSCNMTCH	Find an associate which does not have an entry in it with the same name as the input SNTBK's name.
00000004	NSCANYM	Find any associate that meets the requirements regardless of whether there is an entry in it with the same name as the input SNTBK's name. However, if such an entry does exist this will be reported to the caller.
00000000	NSCWRITE	If the associate found is opened as a result of this call, open it for write.
00000100	NSCREAD	If the associate found is opened as a result of this call, open it for read.
		BITS DEFINED IN NSGTYPE
00000001	NSGDCSS	Process discontiguous saved segments
00000002	NSGIMG	Process image files
00000004	NSGNSS	Process named saved system files
00000008	NSGNLS	Process NLS files
		NSM BIT DEFINITIONS OPTION FOR HCPNSCNM
00000001	NSMDCSS	Set CP notification address for NSS
00000002	NSMIMG	Set CP notification address for Image
00000004	NSMNSS	Set CP notification address for DCSS
00000008	NSMNLS	Set CP notification address for NLS
00000000	NSMNTE	Set CP notification address SNTCPNTE
00000100	NSMNTL	Set CP notification address SNTCPNTL
		NSN CODE DEFINITIONS OPTIONS FOR HCPNSNID, HCPNSNNM, AND HCPNSNAL
00000004	NSNNSS	Process NSS or DCSS files
00000002	NSNIMG	Process Image files
00000008	NSNNLS	Process NLS files
00000100	NSNLKHLD	DO NOT ATTEMPT TO GET OR RELEASE THE SYMBOLIC LOCK. LOCK BEING MANAGED BY CALLING ROUTINE.
		NSP CODE DEFINITIONS OPTIONS FOR HCPNSP
00000001	NSPNIMB	SYSTEM DATA FILE TO BE PURGED NOT IMBEDDED
00000100	NSPLKHLD	Do not attempt to get or release the symbolic lock. lock being managed by calling routine.
		OPR CODE DEFINITIONS OPTIONS FOR HCPOPR
00010000	OPRCLR	CLEAR SCREEN ON ENTRY
00000002	OPRALRM	AUDIBLE ALARM FOR HCPOPR
		PCRRQ BIT DEFINITIONS OPTIONS FOR HCPPCRRQ
00000080	PCRVMREQ	VIRTUAL MACHINE REQUEST TO THE PROCESSOR CONTROLLER
00000040	PCRCPREQ	CP REQUEST TO PROCESSOR CONTROLLER
		PGT BIT DEFINITIONS OPTIONS FOR HCPPGT
00000001	PGTPAGE	DASD SLOT REQUIRED FOR PAGING
00000002	PGTSPOOL	DASD SLOT REQUIRED FOR SPOOLING
00000004	PGTSYST	DASD SLOT REQUIRED FOR SYS FILE
00000008	PGTDRO	MAKE DASD SLOT FOR CCPV R/O
00000020	PGTALTVM	REQUEST APPLIES TO ALT VMDBK
00000040	PGTSYS	CALL APPLIES TO SYSTEM SPACE
00000080	PGTRLSE	REQUEST IS FOR VOLUME RELEASE


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                                PTF CODE DEFINITIONS      OPTIONS FOR HCPPTFGF

00000001     FRMCP         FRAME IN USE BY CONTROL PROGRAM
00000021     FRMTRACE      CP TRACE TABLE FRAME
00000031     FRMPRFX       PREFIX PAGE FRAME
00000061     FRMFREE       FRAME USED FOR FREE STORAGE OR
                           SAVE AREA FRAME
00000080     FRMUSER       FRAME USED AS USER PAGE
00000081     FRMSUSER      IN USE AS SYSTEM VIRTUAL PAGE

                           RELEASE BIT DEFINITIONS USED BY HCPRPB AND HCPRPC

00000020     RPBCLRCP      CLEAR RCP BYTE
00000008     RPBMSMAT      ERROR IN INPUT PASSED TO HCPRPC
00000004     RPBCLSHR      CLEAR SHARED PAGES
00000002     RPBPTLRQ      PTLB REQUIRED BY RELEASE
00000001     RPBCLSCP      CLEAR SHARED CP PAGES

                           WARNING - DO NOT ADD OR CHANGE QCN BITS WITHOUT ERM CHECK

                           QCN BIT DEFINITIONS    OPTIONS FOR HCPQCNWT AND HCPQCNRD:

00010000     QCNIMSG       CONTROL PROGRAM INFORMATIONAL MESSAGE
00020000     QCNSCIF       WRITE IS FOR SECONDARY USER
00040000     QCNLEDWT      THIS IS DOUBLE BYTE CHAR. SET DATA
00080000     QCNCMND       OUTPUT BEING DISPLAYED FOR A COMMAND
00008000     QCNNOTIM      GRAF - NO TIMSTAMP ON REDISPLAY
00004000     QCNBRITE      BRITE ON SCREEN, 3 SPACE 1741
00002000     QCNALTVM      SEND OUTPUT TO VMDBK IN R10
00001000     QCNNORSP      RESPONSE IS NOT A COMMAND RESPONSE
00000800     QCNEMSG       CONTROL PROGRAM ERROR MESSAGE
00000400     QCNSYNC       RETURN WHEN I/O COMPLETE
00000200     QCNDIAG       I/O REQUEST GENERATED VIA DIAGNOSE
00000100     QCNOPER       MESSAGE FOR SYSTEM OPERATOR
00000080     QCNDROP       LOGOFF & DROP LINE AFTER MESSAGE
00000040     QCNLOPRI      MESSAGE BREAKIN ABLE TO BE INHIBITED
00000020     QCNHIPR       WRITE THIS MESSAGE IMMEDIATELY
00000010     QCNVMIO       I/O REQUEST FROM A GUEST
00000004     QCNNOCR       SUPPRESS AUTO CARRIAGE RETURN
00000002     QCNALRM       SOUND THE AUDIBLE ALARM
00000001     QCNTIME       USE TIME STAMP AS MESSAGE HEADER
00000008     QCNHIDE       PREVENT DISPLAY OF THIS DATA
00000004     QCNEDIT       EDIT INPUT DATA FOR CORRECTIONS
00000002     QCNUPPR       TRANSLATE DATA TO UPPER CASE
00000001     QCNWRTRD      WRITE CHAINED TO READ FOR 3101

0000012B     MAXILEN       MAXIMUM SIZE OF INPUT BUFFER FROM
                           ANY DISPLAY TERMINAL
00000026     MAXILEND      MAXILEN IN DOUBLEWORDS

                           RETURN CODES FOR HCPQCNRD AND DMCQCNWT
                           QCNRTN CODE DEFINITIONS

00000004     QCNRCATN      SINGLE ATTENTION
00000008     QCNRCAT2      2 OR MORE ATTENTIONS
0000000C     QCNRCLBK      LINE BREAK

                           RDL BIT DEFINITIONS    OPTIONS FOR HCPRDLSP

00000001     RDLCRPLY      REPLY REQUEST BEING CANCELLED

                           SDF BIT DEFINITIONS    OPTIONS FOR HCPSDF

00000040     SDFPNAME      FILE NAME SPECIFIED
00000020     SDFSPID       SPOOLID SPECIFIED
00000010     SDFUSER       USER OR OWNER SPECIFIED
00000008     SDFVOL        ONE VOLUME SPECIFIED
00000004     SDFCLAS       ONE CLASS SPECIFIED
00000002     SDFORGID      SYSTEM DATA FILE ORIGIN ID SPECIFIED

                           SFP BIT DEFINITIONS    OPTIONS FOR HCPSFPPW
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00000080    SFPNDP      GET NEXT DATA PAGE AFTER WRITE

                        SGPLC BIT DEFINITIONS  OPTIONS FOR HCPSGPLC

00000004    SGPLCREP    REPLACE BITS IN SPECIFIED CONTROL REG
00000002    SGPLCOFF    AND BITS OFF IN SPECIFIED CONTROL REG
00000001    SGPLCORN    OR BITS ON IN SPECIFIED CONTROL REG

                        SIP BIT DEFINITIONS    OPTIONS FOR HCPSIPME

00000040    SIPMEGT     ENABLE AS PART OF GROUP TRACE
00000020    SIPMEUT     ENABLE AS PART OF USER TRACE

                        SVC CODE DEFINITIONS   SVC INTERRUPTION CODES IN CP

00000000    SVCABEND    SVC 00 = HOST CP SYSTEM ABEND
00000004    SVCSABND    SVC 04 = HOST CP SYSTEM SOFT ABEND
0000001C    SVCTRAP     SVC 28 = PROCESS DATA TYPE TRACE
                        (TRACE SERVICE TOOL)
00000020    SVCTRET     SVC 32 = RETURN FROM DATA TYPE TRACE
                        (TRACE SERVICE TOOL)
                        PROCESSING
0000004C    SVC76ERP    SVC 76 = ERROR RECORDING MODULE CALL

                        THKPG CODE DEFINITIONS PARAMETERS FOR PROCESSING INDICATE
                        PAGING COMMAND

00000001    THKPGWT     INDICATE PAGING WAIT COMMAND
00000002    THKPGALL    INDICATE PAGING ALL COMMAND

                        TPEIN CODE DEFINITIONS TAPE MODE (DENSITY) PARAMETERS FOR
                        CALLS TO HCPTPEIN

00000004    TPE38K      MODE = 38K
00000003    TPE6250     MODE = 6250 BPI
00000002    TPE1600     MODE = 1600 BPI
00000001    TPE800      MODE = 800  BPI

                        TPEDISP CODE DEFINITIONS    TAPE DISPOSITION DEFINITIONS

00000002    TPEREW      REWIND TAPE
00000001    TPERUN      REWIND AND UNLOAD TAPE

                        VAT BIT DEFINITIONS    OPTIONS FOR HCPVATLA

00000008    VATSTORE    CHECK FOR GUEST PAGE PROTECTION
00000004    VATALTC0    ALTERNATE GUEST CR-0 IN R0
00000002    VATHOST     RETURN HOST REAL ADDRESS
00000001    VATALTST    ALTERNATE GUEST STO IN R4

                        VSM BIT DEFINITIONS    OPTIONS FOR HCPVSMDA

00000080    VSMVRREC    GUEST SURVIVAL INDICATOR

                        WAT CODE DEFINITIONS   OPTIONS FOR HCPWATRN

00000800    WATVVIRT    INPUT ADDR VGUEST VIRTUAL
00000400    WATVLOGD    INPUT ADDR VGUEST LOGICAL, DATA
00000200    WATVLOGI    INPUT ADDR VGUEST LOGICAL,IFETCH
00000080    WATVREAL    INPUT OR OUTPUT ADDR VGUEST REAL
00000040    WATVABS     INPUT OR OUTPUT ADDR VGUEST ABS
00000020    WATGREAL    OUTPUT ADDR RGUEST REAL
00000010    WATGABS     OUTPUT ADDR RGUEST ABSOLUTE
00000000    WATHOST     OUTPUT ADDR HOST REAL
00000002    WATNOREF    NO ERROR REFLECTION SIMULATION
00000001    WATSTORE    CHECK FOR PAGE PROTECTION

                        WRM BIT DEFINITIONS    OPTIONS FOR HCPWRM

00000080    WRMNODIR    NO DIRECTORY - DONT TRY TO READ
00000040    WRMDSABL    WARMSTART - LEAVE LINES DISABLED
00000020    WRMFRCE     FORCE SPOOL FILE RECOVERY
00000010    WRMAUTO     HOT START
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00000008	WRMSHTDN	SHUTDOWN REQUEST
00000004	WRMDRAIN	WARMSTART - DRAIN ALL UR
00000002	WRMWARM	WARM START REQUESTED
00000001	WRMCOLD	COLD START REQUESTED
		WRP BIT DEFINITIONS OPTIONS FOR HCPWRPUP
00000100	WRPMONS	STOP MONITORING IF ACTIVE
00000080	WRPNOGSR	INHIBIT GUEST SURVIVAL
00000040	WRPASAP	STOP AS SOON AS POSSIBLE
00000020	WRPSHUT	SHUTDOWN COMMAND ISSUED
00000010	WRPSTART	RESTART IF POSSIBLE
00000008	WRPSPOOL	STOP OPERATOR SPOOLING
00000004	WRPWAIT	TERMINATE IN SPECIFIED WAIT STATE
00000002	WRPCKPT	TAKE A CHECKPOINT IF POSSIBLE
00000001	WRPDUMP	TAKE A DUMP IF POSSIBLE
		WRS CODE DEFINITIONS OPTIONS FOR HCPWRS
00000002	WRSCOLD	COLD START PROCESSING REQUESTED
00000001	WRSFRCNC	FORCE STARTED REQUESTED AND CHECKPOINT NOT COMPLETE
		ZMG BIT DEFINITIONS OPTIONS FOR HCPZMGRZ
00000080	ZMGVR	V=R STORAGE REQUEST
00000040	ZMGVF	V=F STORAGE REQUEST
00000010	SHRSCALE	NUMBER OF BITS TO THE RIGHT OF THE BINARY POINT IN SCHEDULER SHARE CALCULATIONS
00002710	RELSHMAX	MAXIMUM VALUE ACCEPTED FOR A "RELATIVE" SCHEDULING SHARE.
00000080	SNTPRDEF	PARMREGS OPTION SPECIFIED ON DEFSYS
00000040	SNTPRNO	PARMREGS=NONE SPECIFIED ON DEFSYS
00000080	SNTRSTD	Indicates that this NSS or DCSS has restricted use and must have a NAMESAVE entry in the user's directory.
00000040	SNTCPUSE	Indicates that this is a CP NSS/DCSS - meaning CP will write to the parts of this NSS/DCSS with ranges defined as 'SC'.
00000020	SNTLSS	This bit indicates that this is a segment space definition that contains member saved segments.
00000010	SNTMSS	This bit indicates that this is a member saved segment definition. NOTE: If both SNTLSS and SNTMSS are off then this is a named saved segment.
00000008	SNTNLS	This is an NLS.
00000004	SNTIMG	This is an Image.
00000002	SNTSYS	This is an NSS.
00000001	SNTSEG	This is a DCSS.
		BITS DEFINED IN SNTTYPF2
00000040	SNTVMGRP	Indicates that a VMGROUP attribute is assigned to this NSS.
80000000	FTRAVAIL	MASK FOR "AVAILABLE" FEATURE
40000000	FTRNTDED	MASK FOR "NOT DEDICATED" FEATURE
08000000	FTRVECTR	MASK FOR "VECTOR" FEATURE
00000010	FSRCECU	EQUIPMENT CHECK + UNIT SPEC
00000014	FSRCDCU	DATA CHECK + UNIT SPEC
00000018	FSRCEC	EQUIPMENT CHECK
0000001C	FSRCCRJ	COMMAND REJECT
00000020	FSRCCDC	(CHANNEL) DATA CHECK
00000024	FSRCCCC	(CHANNEL) CONTROL CHECK
00000028	FSRCCC1	ATTN + BUSY, WITH CC1
00000001	MSGMSG	INDICATE IUCV MESSAGE
00000002	MSGWNG	INDICATE IUCV WARNING
00000003	MSGCPIO	INDICATE IUCV CP I/O
00000004	MSGSMSG	INDICATE IUCV SPECIAL MESSAGE

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00000005    MSGVMIO     INDICATE IUCV VM I/O
00000006    MSGEMSG     INDICATE IUCV ERROR MESSAGE
00000007    MSGIMSG     INDICATE IUCV INFORMATION MESSAGE
00000008    MSGSCIF     INDICATE IUCV SCIF MESSAGE
0000000A    MNCLS10     MONITOR CALL CLASS 10 BIT
00000000    MNCLSCLR    USED TO CLEAR VMDIMNCL
000000FF    CPUIDVM     VIRTUAL MACHINE VERSION CODE
00000003    AWAITKEY    Active Wait protection key
00000000    R0
00000001    R1
00000002    R2
00000003    R3
00000004    R4
00000005    R5
00000006    R6
00000007    R7          GENERAL
00000008    R8          REGISTER
00000009    R9          DEFINITIONS
0000000A    R10
0000000B    R11
0000000C    R12
0000000D    R13
0000000E    R14
0000000F    R15

                        FLOATING CODE DEFINITIONS

00000000    Y0          FLOATING
00000002    Y2          POINT
00000004    Y4          REGISTER
00000006    Y6          DEFINITIONS

                        CONTROL CODE DEFINITIONS

00000000    C0
00000001    C1
00000002    C2
00000003    C3
00000004    C4
00000005    C5
00000006    C6
00000007    C7          CONTROL
00000008    C8          REGISTER
00000009    C9          DEFINITIONS
0000000A    C10
0000000B    C11
0000000C    C12
0000000D    C13
0000000E    C14
0000000F    C15

                        CCMASK CODE DEFINITIONS

00000001    CC3         CC=3 MEANS MASK=1
00000002    CC2         CC=2 MEANS MASK=2
00000004    CC1         CC=1 MEANS MASK=4
00000008    CC0         CC=0 MEANS MASK=8
```

HCPEVTBK— ANCHOR FOR PROCESSOR LOCAL WORKAREAS

DSECT NAME: EVTBK

DESCRIPTIVE NAME: ANCHOR FOR PROCESSOR LOCAL WORKAREAS

FUNCTION: ANCHOR FOR PROCESSOR LOCAL WORKAREAS FOR DATATRACE TYPE IO AND TYPE DATA EVENT HANDLERS

LOCATED BY:

PFXEVTBK

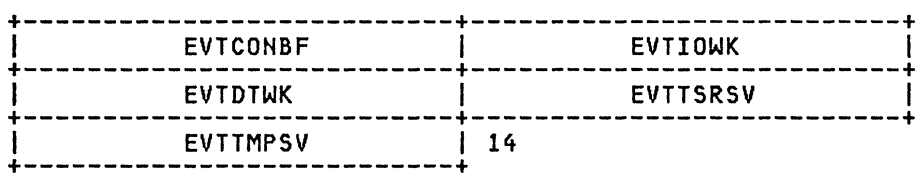
CREATED BY:

HCPTXW

DELETED BY:

HCPTXW

EVTBK - ANCHOR FOR PROCESSOR LOCAL WORKAREAS



disp	name	length	description
000	EVTCONBF	004	ADDR OF BUFFER CONSTRUCTION PAGE
004	EVTIOWK	004	ADDR OF IO TRACETYPE WORKAREA
008	EVTDTWK	004	ADDR OF DATA TRACETYPE WORKAREA
00C	EVTTSRSV	004	ADDR OF HCPTSR STATIC SAVEAREA
010	EVTTMPSV	004	ADDR OF COPIED PFXTMPSV

EQUATES

14	EVTSIZEB	EVTBK SIZE IN BYTES
03	EVTSIZE	EVTBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
EVTBK	001	000
EVTCONBF	004	000
EVTDTWK	004	008
EVTIOWK	004	004
EVTSIZE	001	003
EVTSIZEB	001	014
EVTTMPSV	004	010
EVTTSRSV	004	00C

HCPEXPBK— EXPOSURE BLOCK

DSECT NAME: EXPBK

DESCRIPTIVE NAME: EXPOSURE BLOCK

FUNCTION: THE EXPOSURE BLOCK CONTAINS NECESSARY INFORMATION ABOUT A CP VOLUME FOR PAGING INFORMATION.

LOCATED BY:

CPVEXPBK - FOR SINGLE EXPOSURE DEVICES, POINTS TO THE EXPOSURE BLOCK.
FOR MULTIPLE EXPOSURE DEVICES, POINTS TO THE FIRST ONE OF A CONTIGUOUS GROUP.

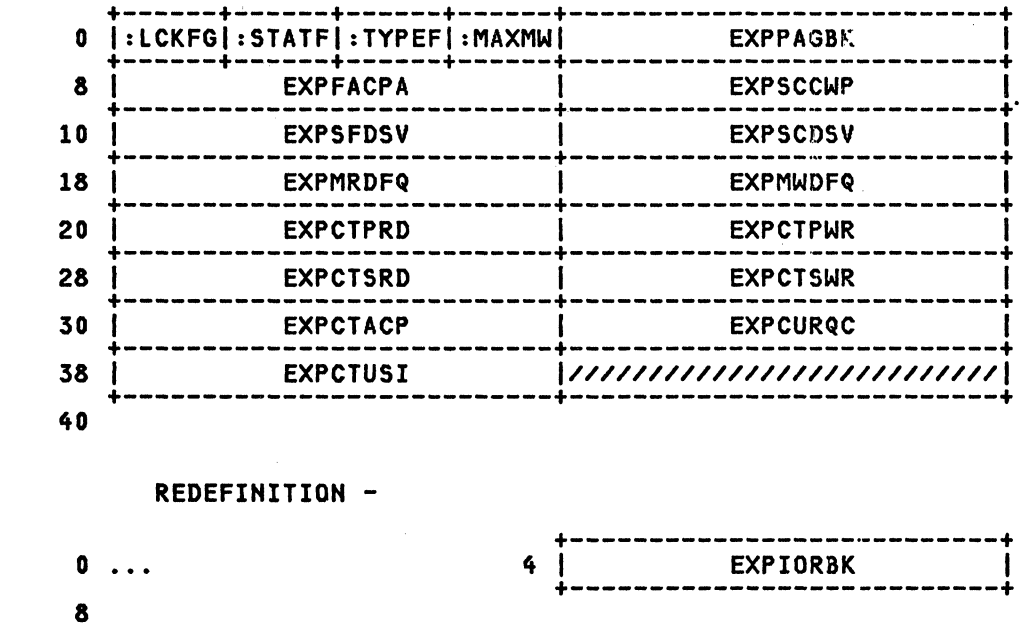
CREATED BY:

HCPRDAAT - WHEN THE CP OWNED VOLUME IS BROUGHT ON LINE AT IPL TIME AND DURING THE ATTACH COMMAND PROCESSING.

DELETED BY:

HCPRDADT - WHEN THE CP OWNED VOLUME IS DETACHED FROM THE SYSTEM.

EXPBK - EXPOSURE BLOCK



REDEFINITION -

disp	name	length	description
000	EXPFLAGS	004	FLAGS FOR THE EXPOSURE BLOCK
000	EXPLCKFG	001	EXPOSURE LOCK BYTE. X'FF' - INDICATES THIS EXPOSURE IS LOCKED. X'00' - INDICATES THIS EXPOSURE IS AVAILABLE FOR USE
			EQUATES
	00 EXPLCKRL		USED TO RELEASE THE EXPOSURE LOCK
001	EXPSTATF	001	EXPOSURE STATUS FLAG

CODES DEFINED IN EXPSTATF (AT HEX DISPLACEMENT: 1)

00	EXPNOP	INDICATES THAT NEITHER A RSCH OR A SSCH IS REQUIRED.
01	EXPRSCH	INDICATES THAT A RSCH IS REQUIRED
02	EXPSSCH	INDICATES THAT A SSCH IS REQUIRED
04	EXPDQINP	INDICATES A DEQUEUE IN PROGRESS

002	EXPTYPEF	001	EXPOSURE TYPE FLAG

BITS DEFINED IN EXPTYPEF (AT HEX DISPLACEMENT: 2)

80	EXPNOUSE	INDICATES THAT MLOAD SHOULD NOT BE USED IN THE CALCULATION FOR THIS EXPOUSRE.
		.....
01	EXPMLTEP	INDICATES THIS IS A MULTIPLE EXPOSURE DEVICE.

003	EXPMAXMW	001	MAXIMUM NUMBER OF MULTIPLE WRITES THAT CAN BE ADDED INTO THE CHANNEL PROGRAM. THIS VALUE IS 4 * NUMBER OF REOCRDS PER TRACK.
004	EXPPAGBK	004	PAGBK FOR THIS EXPOSURE
008	EXPFACPA	004	FIRST ACTIVE CHANNEL PROGRAM ADDR
00C	EXPSCCWP	004	SUSPENDED CCW PACKAGE
010	EXPSFDSV	004	FIRST DEFERRED SAVEAREA FOR SINGLE READS AND WRITES
014	EXPSCDSV	004	CURRENT DEFERRED SAVEAREA THAT WILL BE DEQUEUE FOR SINGLE READS AND WRITE
018	EXPMRDFQ	004	QUEUE ANCHOR FOR MULTIPLE READ. THIS ANCHOR CONTAINS FRAME TABLE ADDRESSES THAT ARE CHAINED TOGETHER WITH A MINUS ONE AS AN END POINTER(X'FFFFFFFF'). THIS ADDRESS IS ZERO IF NONE QUEUED.
01C	EXPMWDFQ	004	QUEUE ANCHOR FOR MULTIPLE WRITES. THIS ANCHOR CONTAINS FRAME TABLE ADDRESSES THAT ARE CHAINED TOGETHER WITH A MINUS ONE AS AN END POINTER(X'FFFFFFFF'). THIS ADDRESS IS ZERO IF NONE QUEUED.
020	EXPCTPRD	004	TOTAL COUNT OF PAGING READS FOR THIS DEVICE.
024	EXPCTPWR	004	TOTAL COUNT OF PAGING WRITES FOR THIS DEVICE.
028	EXPCTSRD	004	TOTAL COUNT OF SPOOLING READS FOR THIS DEVICE.
02C	EXPCTSWR	004	TOTAL COUNT OF SPOOLING WRITES FOR THIS DEVICE.
030	EXPCTACP	004	TOTAL COUNT OF PAGING/SPOOLING READS AND WRITES ADDED TO AN EXISTING CHANNEL PROGRAM WITHOUT EXECUTING A SSCH OR RSCH.
034	EXPCURQC	004	CARDINAL COUNT OF ALL OUTSTANDING PAGING/SPOOLING READS/WRITES FOR THIS DEVICE.
038	EXPCTUSI	004	TOTAL COUNT OF THE NUMBER OF TIMES THE CHANNEL PROGRAM HAD TO BE TERMINATED TO ALLOW USER I/O. THIS IS AN INDICATOR OF INTERFERENCE BETWEEN USER AND PAGING/SPOOLING I/O.
03C	EXPDEVST	004	EXPOSURE SERVICE TIME.
040	EXPMLOAD	004	EXPOSURE MLOAD.
044	EXPTIMER	004	EXPOSURE TIMESTAMP FOR SSCH/RSCH.
048	EXPINTIM	004	EXPOSURE TIMESTAMP AT I/O INTERRUPT TIME.
			.....
04C	EXPNMPIO	004	NUMBER OF ACTIVE PIOBKS AT I/O INTERRUPT
050	EXPBKEND	008	END OF EXPBK.

REDEFINITION -

004	EXPIORBK	004	IORBK FOR THIS EXPOSURE. THE IORBK IS ALWAYS AT THE BEGINNING OF EACH PAGBK.

MORE EQUATES

050	EXPBSIZE	SIZE OF THIS DSECT IN BYTES
00A	EXPSIZE	SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
EXPBK	001	000
EXPBKEND	008	050
EXPBSIZE	001	050
EXPCTACP	004	030
EXPCTPRD	004	020
EXPCTPWR	004	024
EXPCTSRD	004	028
EXPCTSWR	004	02C
EXPCTUSI	004	038
EXPCURQC	004	034
EXPDEVST	004	03C
EXPDQINP	001	004
EXPFACPA	004	008
EXPFLAGS	004	000
EXPINTIM	004	048
EXPIORBK	004	004
EXPLCKFG	001	000
EXPLCKRL	001	000
EXPMAXMW	001	003
EXPMLOAD	004	040
EXPMLTEP	001	001
EXPMRDFQ	004	018
EXPMWDFQ	004	01C
EXPNMPIO	004	04C
EXPNOP	001	000
EXPNOUSE	001	080
EXPPAGBK	004	004
EXPRSCH	001	001
EXPSCCWP	004	00C
EXPSCDSV	004	014
EXPSFDSV	004	010
EXPSIZE	001	00A
EXPSSCH	001	002
EXPSTATF	001	001
EXPTIMER	004	044
EXPTYPEF	001	002

HCPFILID--- FILE IDENTIFICATION TABLE

DSECT NAME: FILID

DESCRIPTIVE NAME: FILE IDENTIFICATION TABLE

FUNCTION: TO ASSOCIATE SPOOL FILES WITH EACH USERID IN THE SYSTEM

LOCATED BY:

SYSFILID

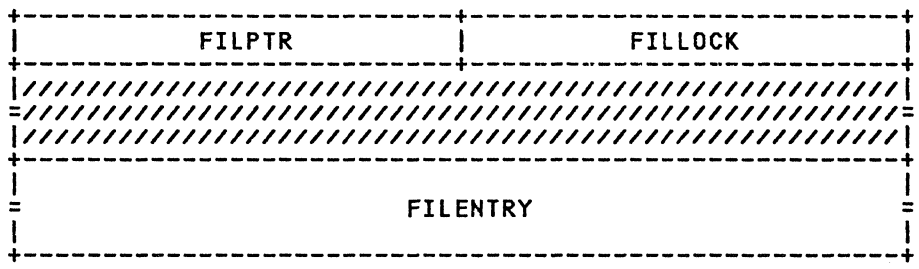
CREATED BY:

HCPWRSST - WHEN BUILDING THE FILID TABLE
DURING INITIALIZATION

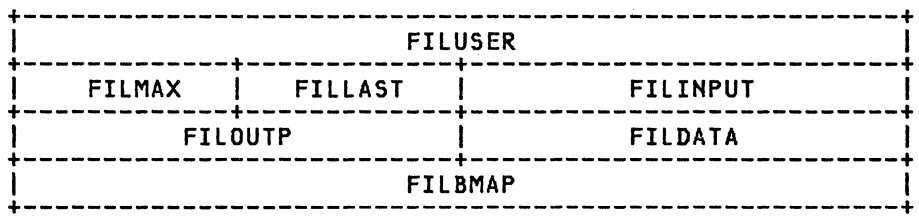
DELETED BY:

STORAGE FOR FILID TABLE IS RELEASED AT
SHUTDOWN

FILID - FILE IDENTIFICATION TABLE



REDEFINITION - DESCRIPTION OF ONE ENTRY



disp	name	length	description
000	FILPTR	004	POINTER TO NEXT FILID TABLE PG
004	FILLOCK	004	LOCK FOR ADDING THE TABLE ENTRY
008		3D	RESERVED FOR IBM USE
020	FILENTRY	032	127 ENTRIES IN TABLE

REDEFINITION - DESCRIPTION OF ONE ENTRY

020	FILUSER	008	USERID OF ENTRY IN THE TABLE
028	FILMAX	002	MAX NUMBER OF SPID FOR USER
02A	FILLAST	002	LAST SPID ALLOCATED FOR USER
02C	FILINPUT	004	POINTER TO USER'S INPUT QUEUE
030	FILOUTP	004	POINTER TO USER'S OUTPUT QUEUE
034	FILDATA	004	POINTER TO USER'S DATA QUEUE
038	FILBMAP	001	USER'S BITMAP OF ALLOCATED SPIDS
040	FILNEXT	004	NEXT ENTRY IN FILID TABLE

CROSS REFERENCE

Name	Len	Val/Disp
FILBMAP	001	038
FILDATA	004	034
FILENTRY	032	020
FILID	001	000
FILINPUT	004	02C
FILLAST	002	02A
FILLOCK	004	004
FILMAX	002	028
FILNEXT	004	040
FILOUTP	004	030
FILPTR	004	000
FILUSER	008	020

HCPFINBK— FLOATING EXTERNAL INTERRUPT CONTROL BLOCK

DSECT NAME: FINBK

DESCRIPTIVE NAME: FLOATING EXTERNAL INTERRUPT CONTROL BLOCK

FUNCTION: HCPFINBK MAINTAINS A GUESTS FLOATING EXTERNAL INTERRUPTS WHEN THE INTERRUPTS ARE PENDING. GUEST FLOATING EXTERNAL INTERRUPTS ARE INTERRUPTS THAT MAY BE PRESENTED TO ANY CPU IN THE VIRTUAL CONFIGURATION.

LOCATED BY:

VMDFIN FIELD OF HCPVMDBK (FLOATING INTERRUPTIONS)

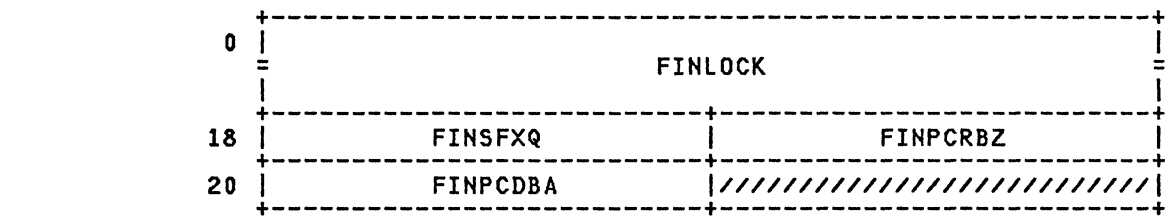
CREATED BY:

HCPBVM FOR A BASE VMDBK. NON-BASE VMDBKS ARE ASSIGNED THE ADDRESS OF THE BASE FINBK

DELETED BY:

HCPUSO DELETES THE FINBK WHEN A BASE VMDBK LOGS OFF

FINBK - FLOATING INTERRUPTION BLOCK



disp	name	length	description
000	FINLOCK	008	LOCKWORD FOR THIS BLOCK
018	FINSFXQ	004	QUEUE ANCHOR FOR SFXBKS REPRESENTING FLOATING EXTERNAL INTERRUPTIONS
01C	FINPCRBZ	004	VMDBK ADDRESS OF VIRTUAL CPU USING PROCESSOR CONTROLLER
020	FINPCDBA	004	PROCESSOR CONTROLLER DATA BLOCK ADDRESS FOR PREFERRED VIRTUAL MACHINE RECOVERY
024		1F	RESERVED FOR FUTURE IBM USE

EQUATES

28 FINSIZE SIZE OF FINBK

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
FINBK	001	000	FINSIZE	001	028
FINLOCK	008	000			
FINPCDBA	004	020			
FINPCRBZ	004	01C			
FINSFXQ	004	018			

HCPFIOBK— FORMATTED I/O BLOCK

DSECT NAME: FIOBK

DESCRIPTIVE NAME: FORMATTED I/O BLOCK

FUNCTION: DEFINE DASD I/O REQUEST TO STAND-ALONE DASD I/O ROUTINE WITH A DESCRIPTION OF THE AREA ON THE VOLUME THAT IS TO USED. THE DATA CAN BE ACCESSED BY EITHER RELATIVE BLOCK OR CCPV REFERENCE TECHNIQUES.

LOCATED BY:

GENERAL PURPOSE REGISTER 1 ON ENTRY TO HCPLODAS

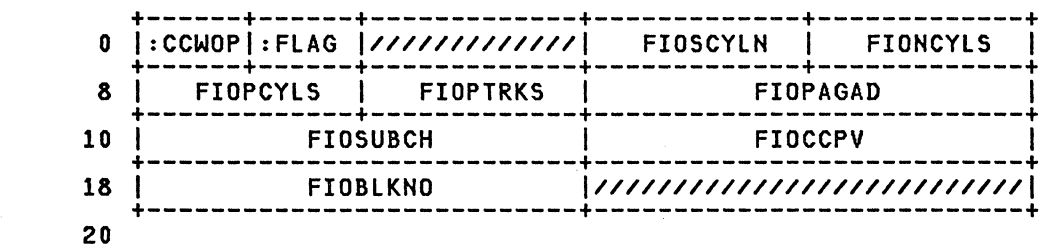
CREATED BY:

HCPCKPRS - BEFORE SYSTEM INITIALIZATION ON A SYSTEM BOUNCE
HCPCKPSH - DURING AN ABNORMAL TERMINATION OR SHUTDOWN
HCPLODNC - DURING THE SYSTEM LOAD PROCESS

DELETED BY:

FIOBK IS OBVIATED WHEN SYSTEM BECOMES FUNCTIONAL

FIOBK - FORMATTED I/O BLOCK



disp	name	length	description
000	FIOCCWOP	001	CCW OP-CODE, CWODRDTA OR CWODWDTA
001	FIOFLAG	001	I/O CONDITION FLAG (CC=1)

BITS DEFINED IN FIOFLAG (AT HEX DISPLACEMENT: 1)

80	FIOSTRFL	I/O STORAGE FAILURE, CANNOT LOAD BLOCK
40	FIOFAIL	I/O FAILURE AFTER 10 ATTEMPTS
20	FIODEVIC	I/O DEVICE DOES NOT RESPOND
10	FIORANGE	I/O OUTSIDE OF RANGE OF CYLINDERS
00	FIOSUCES	CC=0 I/O WAS SUCCESSFUL

002		H	RESERVED FOR FUTURE IBM USE
004	FIOSCYLN	002	STARTING CYLINDER NUMBER OF THE 'FILE'
006	FIONCYLS	002	NUMBER OF CYLINDERS IN THE 'FILE'
008	FIOPCYLS	002	PAGES PER CYLINDER ON THIS DEVICE
00A	FIOPTRKS	002	PAGES PER TRACK ON THIS DEVICE
00C	FIOPAGAD	004	ADDRESS OF PAGE TO BE READ OR WRITTEN
010	FIOSUBCH	004	SUBCHANNEL NUMBER OF UNIT
014	FIOCCPV	004	SPOOLING "CCPV" NUMBERED
018	FIOBLKNO	004	BLOCK NUMBER WITH 'FILE'
01C		F	RESERVED FOR FUTURE IBM USE

EQUATES

04	FIOSIZE	LENGTH OF FORMATTED I/O BLOCK

CROSS REFERENCE

Name	Len	Val/Disp
FIOBK	001	000
FIOBLKNO	004	018
FIOCCPV	004	014
FIOCCWOP	001	000
FIODEVIC	001	020
FIOFAIL	001	040
FIOFLAG	001	001
FIONCYLS	002	006
FIOPAGAD	004	00C
FIOPCYLS	002	008
FIOPTRKS	002	00A
FIORANGE	001	010
FIOSCYLN	002	004
FIOSIZE	001	004
FIOSTRFL	001	080
FIOSUBCH	004	010
FIOSUCES	001	000

HCPFLSPT— SPOOL-TO-TAPE FILE LIST

DSECT NAME: FLSPT

DESCRIPTIVE NAME: SPOOL-TO-TAPE FILE LIST

FUNCTION: CONTAINS THE SPOOL FILE ID'S OF THE SPOOL FILES TO BE DUMPED TO TAPE FOR AN SPTAPE DUMP COMMAND.

LOCATED BY:

(1) ROUTINES:
HCPSPSDP - FOR SPTAPE DUMP COMMANDS
(2) FIELDS:
SPTFLSPT IN HCPSPTBK. (THIS IS THE ANCHOR FLSPT FOR THE SPTAPE DUMP COMMAND ACTIVE ON THE DEVICE)
FLSPTNXT IN HCPFLSPT. (IF THERE IS MORE THAN ONE FLSPT)

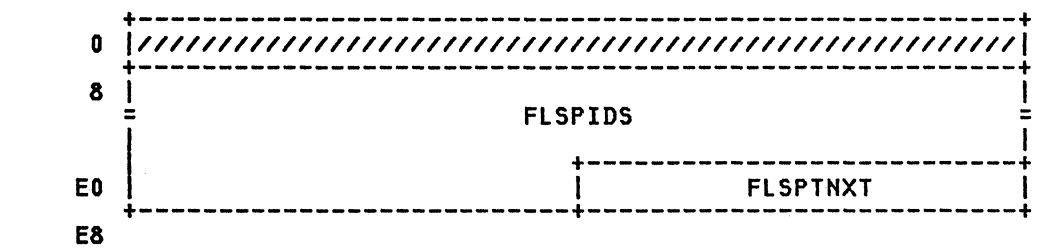
CREATED BY:

HCPSPTAP - FOR THE SPTAPE DUMP COMMAND

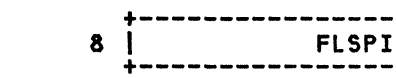
DELETED BY:

HCPSPSDP - AFTER DUMPING FILES TO TAPE, OR AFTER AN SPTAPE STOP OR CANCEL REQUEST.

FLSPT - SPOOL-TO-TAPE FILE LIST



REDEFINITION -



disp	name	length	description
000		D	RESERVED FOR IBM USE
008	FLSDATA	004	START OF THE SPOOL FILE ID LIST
			EQUATES
	08 FLSESTRT		OFFSET OF THE FIRST ENTRY
008	FLSPIDS	004	SPACE FOR 55 SPOOL FILE ID'S
			EQUATES
	E4 FLSEEND		THE OFFSET OF THE END OF THE SPOOL FILE ENTRIES
0E4	FLSPTNXT	004	THE ADDRESS OF THE NEXT FLSPT
			EQUATES


```
        1D    FLSSIZE     SIZE OF THE FLSPT BLOCK

         REDEFINITION -

008   FLSPID     004      A SPID ENTRY

                  EQUATES

        04    FLSELN      THE LENGTH OF A BLOCK ENTRY
```

CROSS REFERENCE

Name	Len	Val/Disp
FLSDATA	004	008
FLSEEND	001	0E4
FLSELN	001	004
FLSESTRT	001	008
FLSPID	004	008
FLSPIDS	004	008
FLSPT	001	000
FLSPTNXT	004	0E4
FLSSIZE	001	01D

HCPFMABK— ADDRESSES OF CCW ROUTINES FOR CPFORMAT

DSECT NAME: FMABK

DESCRIPTIVE NAME: ADDRESSES OF CCW ROUTINES FOR CPFORMAT

FUNCTION: TO CONTAIN ADDRESSES OF VARIOUS CCW STRINGS USED BY CPFORMAT TO FORMAT, ALLOCATE, AND LABEL DISKS FOR CP USE.

LOCATED BY:

THE FMABK IS LOCATED AT THE BEGINNING OF EACH CCW MODULE (HCPFAA, HCPFAB, HCPFAC, HCPFAD). WHEN CPFORMAT IS RUN, THESE MODULES RESIDE IN THE USER'S VIRTUAL MACHINE. TO GET THE ADDRESS OF THE FMABK FOR:

(1) 2305 CCW ADDRESSES - A(HCPFAA05)
(2) 3330 CCW ADDRESSES - A(HCPFAB30)
(3) 3340 CCW ADDRESSES - A(HCPFAC40)
(4) 3350 CCW ADDRESSES - A(HCPFAD50)
(5) 3375 CCW ADDRESSES - A(HCPFAG75)
(6) 3380 CCW ADDRESSES - A(HCPFAE80)

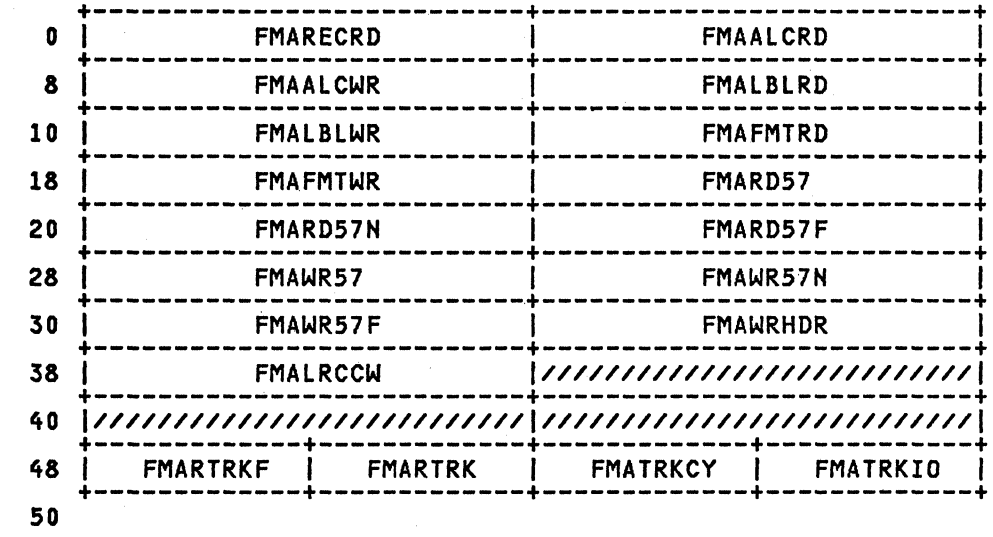
CREATED BY:

HCPLOD - THE ADDRESSES OF THE CCWS ARE FILLED IN BY THE LOADER AT LOAD TIME.

DELETED BY:

HCPRESCP - THIS BLOCK IS DELETED FROM THE USER'S VIRTUAL MACHINE WHEN THE CPFORMAT COMMAND COMPLETES OR IS TERMINATED.

FMABK - CP FORMAT COMMUNICATIONS AREA



disp	name	length	description
000		0D	
000	FMARECRD	004	DATA RECORDS ADDR
004	FMAALCRD	004	ALLOCATE READ CCWS ADDR
008	FMAALCWR	004	BITMAP WRITE CCWS ADDR
00C	FMALBLRD	004	VOL LAB READ CCWS ADDR
010	FMALBLWR	004	VOL LAB WRITE CCWS ADDR
014	FMAFMTRD	004	FORMAT READ CCWS ADDR
018	FMAFMTWR	004	FORMAT WRITE CCWS ADDR
01C	FMARD57	004	FORMAT READ CCWS ADR
020	FMARD57N	004	FORMAT READ CCWS ADR

024	FMARD57F	004	FORMAT READ CCWS ADR
028	FMAWR57	004	FORMAT WRITE CCW ADR
02C	FMAWR57N	004	FORMAT WRITE CCW ADR
030	FMAWR57F	004	FORMAT WRITE CCW ADR
034	FMAWRHDR	004	SPEC HDR WRT CCW ADR
038	FMALRCCW	004	LBL RECORD RD CCW ADDR
03C		1F	RESERVED FOR FUTURE IBM USE
040		1F	RESERVED FOR FUTURE IBM USE
044		1F	RESERVED FOR FUTURE IBM USE
048	FMARTRKF	002	REC + FILLER PER TRACK
04A	FMARTRK	002	RECORDS PER TRACK
04C	FMATRKCY	002	TRACKS PER CYLINDER
04E	FMATRKIO	002	TRACKS PER I/O

CROSS REFERENCE

Name	Len	Val/Disp
FMAALCRD	004	004
FMAALCWR	004	008
FMABK	001	000
FMAFMTRD	004	014
FMAFMTWR	004	018
FMALBLRD	004	00C
FMALBLWR	004	010
FMALRCCW	004	038
FMARD57	004	01C
FMARD57F	004	024
FMARD57N	004	020
FMARECRD	004	000
FMARTRK	002	04A
FMARTRKF	002	048
FMATRKCY	002	04C
FMATRKIO	002	04E
FMAWRHDR	004	034
FMAWR57	004	028
FMAWR57F	004	030
FMAWR57N	004	02C

HCPFMNUC— CPFORMAT CONTROL BLOCK

DSECT NAME: FMNUC

DESCRIPTIVE NAME: CPFORMAT CONTROL BLOCK

FUNCTION: TO CONTAIN FLAGS AND CONTROL INFORMATION SET UP BY THE CPFORMAT COMMAND. ALSO, ADDRESSES OF CPFORMAT ROUTINES ARE ALSO LOCATED IN THIS CONTROL BLOCK. THIS BLOCK NORMALLY RESIDES IN THE USER'S VIRTUAL STORAGE.

LOCATED BY:

AZPOVLAY - FIELD IN AZPAG STARTING AT VIRTUAL ADDRESS X'A00'.

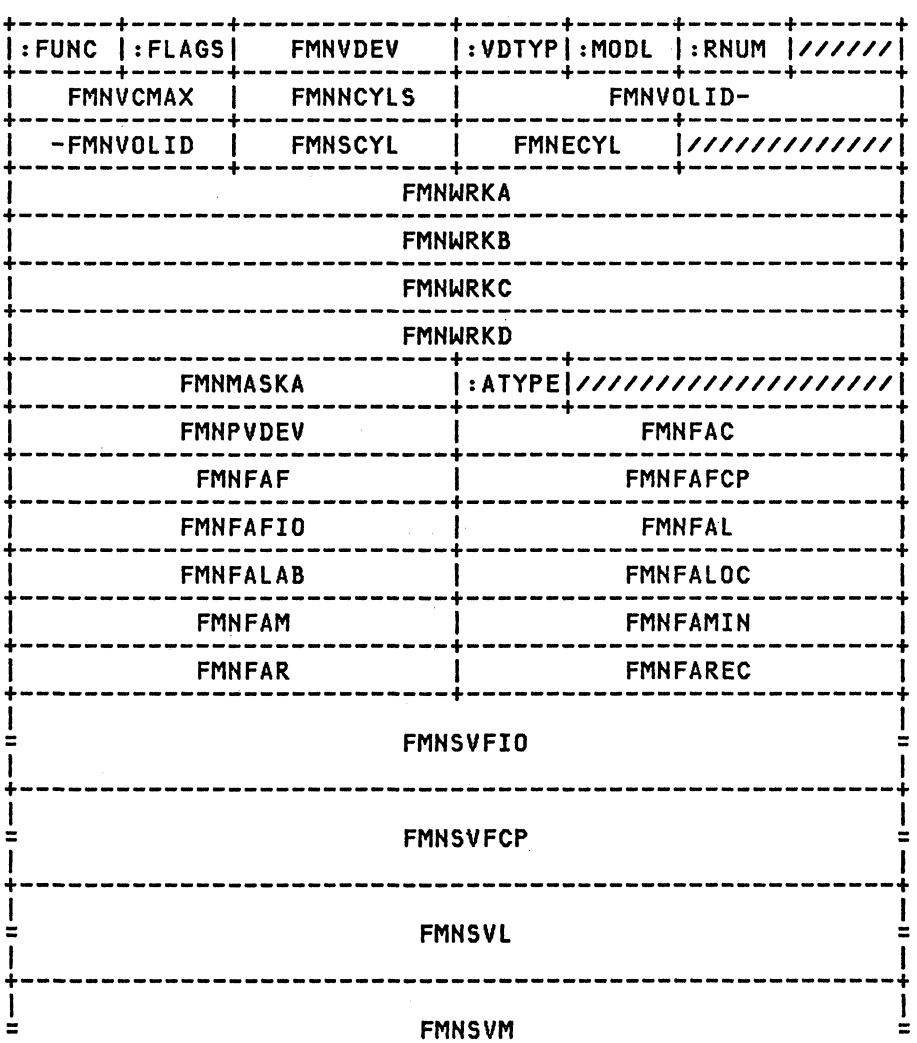
CREATED BY:

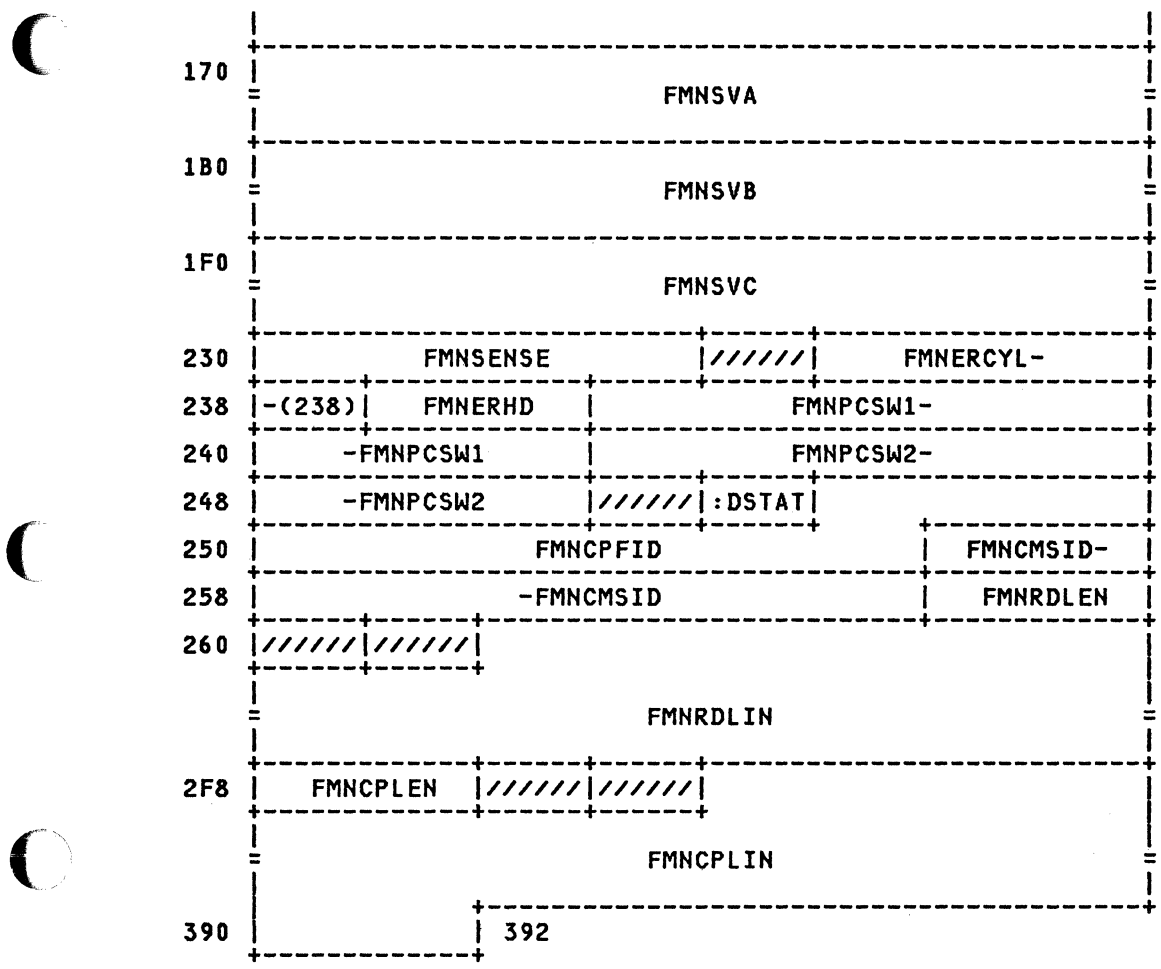
HCPFAN - INITIALIZES ALL OF THE USER'S VIRTUAL PAGE ZERO. THIS CONTROL BLOCK MAPS OUT PAGE ZERO STARTING FROM LOCATION X'A00'.

DELETED BY:

HCPRESCP - THIS BLOCK IS DELETED FROM THE USER'S VIRTUAL MACHINE WHEN THE CPFORMAT COMMAND COMPLETES OR IS TERMINATED.

FMNUC - CP FORMAT NUCLEUS





disp	name	length	description
000	FMNFUNC	001	CPFORMAT PROGRAM FUNCTION INDICATION

BITS DEFINED IN FMNFUNC (AT HEX DISPLACEMENT: 0)

80	FMNFMT	CP VOLUME FORMAT FUNCTION
40	FMNPASS	CP VOLUME FORMAT PASS NUMBER
20	FMNALOC	CP VOLUME ALLOCATION FUNCTION
10	FMNLAB	CP VOLUME LABEL FUNCTION
08	FMNLABM	CP VOLUME LABEL MATCH REQUIRED
04	FMNCMS	INDICATES CMS VERSION OF CPFORMAT
		EQU X'02' RESERVED FOR FUTURE IBM USE
		EQU X'01' RESERVED FOR FUTURE IBM USE

001	FMNFLAGS	001	SPECIAL PROCESSING FLAGS

BITS DEFINED IN FMNFLAGS (AT HEX DISPLACEMENT: 1)

01	FMNNOTXA	FMRVLOWN DOESN'T CONTAIN THE 'CPVOL' KEYWORD, WHICH INDICATES THAT CYLINDER 0 HAS NOT BEEN FORMATTED FOR VM/XA CP USE. IT HAS PROBABLY BEEN FORMATTED BY ANOTHER OPERATING SYSTEM, FOR EXAMPLE, VM/SP OR CMS.

002	FMNVDEV	002	VIRTUAL DASD ADDRESS
004	FMNVDTYP	001	VIRTUAL DEVICE TYPE
005	FMNMODL	001	DASD HIGHEST RECORD NUMBER
006	FMNRNUM	001	DASD HIGHEST RECORD NUMBER

```
007                 XL1         RESERVED FOR FUTURE IBM USE
008     FMNVCMAX    002         DASD HIGHEST CYLINDER ADDRESS
00A     FMNNCYLS    002         NUMBER OF CYLINDERS ON DASD
00C     FMNVOLID    006         VOLID OF VIRTUAL DEVICE
012     FMNSCYL     002         STARTING CYLINDER REQUESTED
014     FMNECYL     002         ENDING CYLINDER REQUESTED
016                 1H          RESERVED FOR FUTURE IBM USE
018     FMNWRKA     008         DOUBLEWORD WORKAREA
020     FMNWRKB     008         DOUBLEWORD WORKAREA
028     FMNWRKC     008         DOUBLEWORD WORKAREA
030     FMNWRKD     008         DOUBLEWORD WORKAREA
038     FMNMASKA    004         NUMERIC MASK
03C     FMNATYPE    001         CYLINDER ALLOCATION TYPE
03D                 XL3'00'     RESERVED FOR FUTURE IBM USE
040     FMNPVDEV    004         PRINTABLE VDEV ADDRESS

                        EQUATES

          41      FMNCMS3V      EBCDIC CMS 3 DIGIT DEVICE ADDRESS

044     FMNFAC      004         FORMAT/ALLOC CCWS & DATA MOD ADDRESS
048     FMNFAF      004         BASE VALUE FOR MODULE HCPFAF
04C     FMNFAFCP    004         CPFORMAT FORMAT ROUTINE
050     FMNFAFIO    004         CPFORMAT DISK I/O ROUTINE
054     FMNFAL      004         BASE ADDRESS FOR MODULE HCPFAL
058     FMNFALAB    004         CPFORMAT LABEL ROUTINE
05C     FMNFALOC    004         CPFORMAT ALLOCATE ROUTINE
060     FMNFAM      004         BASE ADDRESS FOR MODULE HCPFAM
064     FMNFAMIN    004         CPFORMAT COMMAND ROUTER ROUTINE
068     FMNFAR      004         BASE ADDRESS FOR MODULE HCPFAR
06C     FMNFAREC    004         CPFORMAT ALLOCATION DATA RECORD
070     FMNSVFIO    004         HCPFAFIO REGISTER SAVE AREA
0B0     FMNSVFCP    004         HCPFAFCP REGISTER SAVE AREA
0F0     FMNSVL      004         HCPFAL REGISTER SAVE AREA
130     FMNSVM      004         HCPFAM REGISTER SAVE AREA
170     FMNSVA      004         FIRST LEVEL SAVE AREA (FOR SUBRTNS)
1B0     FMNSVB      004         SECOND LEVEL SAVE AREA (FOR SUBRTNS)
1F0     FMNSVC      004         THIRD LEVEL SAVE AREA  (FOR SUBRTNS)
230     FMNSENSE    004         SESNE DATA FROM PERMANENT I/O ERRORS
234                 CL1'        WORK CHARACTER FOR SENSE DATA
235     FMNERCYL    004         FAILING CYLINDER NUMBER FOR ERR MSGS
239     FMNERHD     002         FAILING HEAD NUMBER FOR ERR MSGS
23B     FMNPCSW1    008         1ST HALF OF PRINTABLE CSW FOR ERR MSGS
243     FMNPCSW2    008         2ND HALF OF PRINTABLE CSW FOR ERR MSGS
24B                 CL1'        WORK CHARACTER FOR CSW
24C     FMNDSTAT    001         I/O ERROR STATUS FLAGS
                                EQU   X'80'     RESERVED FOR FUTURE IBM USE

        BITS DEFINED IN FMNDSTAT (AT HEX DISPLACEMENT: 24C)

          40      FMNNOCH       NO CYLINDER OR HEAD INFORMATION
                                WAS CALCULATED.
          20      FMNCSWST      CSW WAS STORED
          10      FMNPERR       PERMANENT I/O ERROR
          08      FMNDIB        DEVICE IS BUSY
          04      FMNBRL        BAD RECORD LENGTH
          02      FMNUEP        UNIT EXCEPTION
          01      FMNDNA        DEVICE NOT ATTACHED

24D     FMNCPFID    009         CP CPFORMAT PROMPT
256     FMNCMSID    008         CMS CPFORMAT PROMPT
25E     FMNRDLEN    002         LENGTH OF TERMINAL INPUT LINE
260                 XL1         RESERVED FOR FUTURE IBM USE
261                 CL1'        BLANK USED FOR CLEARING FMNRDLIN
262     FMNRDLIN    150         TERMINAL INPUT LINE
2F8     FMNCPLEN    002         LENGTH OF TERMINAL OUTPUT LINE
2FA                 XL1         RESERVED FOR FUTURE IBM USE
2FB                 CL1'        BLANK USED FOR CLEARING FMNCPLIN
2FC     FMNCPLIN    150         TERMINAL OUTPUT LINE
```

CROSS REFERENCE

Name	Len	Val/Disp
FMNALOC	001	020
FMNATYPE	001	03C
FMNBRL	001	004
FMNCMS	001	004
FMNCMSID	008	256
FMNCMS3V	003	041
FMNCPFID	009	24D
FMNCPLEN	002	2F8
FMNCPLIN	150	2FC
FMNCSWST	001	020
FMNDIB	001	008
FMNDNA	001	001
FMNDSTAT	001	24C
FMNECYL	002	014
FMNERCYL	004	235
FMNERHD	002	239
FMNFAC	004	044
FMNFAF	004	048
FMNFAFCP	004	04C
FMNFAFIO	004	050
FMNFAL	004	054
FMNFALAB	004	058
FMNFALOC	004	05C
FMNFAM	004	060
FMNFAMIN	004	064
FMNFAR	004	068
FMNFAREC	004	06C
FMNFLAGS	001	001
FMNFMT	001	080
FMNFUNC	001	000
FMNLAB	001	010
FMNLABM	001	008
FMNMASKA	004	038
FMNMODL	001	005
FMNNCYLS	002	00A
FMNNOCH	001	040
FMNNOTXA	001	001
FMNPASS	001	040
FMNPCSW1	008	23B
FMNPCSW2	008	243
FMNPERR	001	010
FMNPVDEV	004	040
FMNRDLEN	002	25E
FMNRDLIN	150	262
FMNRNUM	001	006
FMNSCYL	002	012
FMNSENSE	004	230
FMNSVA	004	170
FMNSVB	004	1B0
FMNSVC	004	1F0
FMNSVFCP	004	0B0
FMNSVFIO	004	070
FMNSVL	004	0F0
FMNSVM	004	130
FMNUC	001	000
FMNUEP	001	002
FMNVCMAX	002	008
FMNVDEV	002	002
FMNVDTYP	001	004
FMNVOLID	006	00C
FMNWRKA	008	018
FMNWRKB	008	020
FMNWRKC	008	028
FMNWRKD	008	030

HCPFMREC— CPFORMAT RECORDS

DSECT NAME: FMREC

DESCRIPTIVE NAME: CPFORMAT RECORDS

FUNCTION: TO CONTAIN ALL RECORDS WHICH CPFORMAT WRITES TO DISK. ALSO, CCW SEEK DATA IS LOCATED IN THIS CONTROL BLOCK.

LOCATED BY:

FMARECRD - FIELD IN THE FMABK - CONTAINS THE ADDRESS OF WHERE THE DATA RECORDS START.

CREATED BY:

HCPFAA - CONTAINS THE DATA RECORDS NEEDED FOR A 2305 DRUM. THIS CONTROL BLOCK MAPS OUT THE MODULE STARTING WITH THE 'FMR05' FIELD. THE RECORDS RESIDE IN THE USER'S VIRTUAL STORAGE WHEN THEY ARE USED.

HCPFAB - CONTAINS THE DATA RECORDS NEEDED FOR A 3330 DISK. THIS CONTROL BLOCK MAPS OUT THE MODULE STARTING WITH THE 'FMR30' FIELD. THE RECORDS RESIDE IN THE USER'S VIRTUAL STORAGE WHEN THEY ARE USED.

HCPFAC - CONTAINS THE DATA RECORDS NEEDED FOR A 3340 DISK. THIS CONTROL BLOCK MAPS OUT THE MODULE STARTING WITH THE 'FMR40' FIELD. THE RECORDS RESIDE IN THE USER'S VIRTUAL STORAGE WHEN THEY ARE USED.

HCPFAD - CONTAINS THE DATA RECORDS NEEDED FOR A 3350 DISK. THIS CONTROL BLOCK MAPS OUT THE MODULE STARTING WITH THE 'FMR50' FIELD. THE RECORDS RESIDE IN THE USER'S VIRTUAL STORAGE WHEN THEY ARE USED.

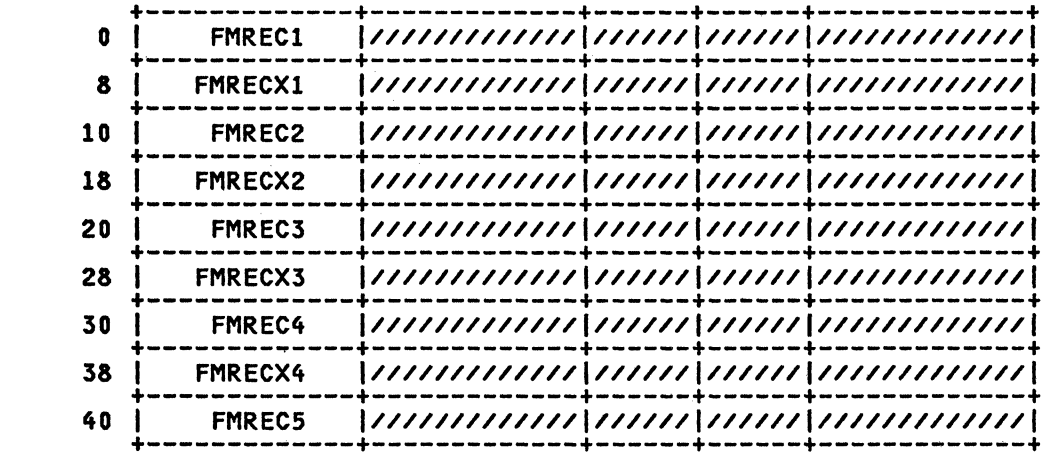
HCPFAE - CONTAINS THE DATA RECORDS NEEDED FOR A 3350 DISK WHEN ATTACHED TO A 3880 MODEL 21 CONTROL UNIT. THIS

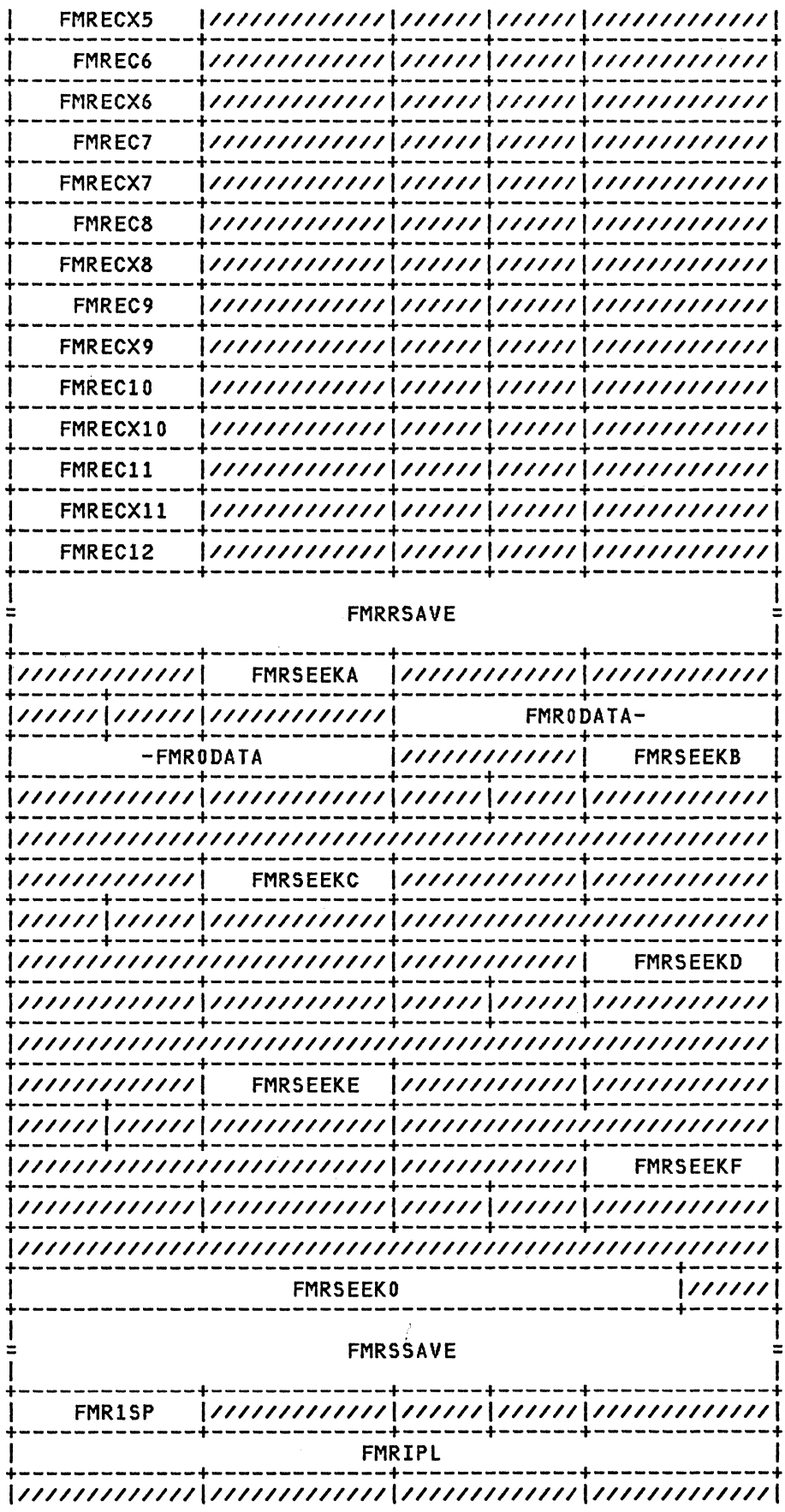
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

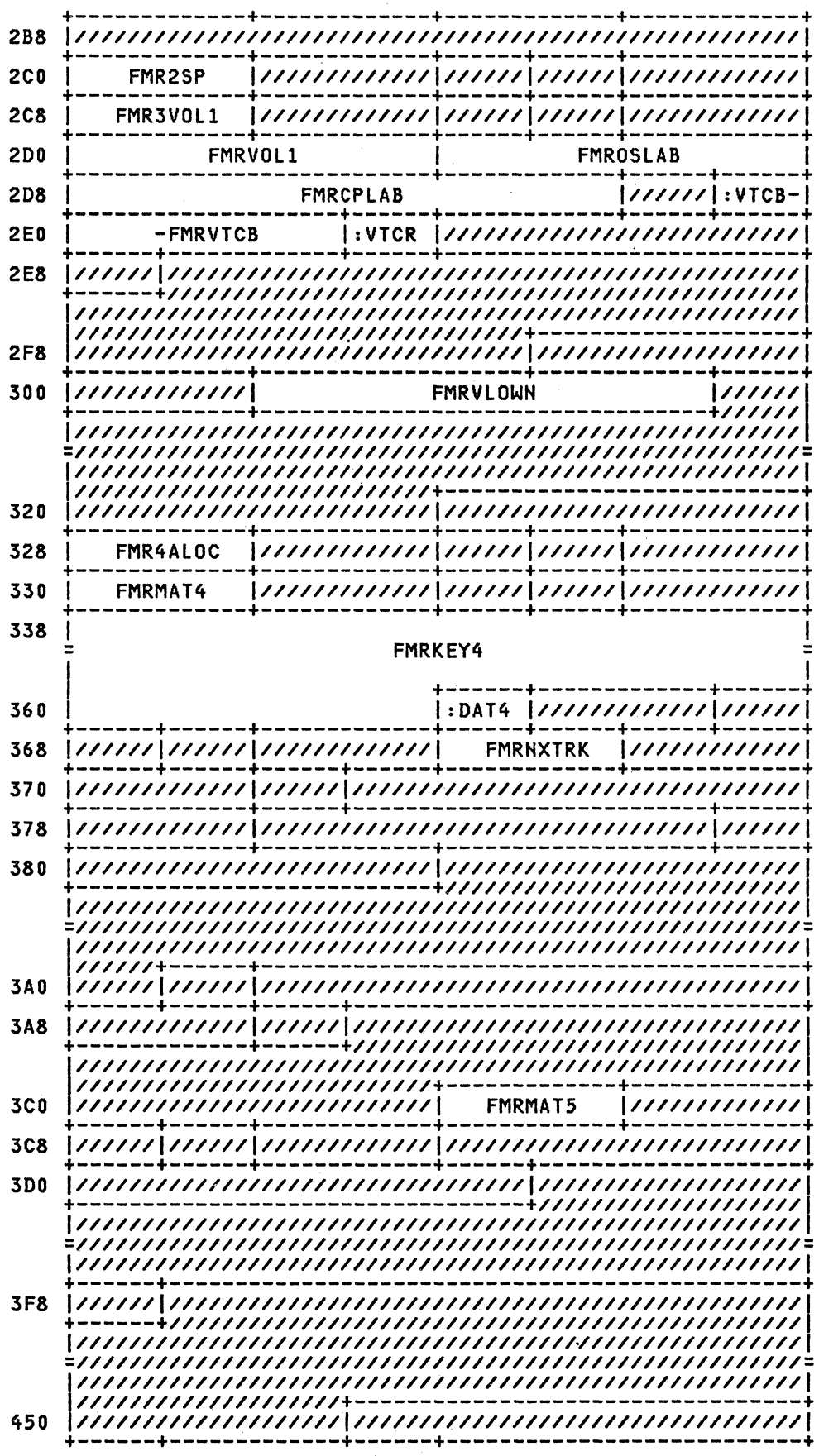
DELETED BY:

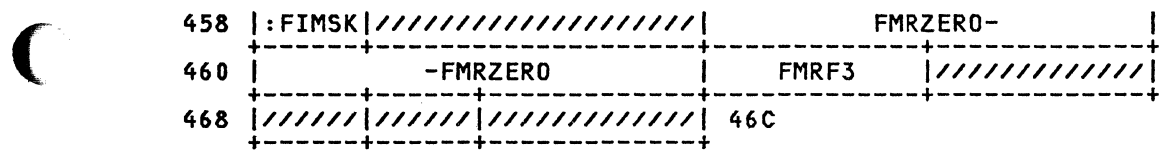
HCPRESCP - THIS BLOCK IS DELETED FROM THE USER'S VIRTUAL MACHINE WHEN THE CPFORMAT COMMAND COMPLETES OR IS TERMINATED.

FMREC - CP FORMAT DATA RECORDS




48
FMRECX5
50
FMREC6
58
FMRECX6
60
FMREC7
68
FMRECX7
70
FMREC8
78
FMRECX8
80
FMREC9
88
FMRECX9
90
FMREC10
98
FMRECX10
A0
FMREC11
A8
FMRECX11
B0
FMREC12
B8
FMRRSAVE
180
FMRSEEKA
188
FMR0DATA-
190
-FMR0DATA
FMRSEEKB
198
1A0
1A8
FMRSEEKC
1B0
1B8
FMRSEEKD
1C0
1C8
1D0
FMRSEEKE
1D8
1E0
FMRSEEKF
1E8
1F0
1F8
FMRSEEK0
200
FMRSSAVE
2A0
FMR1SP
2A8
FMRIPL
2B0





disp	name	length	description
000		0D	ALIGN ON A DOUBLEWORD BNDRY
000	FMREC1	002	CYLINDER NUMBER
002		XL2	TRACK NUMBER
004		XL1	RECORD NUMBER
005		XL1	KEY LENGTH
006		XL2	DATA LENGTH (4K RECORD)
008	FMRECX1	002	CYLINDER NUMBER
00A		XL2	TRACK NUMBER
00C		XL1	RECORD NUMBER
00D		XL1	KEY LENGTH
00E		XL2	DATA LENGTH (50 BYTE FILLER)
010	FMREC2	002	CYLINDER NUMBER
012		XL2	TRACK NUMBER
014		XL1	RECORD NUMBER
015		XL1	KEY LENGTH
016		XL2	DATA LENGTH (4K RECORD)
018	FMRECX2	002	CYLINDER NUMBER
01A		XL2	TRACK NUMBER
01C		XL1	RECORD NUMBER
01D		XL1	KEY LENGTH
01E		XL2	DATA LENGTH (50 BYTE FILLER)
020	FMREC3	002	CYLINDER NUMBER
022		XL2	TRACK NUMBER
024		XL1	RECORD NUMBER
025		XL1	KEY LENGTH
026		XL2	DATA LENGTH (4K RECORD)
028	FMRECX3	002	CYLINDER NUMBER
02A		XL2	TRACK NUMBER
02C		XL1	RECORD NUMBER
02D		XL1	KEY LENGTH
02E		XL2	DATA LENGTH (50 BYTE FILLER)
030	FMREC4	002	CYLINDER NUMBER
032		XL2	TRACK NUMBER
034		XL1	RECORD NUMBER
035		XL1	KEY LENGTH
036		XL2	DATA LENGTH (4K RECORD)
038	FMRECX4	002	CYLINDER NUMBER
03A		XL2	TRACK NUMBER
03C		XL1	RECORD NUMBER
03D		XL1	KEY LENGTH
03E		XL2	DATA LENGTH (50 BYTE FILLER)
040	FMREC5	002	CYLINDER NUMBER
042		XL2	TRACK NUMBER
044		XL1	RECORD NUMBER
045		XL1	KEY LENGTH
046		XL2	DATA LENGTH (4K RECORD)
048	FMRECX5	002	CYLINDER NUMBER
04A		XL2	TRACK NUMBER
04C		XL1	RECORD NUMBER
04D		XL1	KEY LENGTH
04E		XL2	DATA LENGTH (50 BYTE FILLER)
050	FMREC6	002	CYLINDER NUMBER
052		XL2	TRACK NUMBER
054		XL1	RECORD NUMBER
055		XL1	KEY LENGTH
056		XL2	DATA LENGTH (4K RECORD)
058	FMRECX6	002	CYLINDER NUMBER
05A		XL2	TRACK NUMBER
05C		XL1	RECORD NUMBER
05D		XL1	KEY LENGTH
05E		XL2	DATA LENGTH (50 BYTE FILLER)

```
060    FMREC7      002       CYLINDER NUMBER
062                XL2       TRACK NUMBER
064                XL1       RECORD NUMBER
065                XL1       KEY LENGTH
066                XL2       DATA LENGTH (4K RECORD)
068    FMRECX7     002       CYLINDER NUMBER
06A                XL2       TRACK NUMBER
06C                XL1       RECORD NUMBER
06D                XL1       KEY LENGTH
06E                XL2       DATA LENGTH (50 BYTE FILLER)
070    FMREC8      002       CYLINDER NUMBER
072                XL2       TRACK NUMBER
074                XL1       RECORD NUMBER
075                XL1       KEY LENGTH
076                XL2       DATA LENGTH (4K RECORD)
078    FMRECX8     002       CYLINDER NUMBER
07A                XL2       TRACK NUMBER
07C                XL1       RECORD NUMBER
07D                XL1       KEY LENGTH
07E                XL2       DATA LENGTH (50 BYTE FILLER)
080    FMREC9      002       CYLINDER NUMBER
082                XL2       TRACK NUMBER
084                XL1       RECORD NUMBER
085                XL1       KEY LENGTH
086                XL2       DATA LENGTH (4K RECORD)
088    FMRECX9     002       CYLINDER NUMBER
08A                XL2       TRACK NUMBER
08C                XL1       RECORD NUMBER
08D                XL1       KEY LENGTH
08E                XL2       DATA LENGTH (50 BYTE FILLER)
090    FMREC10     002       CYLINDER NUMBER
092                XL2       TRACK NUMBER
094                XL1       RECORD NUMBER
095                XL1       KEY LENGTH
096                XL2       DATA LENGTH (4K RECORD)
098    FMRECX10    002       CYLINDER NUMBER
09A                XL2       TRACK NUMBER
09C                XL1       RECORD NUMBER
09D                XL1       KEY LENGTH
09E                XL2       DATA LENGTH (50 BYTE FILLER)
0A0    FMREC11     002       CYLINDER NUMBER
0A2                XL2       TRACK NUMBER
0A4                XL1       RECORD NUMBER
0A5                XL1       KEY LENGTH
0A6                XL2       DATA LENGTH (4K RECORD)
0A8    FMRECX11    002       CYLINDER NUMBER
0AA                XL2       TRACK NUMBER
0AC                XL1       RECORD NUMBER
0AD                XL1       KEY LENGTH
0AE                XL2       DATA LENGTH (50 BYTE FILLER)
0B0    FMREC12     002       CYLINDER NUMBER
0B2                XL2       TRACK NUMBER
0B4                XL1       RECORD NUMBER
0B5                XL1       KEY LENGTH
0B6                XL2       DATA LENGTH (4K RECORD)
```

EQUATES

```
  B8     FMRBYT1     NUMBER OF BYTES IN ALL RECORD
  17     FMRNRECS    NUMBER OF RECORDS

0B8    FMRRSAVE    004       RECORD SAVEAREA
180                1H        RESERVED FOR ALIGNMENT
182    FMRSEEKA    002       BIN NUMBER (ALWAYS 0)
184                XL2       CYLINDER NUMBER
186                XL2       TRACK NUMBER
188                XL1       RECORD NUMBER
189                XL1       KEY LENGTH
18A                XL2       DATA LENGTH
18C    FMR0DATA    004       DATA FIELD OF RECORD 0
                             CYLINDER 0 BIT MAP
194                1H        RESERVED FOR ALIGNMENT
196    FMRSEEKB    002       BIN NUMBER (ALWAYS 0)
```

```
198                 XL2       CYLINDER NUMBER
19A                 XL2       TRACK NUMBER
19C                 XL1       RECORD NUMBER
19D                 XL1       KEY LENGTH
19E                 XL2       DATA LENGTH
1A0                 2F        DATA FIELD
1A8                 1H        RESERVED FOR ALIGNMENT
1AA     FMRSEEKC    002       BIN NUMBER (ALWAYS 0)
1AC                 XL2       CYLINDER NUMBER
1AE                 XL2       TRACK NUMBER
1B0                 XL1       RECORD NUMBER
1B1                 XL1       KEY LENGTH
1B2                 XL2       DATA LENGTH
1B4                 2F        DATA FIELD
1BC                 1H        RESERVED FOR ALIGNMENT
1BE     FMRSEEKD    002       BIN NUMBER (ALWAYS 0)
1C0                 XL2       CYLINDER NUMBER
1C2                 XL2       TRACK NUMBER
1C4                 XL1       RECORD NUMBER
1C5                 XL1       KEY LENGTH
1C6                 XL2       DATA LENGTH
1C8                 2F        DATA FIELD
1D0                 1H        RESERVED FOR ALIGNMENT
1D2     FMRSEEKE    002       BIN NUMBER (ALWAYS 0)
1D4                 XL2       CYLINDER NUMBER
1D6                 XL2       TRACK NUMBER
1D8                 XL1       RECORD NUMBER
1D9                 XL1       KEY LENGTH
1DA                 XL2       DATA LENGTH
1DC                 2F        DATA FIELD
1E4                 1H        RESERVED FOR ALIGNMENT
1E6     FMRSEEKF    002       BIN NUMBER (ALWAYS 0)
1E8                 XL2       CYLINDER NUMBER
1EA                 XL2       TRACK NUMBER
1EC                 XL1       RECORD NUMBER
1ED                 XL1       KEY LENGTH
1EE                 XL2       DATA LENGTH
1F0                 2F        DATA FIELD
1F8     FMRSEEK0    007
1FF                 XL1       RESERVED FOR FUTURE IBM USE

                    EQUATES

        7E     FMRBYT2        NR. OF BYTES IN SEEK FIELDS

200     FMRSSAVE    004       SEEK FIELD SAVEAREA
2A0     FMR1SP      002       CYLINDER NUMBER (0)
2A2                 XL2       TRACK NUMBER (0)
2A4                 XL1       RECORD NUMBER (1)
2A5                 XL1       KEY LENGTH
2A6                 XL2       DATA LENGTH
2A8     FMRIPL      008       WAIT PSW
2B0                 XL2
2B2                 H
2B4                 XL2
2B6                 H
2B8                 2F
2C0     FMR2SP      002       CYLINDER NUMBER (0)
2C2                 XL2       TRACK NUMBER (0)
2C4                 XL1       RECORD NUMBER (2)
2C5                 XL1       KEY LENGTH
2C6                 XL2       KEY/DATA LEN(KL DL DL)
2C8     FMR3VOL1    002       CYLINDER NUMBER (0)
2CA                 XL2       TRACK NUMBER (0)
2CC                 XL1       RECORD NUMBER (3)
2CD                 XL1       KEY LENGTH (4) (KEY=FMRVOL1)
2CE                 XL2       DATA LENGTH (80 BYTE RECORD)
2D0     FMRVOL1     004       RECORD KEY
2D4     FMROSLAB    004       OS LABEL
2D8     FMRCPLAB    006       CP LABEL (ALSO KNOWN AS THE VOLID,
                              OR VOLUME IDENTIFIER)
2DE                 XL1       CHARACTER ZERO
2DF     FMRVTCB     004       VTOC PTR IN R3 (CCHH)
```

```
2E3   FMRVTCR     001       ... (R)
2E4               XL5       ZEROS
2E9               20XL1     BLANKS
2FD               XL5       FILLER
302   FMRVLOWN    005       VOLUME OWNER - THIS FIELD WILL
                            CONTAIN THE CHARACTERS 'CPVOL'
                            IF CYLINDER ZERO BEEN FORMATTED
                            FOR VM/XA CP USE.
307               29XL1     BLANKS
324               F         RESERVED FOR FUTURE IBM USE
328   FMR4ALOC    002       CYLINDER NUMBER
32A               XL2       TRACK NUMBER
32C               XL1       RECORD NUMBER
32D               XL1       KEY LENGTH
32E               XL2       DATA LENGTH OF ALLOCATION RECORD:
                            1K FOR 2305, 3330, 3340, 3350, 3375
                            4K FOR 3380
                            DISK ALLOCATION RECORD DATA                  *
330   FMRMAT4     002       CYLINDER NUMBER (0)
332               XL2       TRACK NUMBER (0)
334               XL1       RECORD NUMBER (5)
335               XL1       KEY LENGTH (44) (KEY IS FMRKEY4)
336               XL2       DATA LENGTH (96 BYTES)
                            DISK OS FORMAT 4 RECORD                      *
                            KEY
338   FMRKEY4     001       KEY OF HEX 04
                            DATA
364   FMRDAT4     001       FMT4 DSCB IDENTIFIER
365               XL2       CYLINDER NUMBER (0)
367               XL2       TRACK NUMBER (0)
369               XL1       RECORD NUMBER (0)
36A               XL2
36C   FMRNXTRK    002       NEXT AVAILABLE CYLINDER AND
36E               XL2       NEXT AVAILABLE TRACK
370               XL2
372               XL1       VTOC INDICATORS
373               XL7
37A               XL5
37F               XL5
384               XL29
3A1               XL1       TRACK ZERO
3A2               XL8
3AA               XL1       TRACK ZERO
3AB               XL25
3C4   FMRMAT5     002       CYLINDER NUMBER (0)
3C6               XL2       TRACK NUMBER (0)
3C8               XL1       RECORD NUMBER (6)
3C9               XL1       KEY LENGTH (44)
3CA               XL2       DATA LENGTH (96 BYTES)
                            DISK OS FORMAT 5 RECORD                      *
                            KEY
3CC               4XL1      KEY OF HEX 05
3D0               XL5       TRACK ZERO NO CYLINDERS NO TRAC
3D5               XL35      ZEROES
                            DATA
3F8               XL1       CHARACTER 5
3F9               XL90      ZEROES
453               XL5       ZEROES
458   FMRFIMSK    001       FILE MASK
459               XL3       RESERVED FOR FUTURE IBM USE
45C   FMRZERO     008       ZERO DATA ADDRESS
464   FMRF3       002       CYLINDER NUMBER (0)
466               XL2       TRACK NUMBER (1)
468               XL1       RECORD NUMBER
469               XL1       KEY LENGTH
46A               XL2       DATA LENGTH
```

CROSS REFERENCE

Name	Len	Val/Disp
FMRBYT1	001	0B8
FMRBYT2	001	07E
FMRCPLAB	006	2D8
FMRDAT4	001	364
FMREC	001	000
FMRECX1	002	008
FMRECX10	002	098
FMRECX11	002	0A8
FMRECX2	002	018
FMRECX3	002	028
FMRECX4	002	038
FMRECX5	002	048
FMRECX6	002	058
FMRECX7	002	068
FMRECX8	002	078
FMRECX9	002	088
FMREC1	002	000
FMREC10	002	090
FMREC11	002	0A0
FMREC12	002	0B0
FMREC2	002	010
FMREC3	002	020
FMREC4	002	030
FMREC5	002	040
FMREC6	002	050
FMREC7	002	060
FMREC8	002	070
FMREC9	002	080
FMRFIMSK	001	458
FMRF3	002	464
FMRIPL	008	2A8
FMRKEY4	001	338
FMRMAT4	002	330
FMRMAT5	002	3C4
FMRNRECS	001	017
FMRNXTRK	002	36C
FMROSLAB	004	2D4
FMRRSAVE	004	0B8
FMRSEEKA	002	182
FMRSEEKB	002	196
FMRSEEKC	002	1AA
FMRSEEKD	002	1BE
FMRSEEKE	002	1D2
FMRSEEKF	002	1E6
FMRSEEK0	007	1F8
FMRSSAVE	004	200
FMRVLOWN	005	302
FMRVOL1	004	2D0
FMRVTCB	004	2DF
FMRVTCR	001	2E3
FMRZERO	008	45C
FMR0DATA	004	18C
FMR1SP	002	2A0
FMR2SP	002	2C0
FMR3VOL1	002	2C8
FMR4ALOC	002	328

HCPFORMS— SYSTEM SPOOL OUTPUT FORMS TABLE

DSECT NAME: FORMS

DESCRIPTIVE NAME: SYSTEM SPOOL OUTPUT FORMS TABLE

FUNCTION: THE TABLE WHICH CONTAINS THE DEFAULT FORMS FOR EACH SPOOL DEVICE TYPE. IT ALSO CONTAINS A LIST OF FORM NAMES AND FORM NUMBERS WHICH ARE EQUIVALENT.

LOCATED BY:

SYSFORMT FIELD IN HCPSYSCM POINTS TO THIS BLOCK

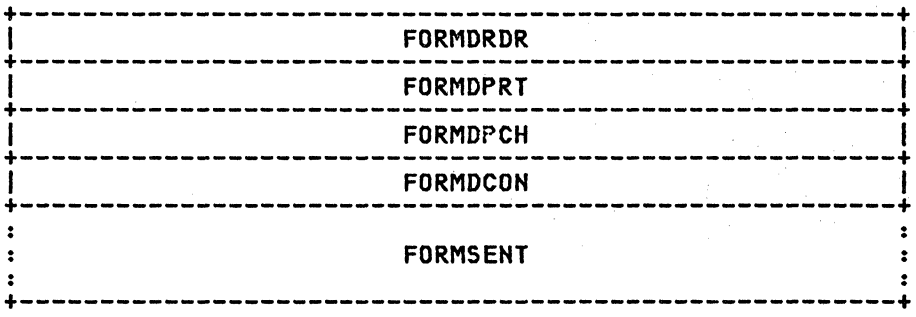
CREATED BY:

SYSFORM MACRO

DELETED BY:

NOT DELETED

FORMS - SYSTEM SPOOL OUTPUT FORMS TABLE



REDEFINITION - FORM SYNONYM TABLE ENTRY

REDEFINITION - END OF FORMS TABLE

disp	name	length	description
000	FORMDRDR	008	DEFAULT READER FORM
008	FORMDPRT	008	DEFAULT PRINTER FORM
010	FORMDPCH	008	DEFAULT CONSOLE FORM
018	FORMDCON	008	DEFAULT CONSOLE FORM
020	FORMSENT	001	START OF VARIABLE LENGTH DATA
	REDEFINITION - FORM SYNONYM TABLE ENTRY		
020	FORMUSER	008	USER FORM NAME
028	FORMOPER	008	EQUIVALENT OPERATOR FORM NUMBER
030	FORMFLAG	001	FLAG BYTE

BITS DEFINED IN FORMFLAG (AT HEX DISPLACEMENT: 30)

80	FORMNARR	ON IF NARROW FORM
11	FORMENTL	SIZE OF ONE SYNONYM TABLE ENTRY
FF	FORMSEND	END OF FORMS TABLE FENCE

REDEFINITION - END OF FORMS TABLE

020	FORMEOT	001	LOCATION OF END OF TABLE MARKER

CROSS REFERENCE

Name	Len	Val/Disp
FORMDCON	008	018
FORMDPCH	008	010
FORMDPRT	008	008
FORMDRDR	008	000
FORMENTL	001	011
FORMEOT	001	020
FORMFLAG	001	030
FORMNARR	001	080
FORMOPER	008	028
FORMS	001	000
FORMSEND	001	0FF
FORMSENT	001	020
FORMUSER	008	020

HCPFREBK— FREE STORAGE BLOCK

DSECT NAME: FREBK

DESCRIPTIVE NAME: FREE STORAGE BLOCK

FUNCTION: MAPS A FREE STORAGE BLOCK HEADER AND TRAILER FOR BOTH ACTIVE AND INACTIVE FREE STORAGE BLOCKS.

LOCATED BY:

HCPFREE OR HCPFREVM WHEN A BLOCK IS REQUESTED. THIS BLOCK IS NEVER ALLOCATED AS A SEPARATE BLOCK.

FREBK - FREE STORAGE BLOCK

FRESTRT

REDEFINITION - ACTIVE FREE STORAGE BLK HEADER

0	FREHEADR
8	

REDEFINITION - ACTIVE FREE STORAGE BLK HEADER

0	FRETRALR
10	

REDEFINITION - ACTIVE FREE STORAGE BLK HEADER

0	FREESIZE	FREESFLG
8		

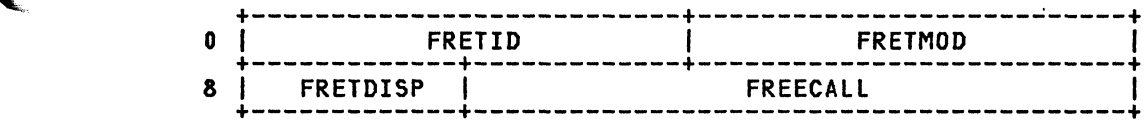
REDEFINITION - ACTIVE FREE STORAGE BLOCK TRAILER

0	FREEID	FREEEFLG
8	FREEDISP	FREEMOD
10		

REDEFINITION - INACTIVE FREE STORAGE BLK HEADER

0	FREEPNT	FRETSIZE
8		

REDEFINITION - INACTIVE FREE STORAGE BLK TRAILER



disp	name	length	description
000	FRESTRT	008	START OF VARIABLE LENGTH DATA
	REDEFINITION - ACTIVE FREE STORAGE BLK HEADER		
000	FREHEADR	008	FREE STORAGE BLOCK HEADER
	EQUATES		
08	FREHEADL		LENGTH OF HEADER IN BYTES
	REDEFINITION - ACTIVE FREE STORAGE BLK HEADER		
000	FRETRALR	008	FREE STORAGE BLOCK TRAILER
	EQUATES		
10	FRETRALL		LENGTH OF TRAILER IN BYTES
03	FRERECL		SIZE IN DOUBLE WORDS
	REDEFINITION - ACTIVE FREE STORAGE BLK HEADER		
000	FREESIZE	004	
004	FREESFLG	004	ALLOCATED BLOCK CHARACTER STRING
	REDEFINITION - ACTIVE FREE STORAGE BLOCK TRAILER		
000	FREEID	004	CONTROL BLOCK'S IDENTIFIER (THE FIRST CHARACTER IS '<', AND THE ID FOR UNDEFINED BLOCKS IS '<<<<')
004	FREEEFLG	004	CHARACTER STRING '<<<<'
008	FREEDISP	004	REQUEST'S OFFSET IN CALLING MODULE (1ST HALF WORD = X'00 00')
00C	FREEMOD	004	MODULE ID OF CALLING MODULE THE FIRST BYTE'S ALWAYS SET TO 0
	REDEFINITION - INACTIVE FREE STORAGE BLK HEADER		
000	FREEPNT	004	PNTR TO NEXT BLOCK IN FREE STORAGE
004	FRETSIZE	004	SIZE OF BLOCK IN DW'S OR THE SIZE IN BYTES FOR A LARGER THAN SUBPOOL SIZE BLOCK THAT IS ON THE FREE STORAGE CHAIN
	REDEFINITION - INACTIVE FREE STORAGE BLK TRAILER		
000	FRETID	004	CONTROL BLOCK'S IDENTIFIER (THE FIRST CHARACTER IS '<', AND THE ID FOR UNDEFINED BLOCKS IS '<<<<') THIS FIELD IS PRESERVED FROM THE HCPFREE CALL WHICH ORIGINALLY OBTAINED THIS CONTROL BLOCK
004	FRETMOD	004	MODID OF HCPFRET CALLER THE FIRST BYTE'S ALWAYS SET TO 0
008	FRETDISP	002	DISPL INTO MODID OF HCPFRET CALL
00A	FREECALL	001	LOW-ORDER 2 BYTES OF "FREEDISP"

AND "FREEMOD PRESERVED FROM THE
HCPFREE CALL WHICH ORIGINALLY
OBTAINED THIS CONTROL BLOCK

CROSS REFERENCE

Name	Len	Val/Disp
FREBK	001	000
FREECALL	001	00A
FREEDISP	004	008
FREEEFLG	004	004
FREEID	004	000
FREEMOD	004	00C
FREEPNT	004	000
FREESFLG	004	004
FREESIZE	004	000
FREHEADL	001	008
FREHEADR	008	000
FRERECL	001	003
FRESTRT	008	000
FRETDISP	002	008
FRETID	004	000
FRETMOD	004	004
FRETRALL	001	010
FRETRALR	008	000
FRETSIZE	004	004

HCPFRMTE— FRAME TABLE ENTRY

DSECT NAME: FRMTE

DESCRIPTIVE NAME: FRAME TABLE ENTRY

FUNCTION: A FRAME TABLE ENTRY DESCRIBES ONE 4K ALIGNED BLOCK OF REAL STORAGE.

LOCATED BY:

```
PFXFTBL + (REAL FRAME ADDRESS / 4096
SYSFTBL + (REAL FRAME ADDRESS / 4096
VMDFR1ST  USER OWNED FRAME FORWARD ANCHOR
VMDFRLST  USER OWNED FRAME BACKWARD ANCHOR
FRMFPNT   FIELD OF HCPFRMTE FOR CHAINED FRAMES
FRMBPNT   FIELD OF HCPFRMTE FOR CHAINED FRAMES
FRMFRNXT  FREE STORAGE FRMTE FORWARD POINTER
```

CREATED BY:

```
HCPIST    ENTRIES INITIALIZED AT STORAGE INIT
```

DELETED BY:

NONE

FRMTE - FRAME TABLE ENTRY

```
  +-------------------------+-------------------------+
0 |          FRMFPNT        |          FRMBPNT        |
  +-------------------------+-------------------------+
8 |          FRMPTE         |          FRMCSWRD       |
  +-------------------------+-------------------------+
10
```

REDEFINITION - CHAINED FRAME BACKWARD POINTER

```
                              +--------------------+------+
0 ...                       4 |////////////////////|:BFLAG|
                              +--------------------+------+
8
```

REDEFINITION - FRAME STATUS

```
                              +------+------+------+------+
8 ...                       C |:CSB0 |:CSB1 |:CSB2 |:CSB3 |
                              +------+------+------+------+
10
```

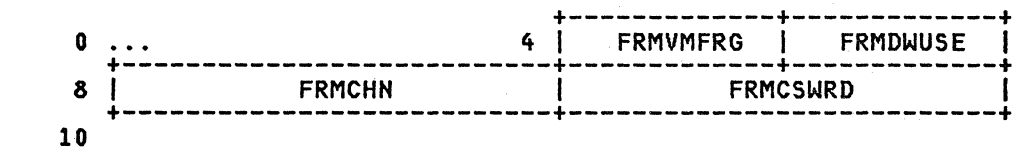
REDEFINITION - REDEFINITION FOR UNCHAINED FRAMES

```
  +-------------------------+-------------------------+
0 |          FRMID          |          FRMLKCNT       |
  +-------------------------+-------------------------+
8 |          FRMPTE         |          FRMCSWRD       |
  +-------------------------+-------------------------+
10
```

REDEFINITION - REDEFINITION FOR FREE FRAMES

```
  +-------------------------+-------------+
0 |          FRMFRNXT       |   FRMDHTOD  | 6
  +-------------------------+-------------+
```

REDEFINITION -



disp	name	length	description
000	FRMORGIN	004	FRAME TABLE ENTRY ORIGIN
000	FRMFPNT	004	CHAINED FRAME FORWARD POINTER
004	FRMBPNT	004	CHAINED FRAME BACKWARD POINTER
008	FRMPTE	004	POINTER TO PAGE TABLE ENTRY. THE PTE ADDRESS IS THE SAME AS THE VPGTE ADDRESS FOR THE 4K BLOCK OF VIRTUAL STORAGE, BUT THE VPGTE IS A MORE CONVENIENT MAPPING.
00C	FRMCSWRD	004	FRAME STATUS BITS AND FLAGS. ALL BITS ARE CONTAINED IN A SINGLE FULLWORD SO THAT COMPARE AND SWAP CAN BE USED TO SERIALIZE FRAME STATE CHANGES. THE FRAME STATE LOCKING CONVENTIONS ARE DEFINED WITHIN THE ALGORITHMS OF THE RSM MODULES THAT MANIPULATE FRAME TABLE ENTRIES. NOTE THAT IT IS PERMISSIBLE TO ALTER A BIT WITHIN THE FRMCSWRD WITHOUT DOING A CS IF THE STATE OF THE FRAME IS 'OWNED' (VIA A PREVIOUS CS).

EQUATES

10	FRMLENTH	LENGTH OF FRAME TABLE ENTRY

010	FRMNEXT	004	NEXT SEQUENTIAL ENTRY

REDEFINITION - CHAINED FRAME BACKWARD POINTER

004		3X	
007	FRMBFLAG	001	FASTPATH STATUS FLAG

THESE BITS ARE STATIC FRAME FLAG BITS

BITS DEFINED IN FRMBFLAG (AT HEX DISPLACEMENT: 7)

FD	FRMALTMV	PAGE IN FRAME WAS MOVED FROM A PAGE FOUND IN AN ALTERNATE PGMBK
FE	FRMALTPG	PAGE IN FRAME WAS PGIN'D FROM AN XSTORE BLOCK FOUND IN AN ALTERNATE PGMBK
FF	FRMFTPF	PAGE IN FRAME WAS CLEARED TO SATISFY A FIRST TIME PAGE FAULT

REDEFINITION - FRAME STATUS

00C	FRMCSB0	001	COMPARE AND SWAP WORD BYTE 0. COMPARE AND SWAP NOT NECESSARILY REQUIRED TO ALTER THESE BITS.

THESE CODES ARE PRIMARILY STATIC FRAME USE CODES

CODES DEFINED IN FRMCSB0 (AT HEX DISPLACEMENT: C)

10	FRMOFFLN	FRAME IS OFF-LINE AND UNAVAILABLE
30	FRMR370	REAL I/O FRAME FOR 370 MODE GUEST
40	FRMVR	VIRTUAL = REAL USER FRAME
63	FRMFRVR	FRAME IN USE FOR V=R FREE STORAGE
65	FRMFRVM	FRAME USED FOR USER VMDBK FREE
67	FRMFRSY	FRAME USED FOR SYSTEM FREE

00D	FRMCSB1	001	COMPARE AND SWAP WORD BYTE 1. COMPARE AND SWAP NOT NECESSARILY REQUIRED TO ALTER THESE BITS. THESE BITS ARE PRIMARILY STATIC FRAME FLAG BITS

BITS DEFINED IN FRMCSB1 (AT HEX DISPLACEMENT: D)

80	FRMLOCKD	FRAME IS LOCKED IN REAL STORAGE (FRMLCNT IS GREATER THAN ZERO)
40	FRMCPLOK	FRAME LOCKED BY CP LOCK COMMAND (FRAME IS PART OF CP NUCLEUS)
20	FRMOWNED	FRAME IS ON A USER OWNED LIST
10	FRMSHARE	FRAME IS SHARED STORAGE FRAME
08	FRMRONLY	FRAME IS A READ ONLY FRAME
04	FRMRCP	FRAME IS USED FOR USER RCP BYTES
02	FRMXTNDQ	FRAME NOT CURRENTLY ON FREE STORAGE LIST
01	FRMERROR	FRAME IS IN ERROR (STORAGE CHECK)

00E	FRMCSB2	001	COMPARE AND SWAP WORD BYTE 2. COMPARE AND SWAP NOT NECESSARILY REQUIRED TO ALTER THESE BITS. THESE BITS DENOTE DYNAMIC FRAME STATES

BITS DEFINED IN FRMCSB2 (AT HEX DISPLACEMENT: E)

20	FRMRFRSH	FRAME DATA INVALID, REFRESH
08	FRMNOGIV	FRAME IS BEING MANIPULATED (FOR EXAMPLE BY DUMP/DISPLAY) AND MUST NOT BE GIVEN OUT TO ANYONE FROM THE AVAILABLE LIST MANAGER.
01	FRMRECLM	FRAME IS BEING RECLAIMED

00F	FRMCSB3	001	COMPARE AND SWAP WORD BYTE 3. THESE BITS CAN ONLY BE CHANGED VIA A COMPARE AND SWAP OPERATION. THESE BITS ARE USED TO SERIALIZE FRAME STATE CHANGES

BITS DEFINED IN FRMCSB3 (AT HEX DISPLACEMENT: F)

80	FRMAVAIL	FRAME IS ON THE AVAILABLE QUEUE
40	FRMTRANS	FRAME IS BEING TRANSLATED
20	FRMRELSE	FRAME IS BEING RELEASED
10	FRMSTEAL	FRAME IS BEING STOLEN
07	FRMLTRCT	FRAME CANNOT BE STOLEN. THIS INDICATES THE COUNT OF CPU'S WHICH HAVE THIS FRMTE AS LAST TRANSLATED. THIS EQUATE IS USED AS A MASK ASSOCIATED WITH THE 3 BIT LAST TRANSLATED COUNTER. THE MAXIMUM VALUE FOR THIS COUNTER IS THE NUMBER OF ONLINE CPUS.

```
                        END OF DEFINITION       FOR FRAME TABLE ENTRIES

          REDEFINITION - REDEFINITION FOR UNCHAINED FRAMES

          5045          ORG   FRMORGIN      REDEFINITION FOR UNCHAINED FRAMES

000     FRMID       004       4 CHARACTER IDENTIFIER
                              IDENTIFIERS USED IN FRMID
                              THESE IDENTIFIERS ARE FOR VISUAL
                              RECOGNITION AND ARE NOT INTENDED
                              TO BE USED AS FLAGS.
                              '*CP*'              FRAME IN USE BY CONTROL PROGRAM
                              'TRAC'              CP TRACE TABLE PAGE
                              'FREE'              FRAME IN USE FOR FREE STORAGE
                              'SAVE'              FRAME IN USE BY SAVE AREA MANAGER
                              '*VR*'              VIRTUAL = REAL USER FRAME
                              'FRVR'              FRAME IN USE FOR V=R FREE STORAGE
                              'OFLN'              FRAME IS OFF-LINE AND UNAVAILABLE
                              'R370'              FRAME IS RIO370 FRAME
                              'PRFX'              PREFIX PAGE FRAME

004     FRMLKCNT    004       FRAME LOCK COUNT
008                 F
00C                 F         FRMCSWRD (FLAGS AND STATUS BITS)

          REDEFINITION FOR FREE STORAGE FRAMES.                 *

          REDEFINITION - REDEFINITION FOR FREE FRAMES

000     FRMFRNXT    004       NEXT FRMTE WITH AVAILABLE BLOCKS
004     FRMDHTOD    002       TOD TIME STAMP (SECS)

          REDEFINITION -

004     FRMVMFRG    002       FRAGMENT SIZE WHEN USED BY FREVM
006     FRMDWUSE    002       DOUBLE WORDS OF STORAGE IN USE
008     FRMCHN      004       POINTER TO FIRST FREE STORAGE
                              AVAILABLE BLOCK IN THIS FRAME
00C                 F         FRMCSWRD (FLAGS AND STATUS BITS)
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
FRMALTMV	001	0FD	FRMFREE	001	061	FRMPTE	004	008
FRMALTPG	001	0FE	FRMFRNXT	004	000	FRMRCP	001	004
FRMAVAIL	001	080	FRMFRSY	001	067	FRMRECLM	001	001
FRMBFLAG	001	007	FRMFRVM	001	065	FRMRELSE	001	020
FRMBPNT	004	004	FRMFRVR	001	063	FRMRFRSH	001	020
FRMCHN	004	008	FRMFTPF	001	0FF	FRMRONLY	001	008
FRMCP	001	001	FRMID	004	000	FRMR370	001	030
FRMCPLOK	001	040	FRMLENTH	001	010	FRMSHARE	001	010
FRMCSB0	001	00C	FRMLKCNT	004	004	FRMSTEAL	001	010
FRMCSB1	001	00D	FRMLOCKD	001	080	FRMSUSER	001	081
FRMCSB2	001	00E	FRMLTRCT	001	007	FRMTE	001	000
FRMCSB3	001	00F	FRMNEXT	004	010	FRMTRACE	001	021
FRMCSWRD	004	00C	FRMNOGIV	001	008	FRMTRANS	001	040
FRMDHTOD	002	004	FRMOFFLN	001	010	FRMUSER	001	080
FRMDWUSE	002	006	FRMORGIN	004	000	FRMVMFRG	002	004
FRMERROR	001	001	FRMOWNED	001	020	FRMVR	001	040
FRMFPNT	004	000	FRMPRFX	001	031	FRMXTNDQ	001	002

HCPFSATE— FIXED STORAGE ASSIGNMENT TABLE ENTRY

DSECT NAME: FSATE

DESCRIPTIVE NAME: FIXED STORAGE ASSIGNMENT TABLE ENTRY

FUNCTION: THE FSATE DESCRIBES FIXED STORAGE IN THE V=R REGION ASSIGNED TO A SINGLE USER.

LOCATED BY:

HCPWRKFA	ANCHOR FOR FIXED STORAGE ASSIGNMENT TABLE
RSASA1ST	FIELD OF HCPRSAMP CONTAINS OFFSET TO AN FSATE WITH THE LOWEST MAIN STORAGE ORIGIN
RSASALST	FIELD OF HCPRSAMP CONTAINS OFFSET TO AN FSATE WITH THE HIGHEST MAIN STORAGE ORIGIN
FSAFOFF	FIELD OF HCPFSATE CONTAINS OFFSET TO AN FSATE WITH THE NEXT HIGHER MAIN STORAGE ORIGIN
FSABOFF	FIELD OF HCPFSATE CONTAINS OFFSET TO AN FSATE WITH THE NEXT LOWER MAIN STORAGE ORIGIN

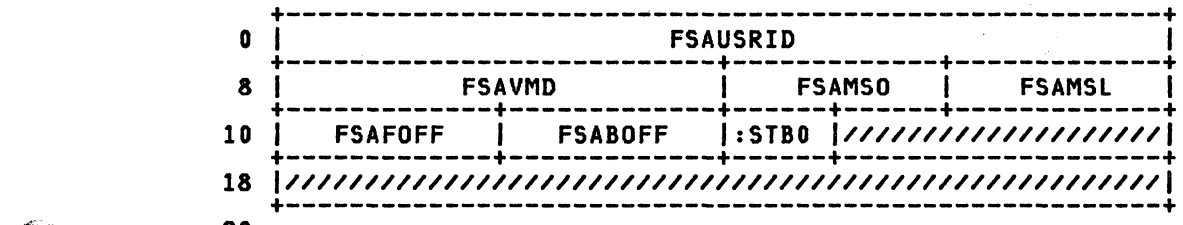
CREATED BY:

THE FIXED STORAGE ASSIGNMENT TABLE IS PERMANENTLY ALLOCATED AS PART OF THE RESIDENT NUCLEUS. IT IS LOCATED IN THE HCPWRK MODULE AND IS NOT REFRESHED ACROSS A SOFTWARE RE-IPL.

DELETED BY:

NONE

FSATE - FIXED STORAGE ASSIGNMENT TABLE ENTRY



disp	name	length	description
000	FSAENTRY	008	FSATE ORIGIN
000	FSAUSRID	008	USERID OF THE USER OF THE ASSIGNED STORAGE
008	FSAVMD	004	ADDRESS OF THE BASE VMDBK OF THE ASSIGNED STORAGE
00C	FSAMSO	002	MAIN STORAGE ORIGIN OF THE ASSIGNED STORAGE
00E	FSAMSL	002	MAIN STORAGE LIMIT OF THE ASSIGNED STORAGE
010	FSAFOFF	002	OFFSET TO THE FSATE WITH THE NEXT HIGHER MSO ASSIGNED.
012	FSABOFF	002	OFFSET TO THE FSATE WITH THE NEXT LOWER MSO ASSIGNED.
014	FSASTAT	002	TABLE ENTRY STATUS
014	FSASTBO	001	TABLE ENTRY STATUS BYTE 0

BITS DEFINED IN FSASTBO (AT HEX DISPLACEMENT: 14)

80	FSAALLOC	TABLE ENTRY IS ALLOCATED
40	FSARESRV	TABLE ENTRY IS RESERVED

```
        20      FSALFOVR    TABLE ENTRY WAS USED PRIOR TO LAST
                            SOFTWARE RE-IPL
        10      FSAVALID    TABLE ENTRY IS VALID.
                            A VALID TABLE ENTRY IS ONE
                            THAT EITHER IS OR MAY BE
                            ALLOCATED TO A V=R OR V=F
                            GUEST.

015               XL3       RESERVED FOR FUTURE IBM USE
018               D         RESERVED FOR FUTURE IBM USE

                      EQUATES

        20      FSALENTH    LENGTH OF ONE TABLE ENTRY

020   FSANEXT     004       NEXT TABLE ENTRY

                      EQUATES

        08      FSAMAXZN    MAXIMUM NUMBER OF ZONES
                            SUPPORTED
        00      FSATBLEN    LENGTH OF FIXED STORAGE
                            ASSIGNMENT TABLE IN BYTES
        20      FSATBSIZ    SIZE OF FIXED STORAGE
                            ASSIGNMENT TABLE IN DBLWRDS
        05      FSAIDXSH    SHIFT INDEX FOR OBTAINING
                            FSATE OFFSETS


                      MORE EQUATES

       FFF      FSASTST1
       FFF      FSASTST2
```

CROSS REFERENCE

Name	Len	Val/Disp
FSAALLOC	001	080
FSABOFF	002	012
FSAENTRY	008	000
FSAFOFF	002	010
FSAIDXSH	001	005
FSALENTH	001	020
FSALFOVR	001	020
FSAMAXZN	001	008
FSAMSL	002	00E
FSAMSO	002	00C
FSANEXT	004	020
FSARESRV	001	040
FSASTAT	002	014
FSASTBO	001	014
FSASTST1	001	FFF
FSASTST2	001	FFF
FSATBLEN	001	100
FSATBSIZ	001	020
FSATE	001	000
FSAUSRID	008	000
FSAVALID	001	010
FSAVMD	004	008

HCPFSDBK— FREE STORAGE DATA BLOCK

DSECT NAME: FSDBK

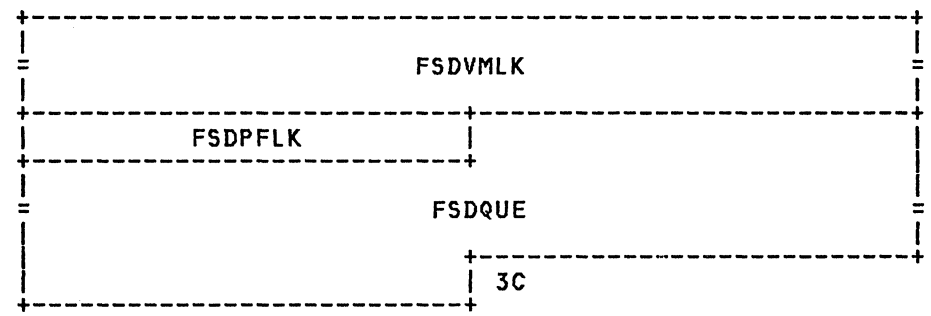
DESCRIPTIVE NAME: FREE STORAGE DATA BLOCK

FUNCTION: MAPS THE FIXED FREE STORAGE DATA AREA. INCLUDED ARE THE VMDBK FORMAL SPIN LOCK, AND PAGEABLE FREE STORAGE LOCK AND ANCHORS.

LOCATED BY:

N/A - NEVER RETURNED TO FREE STORAGE

FSDBK - FREE STORAGE DATA BLOCK



disp	name	length	description
000	FSDVMLK	008	FREE STORAGE FORMAL SPIN LOCK
018	FSDPFLK	004	PFMBK QUEUE LOCK
01C	FSDQUE	004	PFMBK QUEUE ANCHORS

CROSS REFERENCE

Name	Len	Val/Disp
FSDBK	001	000
FSDPFLK	004	018
FSDQUE	004	01C
FSDVMLK	008	000

HCPFTPBK— FOOT-PRINT BLOCK

DSECT NAME: FTPBK

DESCRIPTIVE NAME: FOOT-PRINT BLOCK

FUNCTION: PROVIDE FOOT-PRINTING OF THE RECOVERY PROCESS FOR SUBSEQUENT DEBUGGING

LOCATED BY:

HCPWRKFP IS THE ANCHOR FOR THIS BLOCK.

CREATED BY:

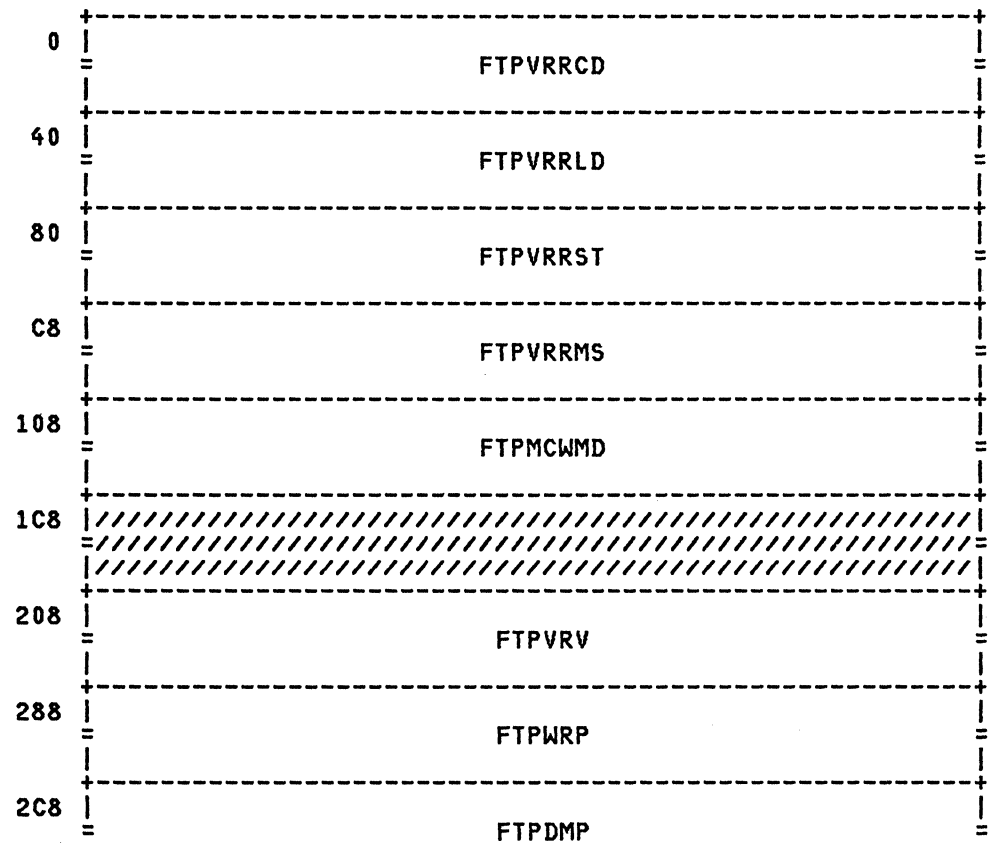
THE ASSEMBLY OF HCPWRK. THE FOOT-PRINT BLOCK ALWAYS REMAINS IN THE HOST CONTROL PROGRAM CRITICAL WORKAREA. EACH OF THE FOLLOWING MODULES 'OWN' AN AREA IN FTPBK WHICH THEY USE FOR RECORDING :

- HCPVRRCD
- HCPVRRLD
- HCPVRRST
- HCPVRRMS
- HCPMCWMD
- HCPVRV
- HCPWRP
- HCPDMP
- HCPVRE
- HCPCKP/HCPWRM

DELETED BY:

NONE, HOWEVER THE BLOCK IS CLEARED BY HCPWRP

FTPBK - FOOTPRINTS




```
    |                                                       |
    +-------------------------------------------------------+
308 |                                                       |
    =                        FTPVRE                         =
    |                                                       |
    +-------------------------------------------------------+
388 |                                                       |
    =                       FTPCKWRM                        =
    |                                                       |
    +-------------------------------------------------------+
3C8 |                       FTPBUFSZ                        |
    +-------------------------------------------------------+
3D0
```

REDEFINITION - FOOTPRINT AREA USED BY HCPMCWMD.

```
    +-------------------------------------------------------+
108 |                       FTPMDNAM                        |
    +------+------+-----------------------------------------+
110 |//////|:TODB1|/////////////////////////////////////////|
    +------+------+-----------------------------------------+
118 |                                                       |
    =                       FTPMDTAB                        =
    |                                                       |
    |                          +----------------------------+
190 |                          |         FTPFENCE           |
    +--------------------------+----------------------------+
198
```

REDEFINITION - DETAIL OF FOOTPRINT TABLE ENTRY.

```
    +------+------+------+------+
118 |:CPUAD|:MFLG1|:MFLG2|:MFLG3| 11C
    +------+------+------+------+
```

REDEFINITION - REDEFINE OF FTPCKWRM FOR HCPCKP

```
    +-------------------------------------------------------+
388 |                       FTPWRMST                        |
    +-------------------------------------------------------+
390 |                       FTPWRMCT                        |
    +-------------------------------------------------------+
398
```

REDEFINITION - REDEFINE OF FTPVRRCD FOR HCPVRR

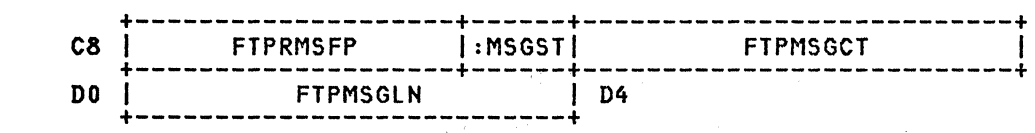
```
    +--------------------+------+----------------------------+
  0 |      FTPRCDFP      |:RCDGS|          FTPECKRC          |
    +------+------+------+------+------+---------------------+
  8 |:VRECK|:MG813|:INTEG|:UNLOK|:M9401| D
    +------+------+------+------+------+
```

REDEFINITION - REDEFINE OF FTPVRRLD FOR HCPVRR

```
    +--------------------+------+------+------+------+------+
 40 |      FTPRLDFP      |:RLDGS|:GSEXH|:GSCHN|:NVSIE|:NREST|
    +------+------+------+------+------+------+------+------+
 48 |:NTRAC|:NOIPL|:NOLOG|:NFORC|:NVMCF|:NPGFT|:NPGWT|:NADJ |
    +------+------+------+------+------+------+------+------+
 50 |:BASE |:RLDOK|:RLDRE|:VRERC|          FTPVMDBK          |
    +------+------+------+------+----------------------------+
 58 |:NPASS| 59
    +------+
```

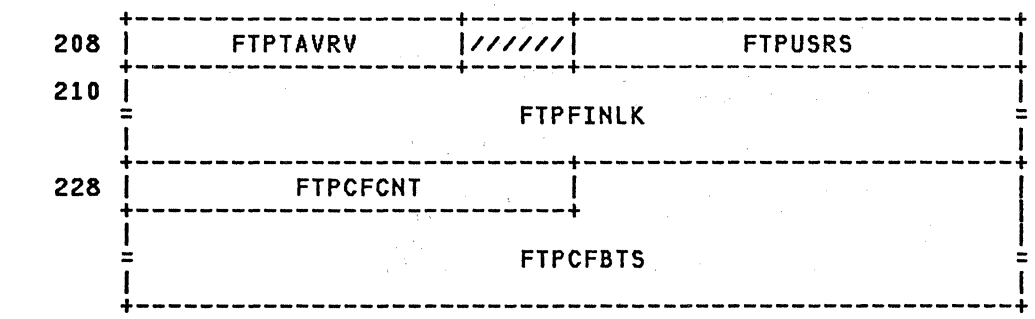
REDEFINITION - REDEFINE OF FTPVRRST FOR HCPVRR

REDEFINITION - REDEFINE OF FTPVRRMS FOR HCPIOP

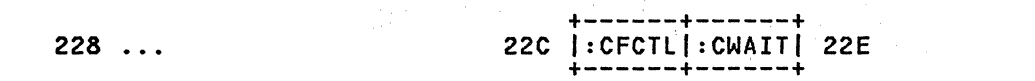


REDEFINITION - REDEFINE OF FTPWRP FOR HCPWRP

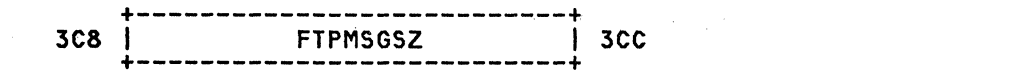
REDEFINITION - REDEFINE OF FTPVRV FOR HCPVRV



REDEFINITION -



REDEFINITION - REDEFINE OF FTPBUFSZ FOR HCPIOP



disp	name	length	description
000	FTPVRRCD	008	RECORD V=R USER BEFORE A BOUNCE
040	FTPVRRLD	008	RELOAD V=R USER AFTER BOUNCE
080	FTPVRRST	008	RESTART V=R USER FOOTPRINTS


```
0C8   FTPVRRMS   008       TERMINATION MSG BUFFER STATUS
108   FTPMCWMD   008       FINAL STATUS OF EACH CPU
1C8              8D        RESERVED FOR FUTURE IBM USE
208   FTPVRV     008       CONSOLE FUNCTION MODE AND GUEST
                           TIMERS
288   FTPWRP     008       SYSTEM TERMINATION FOOTPRINTS
2C8   FTPDMP     008       DUMP FOOTPRINTING

                   EQUATES

        61    FTPGSVDW     GSURV FOOTPRINT SIZE IN DBL-WORDS

308   FTPVRE     008       TRACE ENTRY MAPS DESCRIBING I/O

                   EQUATES

        71    FTPVREDW     FTPVRE SIZE IN DOUBLE-WORDS

388   FTPCKWRM   008       CHECKPOINT/WARMSTART FOOTPRINTS

                   EQUATES

        08    FTPCKWDW     FTPCKWRM SIZE IN DOUBLE-WORDS

3C8   FTPBUFSZ   008       TERM MESSAGE BUFFER SIZE

                   EQUATES

        01    FTPBUFSL     FTPBUFSZ IN DOUBLEWORDS
        7A    FTPSIZE      FTPBK SIZE IN DOUBLE-WORDS


         REDEFINITION - FOOTPRINT AREA USED BY HCPMCWMD.

108   FTPMDNAM   008       THE NAME 'HCPMCWMD' GOES HERE.
110   FTPMDFF    001       INITIALIZE TO FF'S. (SEE FTPLEN2).
110   FTPTOD     008       TIMESTAMP ON ENTRY TO HCPMCWMD.
                           (ZEROS IF STORE-CLOCK FAILS.)
110              X
111   FTPTODB1   001       FIRST BYTE OF FOOTPRINT TOD FIELD
112              6X
118   FTPMDTAB   004       TABLE OF FOOTPRINTS, ONE ENTRY
                           FOR EACH CPU.  WE SUPPORT AS MANY
                           AS 31 CPU'S (FOLLOWING THE SOMEWHAT
                           ARBITRARY CONVENTION USED ELSEWHERE).

                   EQUATES

        84    FTPLEN2      LENGTH TO BE INITIALIZED TO FF'S.

194   FTPFENCE   004       THIS 'FENCE' OF ZEROES AT THE END
                           OF THE INITIALLY ALL-FF'S TABLE
                           PREVENTS US FROM RUNNING OFF THE END
                           IN THE EVENT OF A MESSED UP CHAIN OF
                           PREFIX PAGES.

                   EQUATES

        90    FTPLEN3      LENGTH OF AREA USED BY HCPMCWMD.


         REDEFINITION - DETAIL OF FOOTPRINT TABLE ENTRY.

118   FTPENTRY   001
118   FTPCPUAD   001       CONTAINS CPUID IN STAP FORMAT,
                           LOW ORDER BYTE ONLY.
119   FTPMFLG1   001

        BITS DEFINED IN FTPMFLG1 (AT HEX DISPLACEMENT: 119)

        80    FTPUNKWN     CPU IS IN AN 'UNKNOWN' STATE  (HCPSGPST
                           COULD NOT COMMUNICATE WITH IT).
        40    FTPCPUON     CPU ASSOCIATED WITH THE PREFIX PAGE WAS
```

			ONLINE. (EXPECT IT TO BE OFFLINE AT TIMES SINCE PFX PAGE IS KEPT FOR 2 MINUTES AFTER VARY OFF.)
	20	FTPSTATX	THE STATE OF THE CPU HOLDING THE THE TERMINATION LOCK WAS NOT 'PFXAVAIL'.
	10	FTPSOFER	HCPMCWMD FOUND POSSIBLE SOFTWARE ERROR.
	08	FTPHABEN	HAD ABEND ON THIS CPU (AS REPORTED BY THE PFXHABEN FLAG IN ITS PREFIX PAGE).
	04	FTPCKSTP	CPU IS CHECK-STOPPED AND FIRST NOTICED DURING CURRENT INCIDENT (NOT A RE-DISCOVERY OF A CHECK-STOP HANDLED EARLIER).
	02	FTPMCHKX	A MACHINE CHECK OCCURRED AND FOR SOME REASON THE MACHINE-CHECK FLIH NEVER FINISHED HANDLING IT.
	01	FTPBROAD	MACHINE CHECK IS ESSENTIALLY IDENTICAL TO AN EARLIER ONE AND IS REGARDED AS A 'BROADCAST' MACHINE CHECK.

11A FTPMFLG2 001

BITS DEFINED IN FTPMFLG2 (AT HEX DISPLACEMENT: 11A)

80	FTPFSIE	WE WERE RUNNING SIE (PFXHSIE WAS SET).
40	FTPFERCS	ERROR WAS CHECK-STOP, NOT MACHINE CHECK.
20	FTPF2ND	A SECONDARY ERROR OCCURRED WHILE HANDLING A MACHINE CHECK.
10	FTPF2CS	SECONDARY ERROR WAS A CHECK-STOP.
08	FTPFMCIC	INVALID MCIC (REQUIRED BITS MISSING).
04	FTPFABND	POSSIBLE SOFTWARE ERROR ENCOUNTERED. WHERE WE CANNOT ISSUE HCPABEND, WE SET THIS FLAG, THEN TERMINATE.
02	FTPFATSK	ATTEMPTED TO RUN INTERRUPTED SYSTEM TASK TO COMPLETION.
01	FTPFXTSK	ATTEMPT TO COMPLETE INTERRUPTED SYSTEM TASK WAS SUCCESSFUL.

11B FTPMFLG3 001

BITS DEFINED FOR FTPMFLG3 BY HCPMCKBK MCKFTERM

04	FTPELEN	LENGTH OF A SINGLE ENTRY IN TABLE.

11C FTPNEXTE 001 START OF NEXT ENTRY OF THE TABLE.

REDEFINITION - REDEFINE OF FTPCKWRM FOR HCPCKP

388 FTPWRMST 008 WARM START TIME

EQUATES

08	FTPWRMSL	WARM START TIME LENGTH

390 FTPWRMCT 008 WARM START COMPLETED TIME

EQUATES

08	FTPWRMCL	WARM START COMPLETED TIME LENGTH

REDEFINITION - REDEFINE OF FTPVRRCD FOR HCPVRR

000	FTPRCDFP	003	ENTERED HCPVRRCD WITH A V=R USER
003	FTPRCDGS	001	GUEST SURVIVAL IS POSSIBLE WHEN WE ENTER HCPVRRCD
004	FTPECKRC	004	RETURN CODE FROM HCPVRECK
008	FTPVRECK	001	CALL TO HCPVRECK TO CHECKPOINT V=R I/O CONFIGURATION
009	FTPMG813	001	MP VMDBK OUTSIDE RESERVED AREA -

			ISSUE MESSAGE 813
00A	FTPINTEG	001	DATA INTEGRITY LOST
00B	FTPUNLOK	001	V=R AREA IS UNLOCKED
00C	FTPM9401	001	GSRBK ADDRESS IS ZERO, GUEST MUST HAVE BEEN IN LOGON

REDEFINITION - REDEFINE OF FTPVRRLD FOR HCPVRR

040	FTPRLDFP	003	ENTERED HCPVRRLD ON A V=R BOUNCE
043	FTPRLDGS	001	GUEST SURVIVAL IS POSSIBLE WHEN WHEN WE ENTER HCPVRRLD
044	FTPGSEXH	001	RESERVED FREEVM STORAGE AVAILABLE
045	FTPGSCHN	001	FREE STORAGE CHAIN INTACT
046	FTPCYC1	006	OVERLAY FOR NON-ORIGIN FOOTPRINTS
046	FTPNVSIE	001	V=R GUEST NOT IN VSIE
047	FTPNREST	001	V=R GUEST NOT RESETTING
048	FTPNTRAC	001	V=R GUEST NOT BEING TRACED
049	FTPNOIPL	001	V=R GUEST NOT IPLING
04A	FTPNOLOG	001	V=R GUEST NOT LOGGING OFF
04B	FTPNFORC	001	V=R GUEST NOT FORCED OFF
04C	FTPNVMCF	001	V=R GUEST NOT COMMUNICATING WITH VMCF
04D	FTPCYC2	002	OVERLAY FOR NON-ORIGIN FOOTPRINTS
04D	FTPNPGFT	001	V=R GUEST HAS NO PAGE FAULTS
04E	FTPNPGWT	001	V=R GUEST IS IN PAGE WAIT
04F	FTPNADJ	001	V=R GUEST MACHINE IS NOT ADJUNCT
050	FTPBASE	001	V=R GUEST MACHINE IS THE BASE
051	FTPRLDOK	001	RECOVERY FINE, SO FAR
052	FTPRLDRE	001	RECOVERY FAILED
053	FTPVRERC	001	RETURN CODE FROM HCPVREST
054	FTPVMDBK	004	ADDRESS OF VMDBK CAUSING GUEST SURVIVAL FAILURE
058	FTPNPASS	001	V=R GUEST NOT BEING REMOVED FROM I/O PASSTHRU

REDEFINITION - REDEFINE OF FTPVRRST FOR HCPVRR

080	FTPRSTFP	003	ENTERED HCPVRRST WITH V=R USER
083	FTPZMIVI	001	CALL HCPZMIVI TO VERIFY STORAGE INITIALIZATION FOR I/O INTERPRETATION
084	FTPSTKVR	001	CALL HCPSTKVR TO REVIVE V=R USER
085	FTPNLTVR	001	CALL HCPNLTVR TO INIT V=R NLSBK
086	FTPSECLO	001	CALL HCPSECLO TO HANDLE SECONDARY USER
087	FTPIOAVR	001	CALL HCPIOAVR TO PROCESS IFSNT
088	FTPVRVRS	001	REESTABLISH VIRTUAL CPU FIELDS
089	FTPGMCRC	001	CALL HCPGMCRC TO REFLECT MACHINE CHECKS
08A	FTPM9406	001	V=R RECOVERY SUCCEEDED - MSG9406 SENT
08B	FTPSTKCL	001	STACK A CALL TO HCPVRELG
08C	FTPSTKGT	001	STACK A GOTO TO HCPCFMFO TO FORCE THE GUEST
08D	FTPRSTCM	001	VRRST DONE, BOUNCE OVER

REDEFINITION - REDEFINE OF FTPVRRMS FOR HCPIOP

0C8	FTPRMSFP	003	ENTERED HCPVRRMS ALREADY
0CB	FTPMSGST	001	STATUS OF MESSAGE BUFFER
0CC	FTPMSGCT	004	COUNT OF MESSAGES IN BUFFER
0D0	FTPMSGLN	004	LENGTH OF MESSAGE BUFFER USED

REDEFINITION - REDEFINE OF FTPWRP FOR HCPWRP

```
288   FTPWRPFP   003      HCPWRP FOOTPRINT
28B              XL1      RESERVED FOR ALIGNMENT
28C   FTPWRPIN   004      HCPWRPUP INPUT PARAMETERS
290   FTPWRPDS   001      DUMP STATUS

                  EQUATES

        02    FTPDMPIP    DUMP IN PROGRESS FLAG
        01    FTPDMPFI    DUMP TAKEN FLAG

291   FTPWRPTS   001      TERMINATION STATUS

                  EQUATES

        00    FTPTRMIP    TERMINATION IN PROGRESS
        01    FTPTRMFI    TERMINATION COMPLETE FLAG
        02    FTPTRMER    TERMINATION UNSUCCESSFUL

292   FTPVECTR   001      VECTOR FACILITY UNLOAD STATUS

                  EQUATES

        01    FTPVECSV    ATTEMPT MADE TO UNLOAD VF REGS

293   FTPWRPER   001      ERROR STATUS

                  EQUATES

        01    FTPPRGCK    PROGRAM CHECK CAUSED WAIT 921
        02    FTPSVCIN    SVC INTERRUPT CAUSED WAIT 921



          REDEFINITION - REDEFINE OF FTPVRV FOR HCPVRV

208   FTPTAVRV   003      FOOTPRINT AREA TAG ASSIGNED 'VRV'
20B              X        RESERVED FOR FUTURE USE
20C   FTPUSRS    004      CURRENT LOGGED ON USERS COUNT
210   FTPFINLK   024      COPY OF ORIGINAL FINLOCK
228   FTPCFCNT   004      COPY OF ORIGINAL VMDCFCNT
22C   FTPCFBTS   002      AREA CONTAINING VMDCFCTL AND



          REDEFINITION -

22C   FTPCFCTL   001      COPY OF ORIGINAL VMDCFCTL
22D   FTPCWAIT   001      COPY OF ORIGINAL VMDCWAIT

          REDEFINITION - REDEFINE OF FTPBUFSZ FOR HCPIOP

3C8   FTPMSGSZ   004      LENGTH OF AVAILABLE MESSAGE BUFFER
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
FTPBASE	001	050	FTPBUFSL	001	001	FTPCFCNT	004	228
FTPBK	001	000	FTPBUFSZ	008	3C8	FTPCFCTL	001	22C
FTPBROAD	001	C01	FTPCFBTS	002	22C	FTPCKSTP	001	004

Name	Len	Val/Disp
FTPCKWDW	001	008
FTPCKWRM	008	388
FTPCPUAD	001	118
FTPCPUON	001	040
FTPCWAIT	001	22D
FTPCYC1	006	046
FTPCYC2	002	04D
FTPDMP	008	2C8
FTPDMPFI	001	001
FTPDMPIP	001	002
FTPECKRC	004	004
FTPELEN	001	004
FTPENTRY	001	118
FTPFABND	001	004
FTPFATSK	001	002
FTPFENCE	004	194
FTPFERCS	001	040
FTPFINLK	024	210
FTPFMCIC	001	008
FTPFSIE	001	080
FTPFXTSK	001	001
FTPF2CS	001	010
FTPF2ND	001	020
FTPGMCRC	001	089
FTPGSCHN	001	045
FTPGSEXH	001	044
FTPGSVDW	001	061
FTPHABEN	001	008
FTPINTEG	001	00A
FTPIOAVR	001	087
FTPLEN2	001	084
FTPLEN3	001	090
FTPMCHKX	001	002
FTPMCWMD	008	108
FTPMDFF	001	110
FTPMDNAM	008	108
FTPMDTAB	004	118
FTPMFLG1	001	119
FTPMFLG2	001	11A
FTPMFLG3	001	11B
FTPMG813	001	009
FTPMSGCT	004	0CC
FTPMSGLN	004	0D0
FTPMSGST	001	0CB
FTPMSGSZ	004	3C8
FTPM9401	001	00C
FTPM9406	001	08A
FTPNADJ	001	04F
FTPNEXTE	001	11C
FTPNFORC	001	04B
FTPNLTVR	001	085
FTPNOIPL	001	049
FTPNOLOG	001	04A
FTPNPASS	001	058
FTPNPGFT	001	04D
FTPNPGWT	001	04E
FTPNREST	001	047
FTPNTRAC	001	048
FTPNVMCF	001	04C
FTPNVSIE	001	046
FTPPRGCK	001	001
FTPRCDFP	003	000
FTPRCDGS	001	003
FTPRLDFP	003	040
FTPRLDGS	001	043
FTPRLDOK	001	051
FTPRLDRE	001	052
FTPRMSFP	003	0C8
FTPRSTCM	001	08D
FTPRSTFP	003	080
FTPSECLO	001	086
FTPSIZE	001	07A
FTPSOFER	001	010
FTPSTATX	001	020
FTPSTKCL	001	08B
FTPSTKGT	001	08C
FTPSTKVR	001	084
FTPSVCIN	001	002
FTPTAVRV	003	208
FTPTOD	008	110
FTPTODB1	001	111
FTPTRMER	001	002
FTPTRMFI	001	001
FTPTRMIP	001	000
FTPUNKWN	001	080
FTPUNLOK	001	00B
FTPUSRS	004	20C
FTPVECSV	001	001
FTPVECTR	001	292
FTPVMDBK	004	054
FTPVRE	008	308
FTPVRECK	001	008
FTPVREDW	001	071
FTPVRERC	001	053
FTPVRRCD	008	000
FTPVRRLD	008	040
FTPVRRMS	008	0C8
FTPVRRST	008	080
FTPVRV	008	208
FTPVRVRS	001	088
FTPWRMCL	001	008
FTPWRMCT	008	390
FTPWRMSL	001	008
FTPWRMST	008	388
FTPWRP	008	288
FTPWRPDS	001	290
FTPWRPER	001	293
FTPWRPFP	003	288
FTPWRPIN	004	28C
FTPWRPTS	001	291
FTPZMIVI	001	083

HCPGCCW— GUEST CHANNEL CONTROL WORD MAPPING

DSECT NAME: GCCW

DESCRIPTIVE NAME: GUEST CHANNEL CONTROL WORD MAPPING

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS OF A CCW FOR A VIRTUAL MACHINE

LOCATED BY:

N/A

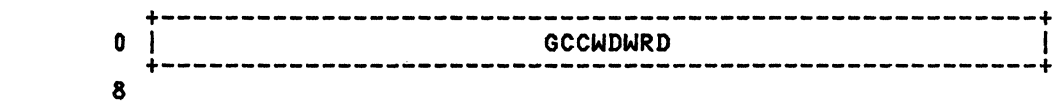
CREATED BY:

N/A

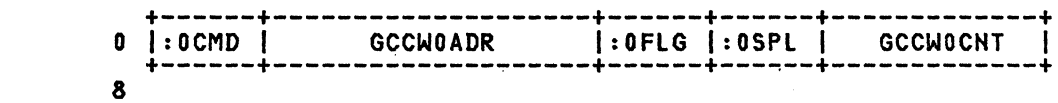
DELETED BY:

N/A

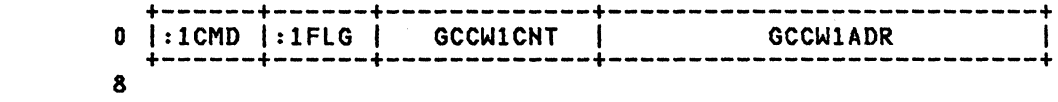
GCCW - GUEST CCW DEFINITION BLOCK



REDEFINITION - FORMAT 0 (S/370 = 24-BIT CCW)



REDEFINITION - FORMAT 1 (S/370/XA = 31-BIT CCW)



disp	name	length	description
000	GCCWDWRD	008	CCW STRUCTURE

REDEFINITION - FORMAT 0 (S/370 = 24-BIT CCW)

000	GCCW0WD0	004	FIRST WORD OF CCW
000	GCCW0CMD	001	CCW COMMAND CODE
001	GCCW0ADR	003	CCW ADDRESS (24-BIT)
004	GCCW0WD1	004	SECOND WORD OF CCW
004	GCCW0FLG	001	CONTROL OF CCW FLAGS

BITS DEFINED FOR GCCW0FLG BY HCPEQUAT CCWFLAG

005	GCCW0SPL	001	FORMAT 0 "UNUSED" BYTE.
006	GCCW0CNT	002	COUNT FOR I/O
008	GCCW0NXT	008	NEXT GUEST CCW

EQUATES

07	GCCW0IS	INSERT MASK
80	GCCW0IDL	IDAL INVALID BITS MASK
08	GCCW0LEN	LENGTH OF A FORMAT 0 CCW

REDEFINITION - FORMAT 1 (S/370/XA = 31-BIT CCW)

```
000    GCCW1WD0    004       FIRST WORD OF CCW
000    GCCW1CMD    001       CCW COMMAND CODE
001    GCCW1FLG    001       CONTROL OF CCW FLAGS

         BITS DEFINED FOR GCCW1FLG BY HCPEQUAT CCWFLAG

002    GCCW1CNT    002       COUNT FOR I/O
004    GCCW1WD1    004       SECOND WORD OF CCW
004    GCCW1ADR    004       CCW ADDRESS (31-BIT)
008    GCCW1NXT    008       NEXT GUEST CCW

                     EQUATES

         0F     GCCW1IS      INSERT MASK
         80     GCCW1IDL     IDAL INVALID BIT  MASK
         08     GCCW1LEN     LENGTH OF A FORMAT 1 CCW
```

CROSS REFERENCE

Name	Len	Val/Disp
GCCW	001	000
GCCWDWRD	008	000
GCCW0ADR	003	001
GCCW0CMD	001	000
GCCW0CNT	002	006
GCCW0FLG	001	004
GCCW0IDL	001	080
GCCW0IS	001	007
GCCW0LEN	001	008
GCCW0NXT	008	008
GCCW0SPL	001	005
GCCW0WD0	004	000
GCCW0WD1	004	004
GCCW1ADR	004	004
GCCW1CMD	001	000
GCCW1CNT	002	002
GCCW1FLG	001	001
GCCW1IDL	001	080
GCCW1IS	001	00F
GCCW1LEN	001	008
GCCW1NXT	008	008
GCCW1WD0	004	000
GCCW1WD1	004	004

HCPGSDBK— GENERAL SYSTEM DATA BLOCK

DSECT NAME: GSDBK

DESCRIPTIVE NAME: GENERAL SYSTEM DATA BLOCK

FUNCTION: THE GSDBK CONTAINS DATA TO BE PROCESSED BY CP, OR TO BE PASSED TO A VIRTUAL MACHINE.

LOCATED BY:

GSDNEXT CHAINED
BSCRPTR FIELD OF HCPBSCBK
VDSGSDVC FIELD OF HCPVDSBK (WORK)
VDSGSDW FIELD OF HCPVDSBK (HCPVSP WORK)
VDSGSDI FIELD OF HCPVDSBK (INPUT)
VDSGSDO FIELD OF HCPVDSBK (OUTPUT)
VDSGSDT FIELD OF HCPVDSBK (TAG)

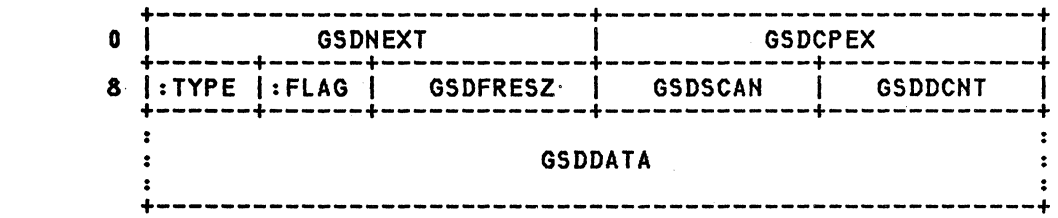
CREATED BY:

HCPCFM, HCPDAE, HCPDAS, HCPGRF, HCPGSV,
HCPHVC, HCPREC, HCPRSE, HCPRSP, HCPVCN,
HCPVSP, HCPVUR, HCPISU, HCPIOP, HCPITM,
HCPWRM, HCPERM, HCPCFS, HCPCQA, HCPCQE,
HCPCQO, HCPCQT, HCPCQU, HCPCQW, HCPCRC,
HCPCSO, HCPCST, HCPPWD, HCPSFR, HCPSFV,
HCPTRA, HCPTRI, HCPVEX

DELETED BY:

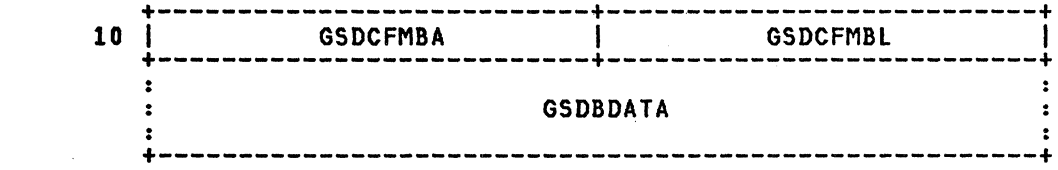
HCPCFM, HCPDAE, HCPDAS, HCPGIN, HCPGRF,
HCPREC, HCPRSE, HCPRSP, HCPVCN, HCPVSP,
HCPVUR, HCPIOP, HCPERM, HCPCFS, HCPCQA,
HCPCQD, HCPCQE, HCPCQO, HCPCQT, HCPCQW,
HCPCRC, HCPCSO, HCPCST, HCPDTD, HCPPWD,
HCPSFR, HCPSFV, HCPTRA, HCPTRI, HCPUSO,
HCPVEX

GSDBK - GENERAL SYSTEM DATA BLOCK

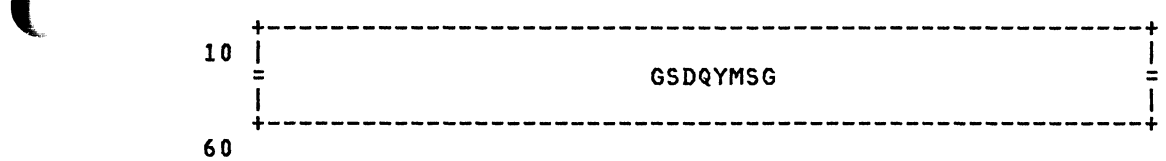


REDEFINITION - TERMINAL HANDLING

REDEFINITION -



REDEFINITION -



disp	name	length	description
000	GSDNEXT	004	POINTER TO NEXT GSDBLOK
004	GSDCPEX	004	POINTER TO CPEXBLOK
008	GSDTYFL	002	GSDTYPE AND GSDFLAG PARAMETERS
008	GSDTYPE	001	GSDBLOK TYPE

BITS DEFINED IN GSDTYPE (AT HEX DISPLACEMENT: 8)

80	GSDCFMDG	DIAGNOSE CONSOLE FUNCTION BUFFER
40	GSDCFMCP	BUFFER CONTAINS
20	GSDCFMTR	BUFFER FROM TRACE CMD OPERAND
		GSD2305 IS FOR INTERFACE TO HCPIOESD
10	GSD2305	2305 IOR EXTENSION
		FLAGS FOR LOGON AND IPL
08	GSDREIPL	GSDBK IS FOR ATTEMPTED RE-IPL COMMAND
04	GSDIPLOG	COMMAND WAS GENERATED BY THE LOGON PROCESSOR
02	GSDLOGIP	FIRST READ INPUT AFTER IPL

009	GSDFLAG	001	GSDBLOK FLAGS

BITS DEFINED IN GSDFLAG (AT HEX DISPLACEMENT: 9)

80	GSDCFMAD	COMMAND TRANSFERRED FROM ADJUNCT
40	GSDCFMDY	DISPLAY COMMAND TO TERMINAL
20	GSDCFMDZ	DISPLAY TO TERMINAL COMPLETE
10	GSDCFMRD	C.F. READ REQUEST IF RUN OFF
08	GSDPWSUP	PASSWORD SUPPRESSION FOR THIS CMD
04	GSDBUFWT	C.F. OUTPUT TO BUFFER FOR THIS CMD
02	GSDNCPRD	NO CP READ ON LINK COMMAND VIA DIAG 8
		FOR PROGRAM FUNCTION KEY SUPPORT
80	GSDPFIMM	THIS IS A IMMED PF KEY
40	GSDPFDEL	THIS IS A DELAY PF KEY
20	GSDPFNOD	THIS IS A NODISP PF KEY
10	GSDPFSUB	THIS IS A SUBSTITU PF KEY
08	GSDPFTAB	THIS IS A TAB PF KEY
04	GSDPFRTV	THIS IS A RETRIEVE PF KEY
02	GSDPFCPY	THIS IS A COPY PF KEY
		FOR SPECIAL PRINTER HANDLING ON 2311..
80	GSDUSCB	TYPE 1 BUFFER READ (UCSB)
40	GSDFCB	TYPE 2 BUFFER READ (FCB)
20	GSDPLB	TYPE 3 BUFFER READ (PLB)
		FOR RECORDING AND ACCOUNTING
02	GSDRIOER	RECORD FOR INBOARD/OUTBOARD RECORDING
01	GSDRACNT	RECORD FOR ACCOUNTING
		FOR VIRTUAL UNIT RECORD DEVICE SIMULATION
80	GSDCCWO	GSDBLOK CONTAINS CCWS ONLY
20	GSDCCWRT	CCW WRITE OPERATION
		FOR INPUT DATA PROCESSING
08	GSDPHIDE	PREVENT DISPLAY OF THIS DATA

00A	GSDFRESZ	002	GSDBLOK BLOCK SIZE IN DOUBLE WORDS
00C	GSDSCAN	002	BYTE DISP OF NEXT FIELD IN GSDDATA
00E	GSDDCNT	002	LENGTH OF GSDDATA IN BYTES

EQUATES

10	GSDHLEN	GSDBK SIZE IN BYTES
02	GSDHSIZE	GSDBK SIZE IN DOUBLE-WORDS
12	GSDLGSIZ	LARGE GSDBK FOR 2305 USE

```
010   GSDDATA    001       START OF VARIABLE LENGTH DATA

         REDEFINITION - TERMINAL HANDLING

00C   GSDQCNFL   001       PARAMETER FLAGS FOR HCPQCN
00D   GSDFSMFL   001       FULL SCREEN PARMS FOR HCPQCN

         REDEFINITION -

010   GSDCFMBA   004       C.F. OUTPUT BUFFER ADDRESS
014   GSDCFMBL   004       C.F. OUTPUT BUFFER LENGTH
018   GSDBDATA   001       START OF VARIABLE LENGTH DATA  W/BUFFER

                    EQUATES

        08     GSDBSCAN    SCN PTR FOR C.F. CMD W/BUFFER


         REDEFINITION -

010   GSDQYMSG   080

                    EQUATES

        0C     GSDQYSIZ    GSDBK FOR 80 CHAR TEXT FIELD


                    MORE EQUATES

       011     GSDDATA1
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
GSDBDATA	001	018	GSDNCPRD	001	002
GSDBK	001	000	GSDNEXT	004	000
GSDBSCAN	001	008	GSDPFCPY	001	002
GSDBUFWT	001	004	GSDPFDEL	001	040
GSDCCWO	001	080	GSDPFIMM	001	080
GSDCCWRT	001	020	GSDPFNOD	001	020
GSDCFMAD	001	080	GSDPFRTV	001	004
GSDCFMBA	004	010	GSDPFSUB	001	010
GSDCFMBL	004	014	GSDPFTAB	001	008
GSDCFMCP	001	040	GSDPHIDE	001	008
GSDCFMDG	001	080	GSDPLB	001	020
GSDCFMDY	001	040	GSDPWSUP	001	008
GSDCFMDZ	001	020	GSDQCNFL	001	00C
GSDCFMRD	001	010	GSDQYMSG	080	010
GSDCFMTR	001	020	GSDQYSIZ	001	00C
GSDCPEX	004	004	GSDRACNT	001	001
GSDDATA	001	010	GSDREIPL	001	008
GSDDATA1	001	011	GSDRIOER	001	002
GSDDCNT	002	00E	GSDSCAN	002	00C
GSDFCB	001	040	GSDTYFL	002	008
GSDFLAG	001	009	GSDTYPE	001	008
GSDFRESZ	002	00A	GSDUSCB	001	080
GSDFSMFL	001	00D	GSD2305	001	010
GSDHLEN	001	010			
GSDHSIZE	001	002			
GSDIPLOG	001	004			
GSDLGSIZ	001	012			
GSDLOGIP	001	002			

HCPGSRBK— GUEST SURVIVAL RECORDING BLOCK

DSECT NAME: GSRBK

DESCRIPTIVE NAME: GUEST SURVIVAL RECORDING BLOCK

FUNCTION: CONTAINS SAVE AREAS FOR QUEUE ANCHORS AND PARTS OF THE GUESTS' PREFIX PAGE FOR GUEST SURVIVAL

LOCATED BY:

VMDGSRBK FIELD OF HCPVMDBK

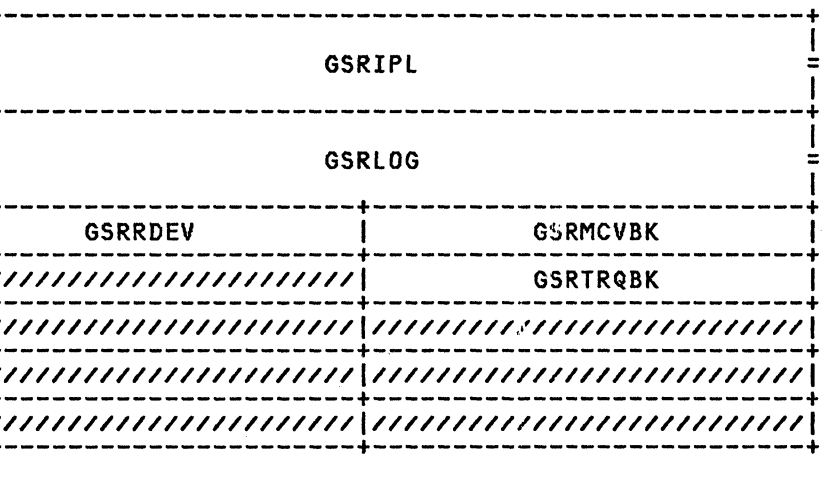
CREATED BY:

HCPVRR AT V=R LOGON

DELETED BY:

HCPVRR AT V=R LOGOFF

GSRBK - GUEST SURVIVAL RECORDING BLOCK



disp	name	length	description
000	GSRIPL	024	IPL RECORD (ABSOLUTE 0 TO 23 <X'00'-X'17'> IN V= REGION).
018	GSRLOG	096	MACHINE CHECK LOGOUT AREA (ABSOLUTE 256-352 <X'100'-X'15F'> IN V=R REGION)
078	GSRRDEV	004	STACK OF RDEVS FOR RECOVERY
07C	GSRMCVBK	004	MACHINE CHECK BLOCK FOR V=R GUEST
080		A	RESERVED FOR FUTUTE IBM USE
084	GSRTRQBK	004	TIMER REGUEST TO BE REFLECTED
088	GSRSPIOR	004	ANCHOR FOR SPARE IORBK QUEUE
08C	GSRMXIOR	004	MAXIMUM SPARE IORBKS REQUIRED
090	GSRCTIOR	004	CURRENT SPARE IORBKS ALLOCATED
094		A	RESERVED FOR FUTURE IBM USE
098		A	RESERVED FOR FUTURE IBM USE
09C		A	RESERVED FOR FUTURE IBM USE

EQUATES

14	GSRSIZE	LENGTH OF A GSRBK
02	GSRSPARE	MUMBER OF SPARE IORBKS PER DEVICE

CROSS REFERENCE

Name	Len	Val/Disp
GSRBK	001	000
GSRCTIOR	004	090
GSRIPL	024	000
GSRLOG	096	018
GSRMCVBK	004	07C
GSRMXIOR	004	08C
GSRRDEV	004	078
GSRRVIRT	001	100
GSRSIZE	001	014
GSRSPARE	001	002
GSRSPIOR	004	088
GSRTRQBK	004	084
GSRVVIRT	001	000

HCPHCCW— HOST CHANNEL CONTROL WORD

DSECT NAME: HCCW

DESCRIPTIVE NAME: HOST CHANNEL CONTROL WORD

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS OF THE FORMAT ONE CCWS USED BY CP

LOCATED BY:

N/A

CREATED BY:

N/A

DELETED BY:

N/A

HCCW - HOST CCW DEFINITION BLOCK

disp	name	length	description
000	HCCW1	008	AN ENTIRE FORMAT 1 CCW
000	HCCWCFCT	004	FORMAT 1 CCW FIRST WORD - CMD, FLAG,
000	HCCWCMND	001	CCW COMMAND CODE
001	HCCWFLAG	001	CCW FLAG BITS
	BITS DEFINED FOR HCCWFLAG BY HCPEQUAT CCWFLAG		
002	HCCWCNT	002	CCW DATA COUNT
004	HCCWADDR	004	CCW DATA ADDRESS
	EQUATES		
	07 HCCWADRX		CCW FINAL BYTE OF ADDRESS
008	HCCWNEXT	008	CCW FOLLOWING CURRENT CCW
	EQUATES		
	0F HCCWIS		ICM/STCM MASK FOR 31 BIT ADDRESS
	04 HCCWMC		MVC/CLC LENGTH FOR 31 BIT ADDRESS
	80 HCCWIDAL		IDAL INVALID BIT MASK
	08 HCCWLEN		LENGTH OF A SINGLE CCW (8 BYTES)

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
HCCW	001	000	HCCWCMND	001	000	HCCWIS	001	00F
HCCWADDR	004	004	HCCWCNT	002	002	HCCWLEN	001	008
HCCWADRX	001	007	HCCWFLAG	001	001	HCCWMC	001	004
HCCWCFCT	004	000	HCCWIDAL	001	080	HCCWNEXT	008	008

Name	Len	Val/Disp
HCCW1	008	000

HDRREC— COMMON HEADER FOR ERROR RECORDS

DSECT NAME: HDRREC

DESCRIPTIVE NAME: COMMON HEADER FOR ERROR RECORDS

FUNCTION: PROVIDE THE COMMON FORMAT FOR THE HEADER PORTION (FIRST 24 BYTES) OF ALL ERROR RECORDS.

LOCATED BY:

ANY FIELD WHICH LOCATES ONE OF THE OTHER ERROR RECORDS. THE DEFINITIONS IN HDRREC MAY BE USED IN CONJUNCTION WITH OR IN PLACE OF THE HEADER OF ANY OTHER ERROR RECORD.

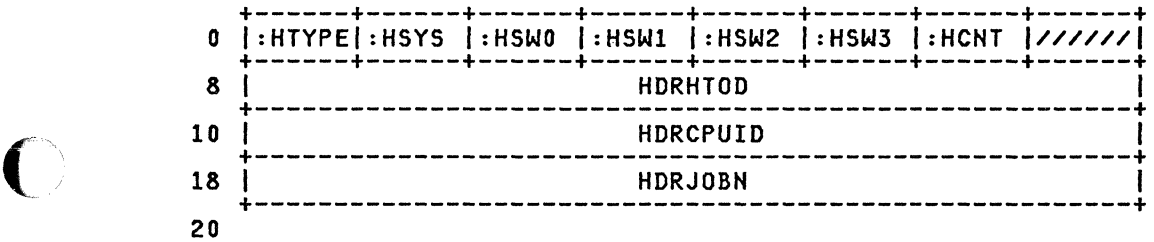
CREATED BY:

ANY MODULE WHICH CREATES ANY OTHER ERROR RECORD (AS THE FIRST 24 BYTES OF THAT ERROR RECORD).

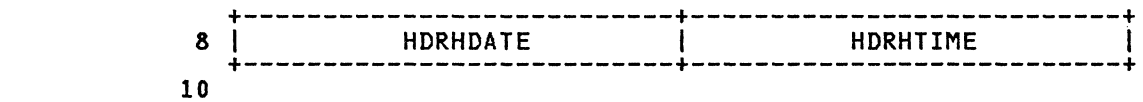
DELETED BY:

THE FIELDS DEFINED HERE ARE DELETED WITH WHATEVER ERROR RECORD THEY ARE CONTAINED IN.

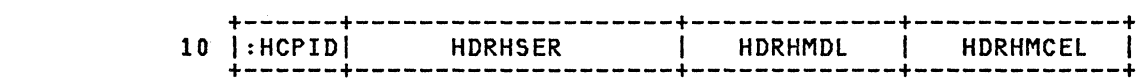
HDRREC - COMMON HEADER FOR ERROR RECORDS



REDEFINITION - HDRHTOD



REDEFINITION - HDRCPUID



disp	name	length	description
000	HDRHTYPE	001	CLASS/SOURCE

CODES DEFINED IN HDRHTYPE (AT HEX DISPLACEMENT: 0)

B0	HDRCCF	CHANNEL CHECK FRAME RECORD
A3	HDRALT	ALERT RECORD
A0	HDRMCF	MACHINE CHECK FRAME RECORD
93	HDRMDRCV	CONVERTED MDR RECORD (NOT FOR VS)
91	HDRMDR	MDR RECORD

	90	HDRMDRSV	MDR RECORD FORMATTED BY SVC 91
	84	HDRIOS	EOP FROM IOS
	82	HDRTIME	TIME STAMP RECORD
	81	HDRMCHFR	MCH FORCED TERMINATION
	80	HDREOD	EOD RECORD
	71	HDRMIT	MIT RECORD
	70	HDRMIR	MIR RECORD
	60	HDRDDR	DDR RECORD
	50	HDRIPL	IPL RECORD
	4F	HDRLSTR	LOST RECORD SUMMARY
	48	HDRHDHD	HARDWARE DETECTED HARDWARE ERR REC
	44	HDROSFT	OPERATOR DETECTED SOFTWARE ERR REC
	42	HDRHSFT	HARDWARE DETECTED SOFTWARE ERR REC
	40	HDRSFT	SOFTWARE DETECTED SOFTWARE ERR REC
	3A	HDROBRDP	OBR DYNAMIC PATHING AVAILABLE
	36	HDROBRVT	OBR TP ACCESS METHOD (VTAM) RECORD
	34	HDROBRTC	OBR TP ACCESS METHOD (TCAM(OS)/ BTAM(DOS)) RECORD
	32	HDROBRCV	CONVERTED OBR RECORD (NOT FOR VS)
	30	HDROBR	OBR (UNIT CHECK) RECORD
	2F	HDRMCHIO	BOUNDARY BETWEEN MACHINE CHECK TYPES OF RECORDS AND I/O TYPES OF RECORDS -- HERE AND BELOW ARE MACHINE CHECKS; ABOVE ARE I/O
	29	HDRCCHS2	CCH SER 0 RECORD
	28	HDRCCHS1	CCH SER 1 RECORD
	25	HDRCRD	CRD RECORD
	23	HDRSLH	SLH RECORD
	21	HDRCCMVS	CHANNEL CHK REC IN MVS ENVIRONMENT
	20	HDRCCH	CHANNEL CHECK RECORD
	1B	HDRMCHC0	CONVERTED MCH SER0 REC(NOT FOR VS)
	1A	HDRMCHC1	CONVERTED MCH SER1 REC(NOT FOR VS)
	19	HDRMCHS0	MCH SER0 RECORD (NOT FOR VS)
	18	HDRMCHS1	MCH SER1 RECORD (NOT FOR VS)
	13	HDRMCHVS	MCH REC RECORDED IN MULTIPLE VIRTUAL STORAGE ENVIRONMENT
	12	HDRMCHCV	CONVERTED MCH REC (NOT FOR VS)
	10	HDRMCH	MCH RECORD
001	HDRHSYS	001	SYSTEM/RELEASE LEVEL

BITS DEFINED IN HDRHSYS (AT HEX DISPLACEMENT: 1)

E0	HDRHSSYS	SYSTEM MASK
80	HDRHSOS2	OS/VS2
60	HDRHSVM	VM
40	HDRHSOS1	OS/VS1
20	HDRHSDOS	DOS
1F	HDRHSLVL	RELEASE LEVEL MASK

002	HDRHSW0	001	RECORD INDEPENDENT SWITCH 0

BITS DEFINED IN HDRHSW0 (AT HEX DISPLACEMENT: 2)

80	HDRHSWMR	MORE RECORDS FOLLOW
40	HDRHSWCI	TOD CLOCK INSTRUCTION ISSUED
20	HDRHSWRT	RECORD TRUNCATED
10	HDRHSWPK	370/XA MODE
08	HDRHSWTI	TIME MACRO ISSUED
04	HDRHSWPS	ERROR WAS PASSED (REFLECTED) TO A GUEST

```
003   HDRHSW1     001       RECORD SWITCH 1
004   HDRHSW2     001       RECORD SWITCH 2
005   HDRHSW3     001       RECORD SWITCH 3
006   HDRHCNT     001       RECORD COUNT

        BITS DEFINED IN HDRHCNT  (AT HEX DISPLACEMENT: 6)

        F0     HDRRCSEQ     RECORD SEQUENCE NUMBER MASK
        0F     HDRRCPHY     TOTAL NUM. OF PHYSICAL RECORDS IN
                            LOGICAL RECORD BIT MASK

007                XL1       RESERVED FOR FUTURE IBM USE
008   HDRHTOD      008       TOD OF SYSTEM FAILURE
010   HDRCPUID     008       CPU ID

                      EQUATES

        18     HDRLEN       LENGTH OF HDRREC

018   HDRJOBN      008       JOB NAME/USERID (NOT USED IN
                            CRDREC, MDRREC, OR OBRREC)

                      EQUATES

        20     HDRXLEN      LENGTH OF EXTENDED HDRREC
        04     HDRSIZE      HDRREC SIZE IN DOUBLE WORDS


         REDEFINITION - HDRHTOD

008   HDRHDATE     004       SYSTEM DATE OF FAILURE
00C   HDRHTIME     004       SYSTEM TIME OF FAILURE

         REDEFINITION - HDRCPUID

010   HDRHCPID     001       MACHINE VERSION CODE
011   HDRHSER      003       CPU SERIAL NUMBER
014   HDRHMDL      002       CPU MACHINE MODEL NUMBER
016   HDRHMCEL     002       MAX LENGTH OF MACHINE-DEPENDENT
                            MACHINE CHECK EXTENDED LOGOUT
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
HDRALT	001	0A3	HDRHSLVL	001	01F	HDRIOS	001	084
HDRCCF	001	0B0	HDRHSOS1	001	040	HDRIPL	001	050
HDRCCH	001	020	HDRHSOS2	001	080	HDRJOBN	008	018
HDRCCHS1	001	028	HDRHSSYS	001	0E0	HDRLEN	001	018
HDRCCHS2	001	029	HDRHSVM	001	060	HDRLSTR	001	04F
HDRCCMVS	001	021	HDRHSWCI	001	040	HDRMCF	001	0A0
HDRCPUID	008	010	HDRHSWMR	001	080	HDRMCH	001	010
HDRCRD	001	025	HDRHSWPK	001	010	HDRMCHCV	001	012
HDRDDR	001	060	HDRHSWPS	001	004	HDRMCHC0	001	01B
HDREOD	001	080	HDRHSWRT	001	020	HDRMCHC1	001	01A
HDRHCNT	001	006	HDRHSWTI	001	008	HDRMCHFR	001	081
HDRHCPID	001	010	HDRHSW0	001	002	HDRMCHIO	001	02F
HDRHDATE	004	008	HDRHSW1	001	003	HDRMCHS0	001	019
HDRHDHD	001	048	HDRHSW2	001	004	HDRMCHS1	001	018
HDRHMCEL	002	016	HDRHSW3	001	005	HDRMCHVS	001	013
HDRHMDL	002	014	HDRHSYS	001	001	HDRMDR	001	091
HDRHSDOS	001	020	HDRHTIME	004	00C	HDRMDRCV	001	093
HDRHSER	003	011	HDRHTOD	008	008	HDRMDRSV	001	090
HDRHSFT	001	042	HDRHTYPE	001	000	HDRMIR	001	070

Name	Len	Val/Disp
HDRMIT	001	071
HDROBR	001	030
HDROBRCV	001	032
HDROBRDP	001	03A
HDROBRTC	001	034
HDROBRVT	001	036
HDROSFT	001	044
HDRRCPHY	001	00F
HDRRCSEQ	001	0F0
HDRREC	001	000
HDRSFT	001	040
HDRSIZE	001	004
HDRSLH	001	023
HDRTIME	001	082
HDRXLEN	001	020

HCPIDAL— INDIRECT DATA ADDRESS LIST MAPPING

DSECT NAME: IDAL

DESCRIPTIVE NAME: INDIRECT DATA ADDRESS LIST MAPPING

FUNCTION: PROVIDE SYMBOLIC REFERENCE TO THE FIELDS OF A CHANNEL INDIRECT DATA ADDRESS LIST

LOCATED BY:

N/A

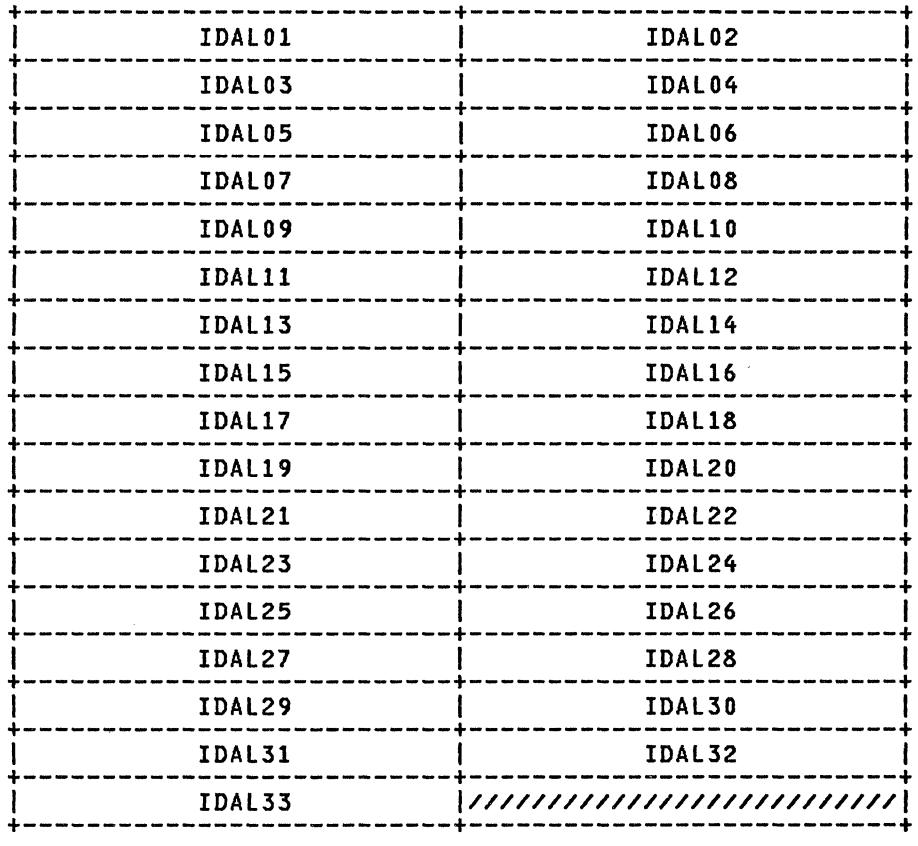
CREATED BY:

N/A

DELETED BY:

N/A

IDAL - INDIRECT DATA ADDRESSING LIST



disp	name	length	description
000	IDALLIST	004	2 TO 33 INDIRECT DATA WORDS
000	IDAL01	004	INDIRECT DATA ADDRESS WORD 01
004	IDAL02	004	INDIRECT DATA ADDRESS WORD 02
008	IDAL03	004	INDIRECT DATA ADDRESS WORD 03
00C	IDAL04	004	INDIRECT DATA ADDRESS WORD 04
010	IDAL05	004	INDIRECT DATA ADDRESS WORD 05
014	IDAL06	004	INDIRECT DATA ADDRESS WORD 06
018	IDAL07	004	INDIRECT DATA ADDRESS WORD 07
01C	IDAL08	004	INDIRECT DATA ADDRESS WORD 08

020	IDAL09	004	INDIRECT DATA ADDRESS WORD 09
024	IDAL10	004	INDIRECT DATA ADDRESS WORD 20
028	IDAL11	004	INDIRECT DATA ADDRESS WORD 21
02C	IDAL12	004	INDIRECT DATA ADDRESS WORD 22
030	IDAL13	004	INDIRECT DATA ADDRESS WORD 23
034	IDAL14	004	INDIRECT DATA ADDRESS WORD 24
038	IDAL15	004	INDIRECT DATA ADDRESS WORD 25
03C	IDAL16	004	INDIRECT DATA ADDRESS WORD 26
040	IDAL17	004	INDIRECT DATA ADDRESS WORD 27
044	IDAL18	004	INDIRECT DATA ADDRESS WORD 28
048	IDAL19	004	INDIRECT DATA ADDRESS WORD 29
04C	IDAL20	004	INDIRECT DATA ADDRESS WORD 20
050	IDAL21	004	INDIRECT DATA ADDRESS WORD 21
054	IDAL22	004	INDIRECT DATA ADDRESS WORD 22
058	IDAL23	004	INDIRECT DATA ADDRESS WORD 23
05C	IDAL24	004	INDIRECT DATA ADDRESS WORD 24
060	IDAL25	004	INDIRECT DATA ADDRESS WORD 25
064	IDAL26	004	INDIRECT DATA ADDRESS WORD 26
068	IDAL27	004	INDIRECT DATA ADDRESS WORD 27
06C	IDAL28	004	INDIRECT DATA ADDRESS WORD 28
070	IDAL29	004	INDIRECT DATA ADDRESS WORD 29
074	IDAL30	004	INDIRECT DATA ADDRESS WORD 30
078	IDAL31	004	INDIRECT DATA ADDRESS WORD 31
07C	IDAL32	004	INDIRECT DATA ADDRESS WORD 32
080	IDAL33	004	INDIRECT DATA ADDRESS WORD 33
084		A	NEVER USED FINAL WORD

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
IDAL	001	000	IDAL32	004	07C
IDALLIST	004	000	IDAL33	004	080
IDAL01	004	000			
IDAL02	004	004			
IDAL03	004	008			
IDAL04	004	00C			
IDAL05	004	010			
IDAL06	004	014			
IDAL07	004	018			
IDAL08	004	01C			
IDAL09	004	020			
IDAL10	004	024			
IDAL11	004	028			
IDAL12	004	02C			
IDAL13	004	030			
IDAL14	004	034			
IDAL15	004	038			
IDAL16	004	03C			
IDAL17	004	040			
IDAL18	004	044			
IDAL19	004	048			
IDAL20	J04	04C			
IDAL21	004	050			
IDAL22	004	054			
IDAL23	004	058			
IDAL24	004	05C			
IDAL25	004	060			
IDAL26	004	064			
IDAL27	004	068			
IDAL28	004	06C			
IDAL29	004	070			
IDAL30	004	074			
IDAL31	004	078			

HCPIDHBK— SPOOL IMAGE LIBRARY DIRECTORY HEADER

DSECT NAME: IDHBK

DESCRIPTIVE NAME: SPOOL IMAGE LIBRARY DIRECTORY HEADER

FUNCTION: TO MAP OUT THE DIRECTORY HEADER INFORMATION IN A 3800 IMAGE LIBRARY FILE.

LOCATED BY:

THE DIRECTORY HEADER IS LOCATED AT THE BEGINNING OF THE FIRST DIRECTORY RECORD IN THE FILE.

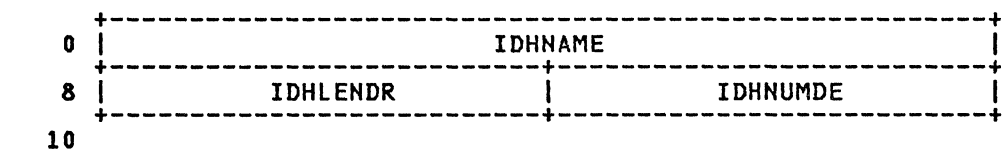
CREATED BY:

IMAGELIB COMMAND (HCPNMTBL)
IMAGEMOD COMMAND (DMSIMAGE)

DELETED BY:

ALL THE CONTENTS OF AN IMG FILE, INCLUDING THE IDHBKS, ARE DELETED BY THE "PURGE IMG" COMMAND PROCESSING (HCPCSUPU).

IDHBK - SPOOL IMAGE LIBRARY DIRECTORY HEADER



disp	name	length	description
000	IDHNAME	008	IMAGE LIBRARY NAME
008	IDHLENDR	004	LENGTH OF DIRECTORY RECORD, INCLUDING HEADER
00C	IDHNUMDE	004	NUMBER OF DIRECTORY ENTRIES (IDMBKS)

EQUATES

10	IDHSIZE	SIZE IN BYTES
02	IDHSZDW	SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IDHBK	001	000
IDHLENDR	004	008
IDHNAME	008	000
IDHNUMDE	004	00C
IDHSIZE	001	010
IDHSZDW	001	002

HCPIDMBK— SPOOL IMAGE LIBRARY DIRECTORY MEMBER

DSECT NAME: IDMBK

DESCRIPTIVE NAME: SPOOL IMAGE LIBRARY DIRECTORY MEMBER ENTRY BLOCK

FUNCTION: TO MAP OUT THE DIRECTORY MEMBER INFORMATION IN A 3800 IMAGE LIBRARY FILE.

LOCATED BY:

THE DIRECTORY MEMBERS ARE LOCATED AFTER THE IDHBK ON THE FIRST DIRECTORY RECORD IN THE FILE. THE IDHNUMDE DETERMINES HOW MANY IDMBKS THERE ARE ON THE DIRECTORY RECORD(S).

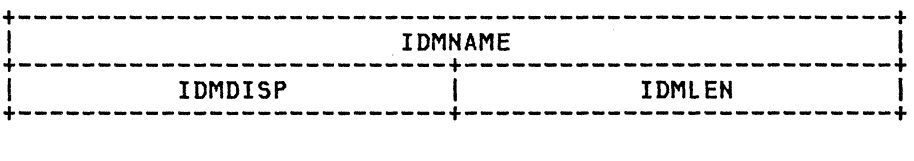
CREATED BY:

IMAGELIB COMMAND (HCPNMTBL)
IMAGEMOD COMMAND (DMSIMAGE)

DELETED BY:

ALL THE CONTENTS OF AN IMG FILE, INCLUDING THE IDMBKS, ARE DELETED BY THE "PURGE IMG" COMMAND PROCESSING (HCPCSUPU).

IDMBK - SPOOL IMAGE LIBRARY DIRECTORY MEMBER ENTRY BLOCK



disp	name	length	description
000	IDMNAME	008	LIBRARY MEMBER NAME
008	IDMDISP	004	STARTING DISPLACEMENT IN LIBRARY
00C	IDMLEN	004	LENGTH OF MEMBER IN BYTES (THIS INCLUDES THE IMHBK)

EQUATES

10	IDMSIZE	SIZE IN BYTES
02	IDMSZDW	SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IDMBK	001	000
IDMDISP	004	008
IDMLEN	004	00C
IDMNAME	008	000
IDMSIZE	001	010
IDMSZDW	001	002

HCPIFSNT— INTERPRETATION FACILITY SUBCHANNEL NUMBER TABLE

DSECT NAME: IFSNT

DESCRIPTIVE NAME: INTERPRETATION FACILITY SUBCHANNEL NUMBER TABLE

FUNCTION: TO ALLOW THE MICROCODE TO DETERMINE IF A SIOF INSTRUCTION ISSUED, UNDER SIE, BY THE V=R GUEST SHOULD BE PASSED THROUGH OR CAUSE INTERCEPTION. THE IFSNT IS A 16K TABLE ON A PAGE FRAME BOUNDARY. IT IS CONTAINED IN FIXED, CONTIGUOUS REAL STORAGE. IT CONTAINS ONE ENTRY (4 BYTES LONG) FOR EACH DEVICE THAT COULD BE SUPPORTED UNDER I/O PASS THROUGH. IT IS ONLY APPLICABLE FOR A 370 V=R GUEST. DEVICES WITH ADDRESSES 000 THRU FFF ARE SUPPORTED UNDER I/O PASS THROUGH. THE MICROCODE USES THE DEVICE ADDRESS OPERAND OF THE SIOF INSTRUCTION TO INDEX INTO THE IFSNT. IF THE FIRST BYTE OF THE ENTRY IS NON-ZERO, THE SIOF INSTRUCTION IS ELIGIBLE TO BE PASSED THROUGH. THE FIRST BYTE THEN CONTAINS THE LOGICAL PATH MASK (LPM) TO BE PLACED IN THE OPERATION REQUEST BLOCK (ORB) CONSTRUCTED BY THE MICROCODE. IF THE FIRST BYTE OF THE ENTRY IS ZERO, SIOF MUST CAUSE INTERCEPTION. THE SECOND BYTE IS RESERVED AND THE THIRD AND FOURTH BYTES CONTAIN THE SUBCHANNEL NUMBER.

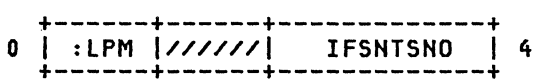
CREATED BY:

HCPIOAIT, HCPIOAGS

DELETED BY:

HCPIOARC, HCPIOARS

IFSNT - INTERPRETATION FACILITY SUBCHANNEL NUMBER TABLE



disp	name	length	description
000	IFSNTLPM	001	IF NON-ZERO, SIOF CAN BE PASSED THROUGH FOR THIS DEVICE. THIS BYTE CONTAINS LPM FOR MICROCODE BUILT ORB. IF ZERO, SIOF MUST CAUSE INTERCEPTION.
001		1X	RESERVED FOR FUTURE IBM USE
002	IFSNTSNO	002	SUBCHANNEL NUMBER FOR THIS DEVICE

EQUATES

00	IFSNTLEN	LENGTH OF IFSNT
04	IFSNTFCT	NUMBER OF FRAMES NEEDED FOR THE IFSNT

CROSS REFERENCE

Name	Len	Val/Disp
IFSNT	001	000
IFSNTFCT	001	004
IFSNTLEN	001	000
IFSNTLPM	001	000
IFSNTSNO	002	002

HCPIMGBK— IMAGE LIBRARY/NLS MESSAGE REPOSITORY

DSECT NAME: IMGBK

DESCRIPTIVE NAME: IMAGE LIBRARY/NLS MESSAGE REPOSITORY BLOCK

FUNCTION: THIS BLOCK IS USED FOR COMMUNICATIONS PURPOSES WHEN CP USERS REQUEST ACCESS TO AN IMAGE LIBRARY OR NLS MESSAGE REPOSITORY FILE.

LOCATED BY:

(IMAGES) POINTER IN RSPBK
(NLS) POINTER IN LNGBK

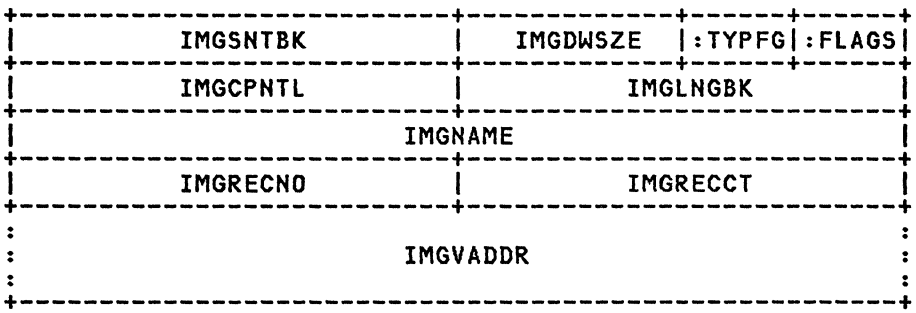
CREATED BY:

(IMAGES) HCPSIL - WHEN A PRINTER IS STARTED
(NLS) HCPNLS - WHEN THE FIRST USER REQUESTS THE LANGUAGE

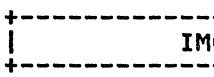
DELETED BY:

(IMAGES) HCPSIL - WHEN A PRINTER IS DRAINED
(NLS) HCPNLS - WHEN THE LAST USER RELEASES THE LANGUAGE

IMGBK - IMAGE FILE BLOCK



REDEFINITION - START OF SYSTEM VIRTUAL ADDRESSES



disp	name	length	description
000	IMGSNTBK	004	POINTER TO THE SNTBK
004	IMGDWSZE	002	SIZE IN DOUBLEWORDS OF THE BLOCK
006	IMGTYPFG	001	WHAT TYPE OF FILE IS THIS?
007	IMGFLAGS	001	MISCELLANEOUS STATUS FLAGS
008	IMGCPNTL	004	ADDRESS OF A CP RESIDENT ROUTINE TO BE CALLED WHEN THE LAST USER RELEASES THE IMAGE LIBRARY OR NLS LANGUAGE FILE. WHEN FIELD IS ZERO, NO CALL IS MADE.
00C	IMGLNGBK	004	POINTER TO LNGBK FOR THIS LANGUAGE. (FOR NLS LANGUAGE FILES ONLY; FOR IMAGE LIBRARIES IT DOES NOT APPLY, AND REMAINS ZERO.
010	IMGNAME	008	FILE NAME OF THE IMAGE LIBRARY OR NLS LANGUAGE FILE
018	IMGRECNO	004	NUMBER OF THE FIRST RECORD TO BE READ. RECORDS ARE NUMBERED STARTING

```
                                FROM ONE (1).
01C    IMGRECCT    004          COUNT OF RECORDS TO BE READ

                       EQUATES

         04      IMGHDRSZ       HEADER SIZE IN DOUBLEWORDS

020    IMGVADDR    004          START OF VARIABLE LENGTH DATA

           REDEFINITION - START OF SYSTEM VIRTUAL ADDRESSES

020    IMGVIRT     004          RETURNED SYSTEM VIRTUAL ADDRESS

                       MORE EQUATES

         001     IMGIMAGE       IMAGE LIBRARY FILE
         002     IMGNLS         NLS MESSAGE REPOSITORY FILE
         001     IMGFIRST       FIRST OPEN FOR THIS FILE, SET AND
                                RESET BY HCPNSROP.
```

CROSS REFERENCE

Name	Len	Val/Disp
IMGBK	001	000
IMGCPNTL	004	008
IMGDWSZE	002	004
IMGFIRST	001	001
IMGFLAGS	001	007
IMGHDRSZ	001	004
IMGIMAGE	001	001
IMGLNGBK	004	00C
IMGNAME	008	010
IMGNLS	001	002
IMGRECCT	004	01C
IMGRECNO	004	018
IMGSNTBK	004	000
IMGTYPFG	001	006
IMGVADDR	004	020
IMGVIRT	004	020

HCPIMHBK— SPOOL IMAGE LIBRARY MEMBER HEADER BLOCK

DSECT NAME: IMHBK

DESCRIPTIVE NAME: SPOOL IMAGE LIBRARY MEMBER HEADER BLOCK

FUNCTION: TO MAP OUT THE MEMBER HEADER INFORMATION PRECEDING EACH MEMBER IN THE 3800 IMAGE LIBRARY FILE.

LOCATED BY:

THE MEMBER HEADER PRECEEDS EACH IMAGE MODULE IN THE IMAGE LIBRARY. IT IS POINTED TO BY THE IDMDISP FIELD IN THE IDMBK.

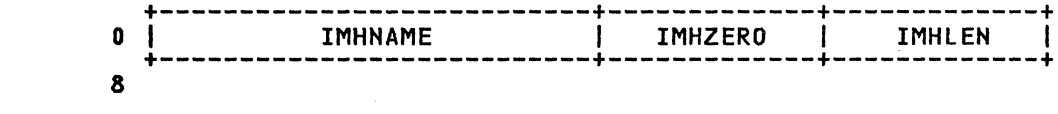
CREATED BY:

IMAGELIB COMMAND (HCPNMTBL)
IMAGEMOD COMMAND (DMSIMAGE)

DELETED BY:

ALL THE CONTENTS OF AN IMG FILE, INCLUDING THE IMHBKS, ARE DELETED BY THE "PURGE IMG" COMMAND PROCESSING (HCPCSUPU).

IMHBK - SPOOL IMAGE LIBRARY MEMBER HEADER BLOCK



disp	name	length	description
000	IMHNAME	004	NAME OF THE MODULE
004	IMHZERO	002	TWO ZERO BYTES
006	IMHLEN	002	LENGTH OF DATA (AFTER HEADER)

EQUATES

08	IMHTEXT	START OF IMAGE LOAD MODULE
08	IMHBSIZE	SIZE IN BYTES
01	IMHSIZE	SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IMHBK	001	000
IMHBSIZE	001	008
IMHLEN	002	006
IMHNAME	004	000
IMHSIZE	001	001
IMHTEXT	001	008
IMHZERO	002	004

HCPIOIP— INPUT/OUTPUT INTERRUPTION CODE MAPPING

DSECT NAME: IOIP

DESCRIPTIVE NAME: INPUT/OUTPUT INTERRUPTION CODE MAPPING

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS STORED WITH AN XA-MODE I/O INTERRUPTION CODE.

LOCATED BY:

N/A

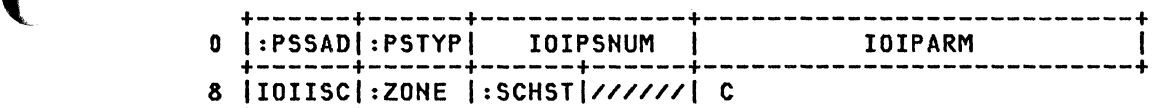
CREATED BY:

N/A

DELETED BY:

N/A

IOIP - I/O INTERRUPT PARAMETER BLOCK



disp	name	length	description
000	IOISUBID	004	SUBSYSTEM-IDENTIFICATION WORD
000	IOIPSSAD	001	SUBSYSTEM ADDRESS (X'00')
001	IOIPSTYP	001	SUBSYSTEM TYPE (X'01')
002	IOIPSNUM	002	SUBCHANNEL NUMBER
004	IOIPARM	004	I/O INTERRUPTION PARAMETER
008	IOIINTID	004	INTERRUPTION-IDENTIFICATION WORD
008	IOIISPM	001	INTERRUPTION-SUBCLASS-PENDING MASK. ..(TPZI-TEST FUNCTION).
008	IOIISC	001	INTERRUPTION-SUBCLASS CODE
009	IOIZONE	001	ZONE NUMBER
00A	IOISCHST	001	SUBCHANNEL STATUS

BITS DEFINED IN IOISCHST (AT HEX DISPLACEMENT: A)

80	IOIIIC	INTERRUPTION-INTERLOCK-CONTROL BIT.
00B	X	RESERVED FOR FUTURE IBM USE

EQUATES

02	IOIPSIZE	SIZE OF BLOCK IN DOUBLE-WORDS
0C	IOIPBLEN	

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
IOIIIC	001	080	IOIISC	001	008	IOIP	001	000
IOIINTID	004	008	IOIISPM	001	008	IOIPARM	004	004

Name	Len	Val/Disp
IOIPBLEN	001	00C
IOIPSIZE	001	002
IOIPSNUM	002	002
IOIPSSAD	001	000
IOIPSTYP	001	001
IOISCHST	001	00A
IOISUBID	004	000
IOIZONE	001	009

HCPIOPBK— I/O PASSTHROUGH BLOCK

DSECT NAME: IOPBK

DESCRIPTIVE NAME: I/O PASSTHROUGH BLOCK

FUNCTION: A IOPBK CONTAINS INFORMATION RELATED TO THE EXECUTION OF A VIRTUAL MACHINE ELIGIBLE TO USE THE SIE ASSIST FOR ITS DEDICATED I/O.

LOCATED BY:

VMDIOPBK FIELD OF THE PREFERRED GUEST'S ORIGIN VMDBK
THE FIRST PART OF THE IOPBK IS A TRQBK, SO IT MAY ALSO APPEAR ON THE TIMER SUPERVISOR QUEUE, OR BE STACKED ON THE VMDBK.

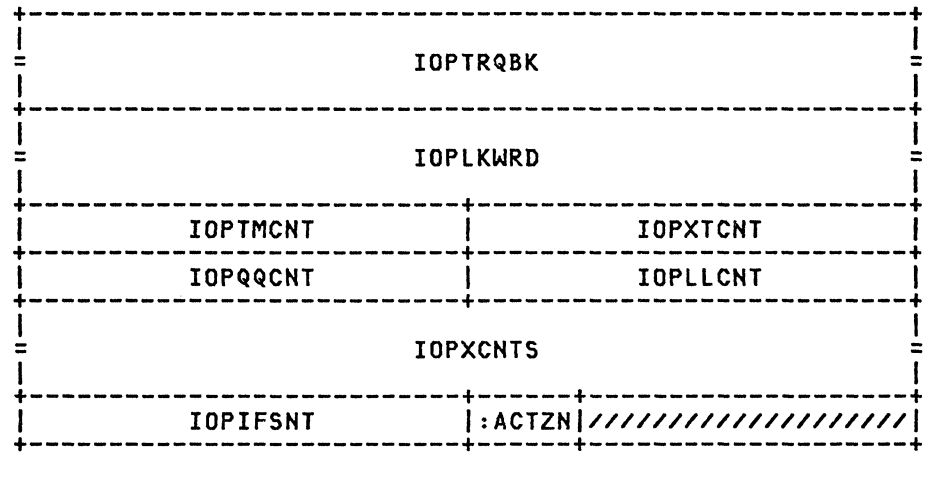
CREATED BY:

HCPBVM WHEN A USER LOGS ON IN THE V=R AREA.

DELETED BY:

HCPUSO WHEN THE V=R USER LOGS OFF.

IOPBK - I/O PASS THRU BLOCK



disp	name	length	description
000	IOPTRQBK	008	TIMER REQUEST BLOCK
038	IOPLKWRD	008	LOCKWORD FOR SYNCHRONIZING
050	IOPTMCNT	004	COUNT OF ENTRIES TO CFM WHILE I/O
054	IOPXTCNT	004	COUNT OF TIMER EXPIRATIONS BEFORE
058	IOPQQCNT	004	COUNT OF CANCELLATIONS IN LESS
05C	IOPLLCNT	004	COUNT OF CANCELLATION AFTER MORE
060	IOPXCNTS	004	ARRAY OF COUNTS OF CANCELLATIONS IN
0A0	IOPIFSNT	004	ADDRESS OF THE 16K BLOCK ASSIGNED TO THIS USER FOR USE AS THE SUBCHANNEL NUMBER TABLE
0A4	IOPACTZN	001	ACTIVE ZONE NUMBER
0A5		3X	RESERVED
0A8	IOPCLRCC	004	CLEAR CHANNEL CONDITION CODE

EQUATES

AC	IOPLEN	SIZE OF THE IOPBK IN BYTES
16	IOPSIZE	SIZE OF THE IOPBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IOPACTZN	001	0A4
IOPBK	001	000
IOPCLRCC	004	0A8
IOPIFSNT	004	0A0
IOPLEN	001	0AC
IOPLKWRD	008	038
IOPLLCNT	004	05C
IOPQQCNT	004	058
IOPSIZE	001	016
IOPTMCNT	004	050
IOPTRQBK	008	000
IOPXCNTS	004	060
IOPXTCNT	004	054

HCPIORBK— I/O REQUEST AND RESPONSE BLOCK

DSECT NAME: IORBK

DESCRIPTIVE NAME: I/O REQUEST AND RESPONSE BLOCK

FUNCTION: THE I/O REQUEST AND RESPONSE BLOCK IS USED TO REPRESENT AN I/O OPERATION.

LOCATED BY:

```
CACXUIOR FIELD OF CACBK - CTC UNSOLICITED IORBK
CACYUIOR FIELD OF CACBK - CTC UNSOLICITED IORBK
CPVIORS  FIELD OF CPVOL - PREFORMATTED PAGING IORBK
GSRIORBK FIELD OF GSRBK - IORBK'S FOR RECOVERY
IORFPNT  FIELD OF IORBK - FORWARD  IORBK POINTER
IORBPNT  FIELD OF IORBK - BACKWARD IORBK POINTER
IORPIOR  FIELD OF IORBK - NEXT PENDING INTERRUPTION IORBK
MDIDEOWD FIELD OF MDISK - DEVICE-END OWED IORBK
MDIDEPND FIELD OF MDISK - DEVICE-END PENDING IORBK
MDIQWAIT FILED OF MDISK - WAIT FOR "RELEASE" IORBK
MNDAIOR  FIELD OF MNDC  - MONITOR TAPE IORBK
PIOIOR   FIELD OF PIOBK - IORBK FOR THIS PIOBK
RDEVAIOR FIELD OF RDEV  - ACTIVE IORBK
RDEVNXTL FIELD OF RDEV  - NEXT LOWER  IORBK
RDEVNXTH FIELD OF RDEV  - NEXT HIGHER IORBK
RDEVNXTI FIELD OF RDEV  - NEXT IMMEDIATE IORBK
RDEVNXTW FIELD OF RDEV  - INTER-REQUIRED WAIT IORBK
VCTXDATN FIELD OF VCTCA - DEFERRED ATTENTION IORBK
VCTYDATN FIELD OF VCTCA - DEFERRED ATTENTION IORBK
VDEVAIOR FIELD OF VDEV  - ACTIVE IORBK
VDEVIORQ FIELD OF VDEV  - UNSOLICITED INTERRUPT IORBK
VDEVNIOR FIELD OF VDEV  - REDRIVE/SUSPENDED IORBK
VDEVPIOR FIELD OF VDEV  - PENDING INTERRUPT IORBK
VDEVSIOR FIELD OF VDEV  - PENDING SENSE DATA IORBK
VMDQIORF FIELD OF VMDBK - IORBK/TRQBK STACK
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CREATED BY:

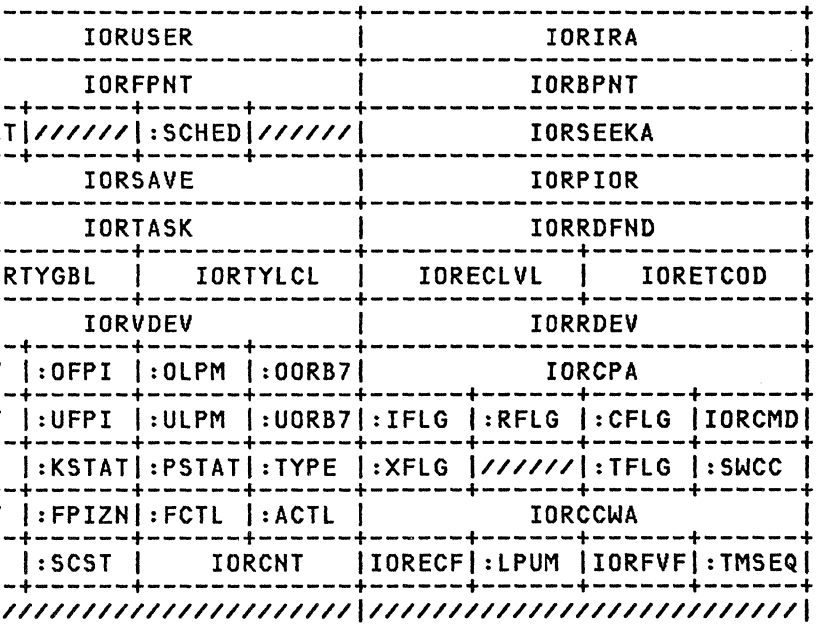
IORBK'S ARE DYNAMICALLY CREATED BY CALLING HCPFREE.

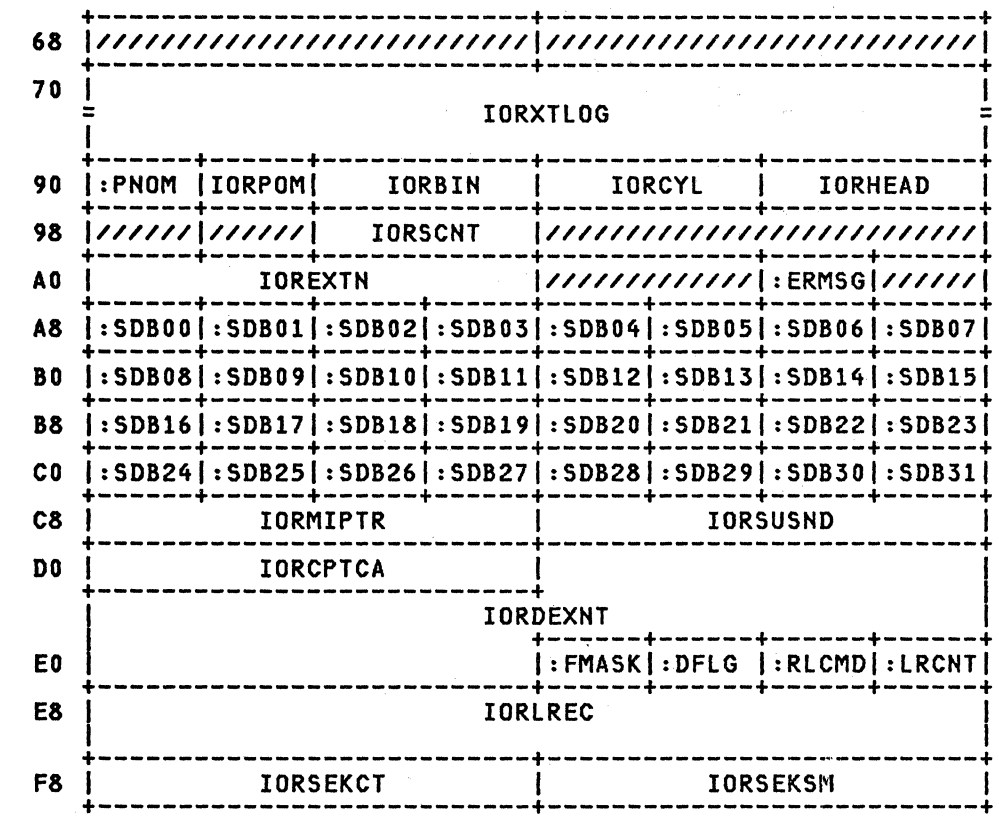
DELETED BY:

IORBK'S ARE DELETED BY CALLING HCPFRET.

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

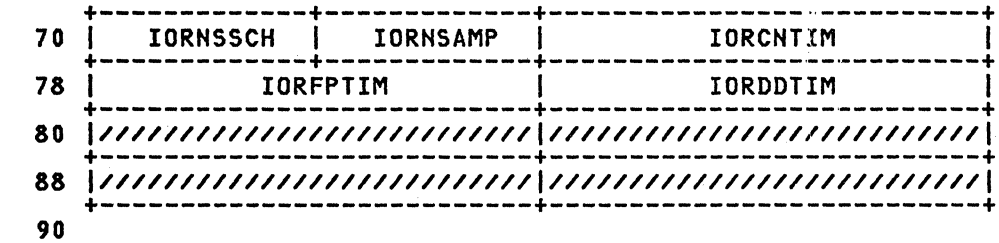
IORBK - I/O REQUEST AND RESPONSE BLOCK





REDEFINITION - SCHIB OVERLAY

REDEFINITION - SCMBK OVERLAY



disp	name	length	description
000	IORUSER	004	VIRTUAL USER TO BE CHARGED
004	IORIRA	004	I/O INTERRUPTION RETURN ADDR.
008	IORFPNT	004	POINTER TO NEXT QUEUED IORBK
00C	IORBPNT	004	POINTER TO PREVIOUS QUEUED IORBK
010	IORDISPN	004	DISPATCHING FLAGS
010	IORQSTAT	001	DISPATCHING QUEUING STATUS

BITS DEFINED IN IORQSTAT (AT HEX DISPLACEMENT: 10)

	80	IORQQUED	WAITING AFTER STARTING I/O
	40	IORQACTV	ACTIVE IN CHANNEL
	20	IORQDSP	DISPATCHER HAS CONTROL OF IORBK
	10	IORACT	ACTIVE I/O
	01	IORQANCH	CHANNEL SCHEDULING QUEUE (ANCHOR)
011		1X	RESERVED FOR FUTURE IBM USE
012	IORSCHED	001	SCHEDULING, UNSTACK CONTROL FLAGS

BITS DEFINED IN IORSCHED (AT HEX DISPLACEMENT: 12)

	80	IORHIPRI	REQUEST TO GRANT A VERY HIGH DISPATCHER/SCHEDULER PRIORITY FOR THE VMDBK IDENTIFIED BY IORUSER
	40	IORUCALL	UNSTACK IORBK WITH CALL-LINKAGE WHEN UNSTACKED BY THE DISPATCHER
	01	IORIDTRQ	TRQBK IDENTIFIER (1=TRQBK, 0=IORBK)
013		1X	RESERVED FOR FUTURE IBM USE
014	IORSEEKA	004	USER LAST SEEK CCW ADDRESS
018	IORSAVE	004	LOCATION TO SAVE R13 FOR IORSYN HCPPAG USES THIS FIELD AS THE POINTER IN A SINGLY LINKED LIST OF IORBKS. HCPCPH USES THIS FIELD AS THE POINTER TO A HLTBLK. HCPCPH WILL RESTORE THIS FIELD TO ITS ORIGINAL VALUE WHEN HALT PROCESSING IS COMPLETE.
01C	IORPIOR	004	PENDING INTERRUPTION LIST
020	IORTASK	004	ADDRESS OF RCWTASK/CONTASK CHAIN
024	IORRDFND	004	ADDR OF 3270 FULL SCREEN READ CODE DEFINED IN IORTYGBL
028	IORTYGBL	002	E.R.P. GLOBAL RETRY COUNT

EQUATES

	01	IORMXGCT	MAXIMUM GLOBAL RETRY COUNT
02A	IORTYLCL	002	E.R.P. LOCAL RETRY COUNT
02C	IORECLVL	002	E.R.P. RECURSION LEVEL

CODES DEFINED IN IORECLVL (AT HEX DISPLACEMENT: 2C)

	0A	IORMXRCT	MAXIMUM RECURSIVE COUNT
02E	IORETCOD	002	E.R.P. COMPLETION CODE

CODES DEFINED IN IORETCOD (AT HEX DISPLACEMENT: 2E)

	00	IORRCOK	SUCCESSFUL COMPLETION
	04	IORRCDRV	REDRIVE / RESUME
	08	IORRCEOF	END-OF-FILE
	0C	IORRCFTL	FATAL I/O COMPLETION
	10	IORRCKIL	SEVERE I/O ERROR
	14	IORRCNCL	I/O CANCELLED
030	IORVDEV	004	ADDRESS OF VIRTUAL DEVICE BLOCK
			PATH MANAGEMENT CONTROL WORD
034	IORPMCW	016	ALTERABLE SECTION OF PMCW - THIS IS THE OPERAND TO IOSQM - QUEUE MODIFY-SUBCHANNEL REQUEST.
034	IORPMW01	008	PMCW WORD 0-1
			OPERATION REQUEST BLOCK
034	IORORB	012	OPERATION REQUEST BLOCK
034	IORRDEV	004	ADDRESS OF REAL DEVICE BLOCK (PARM)
038	IOROCTL	004	FOLLOWING ARE CONTROL FIELDS

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038   IOROKF     002      KEY AND FLAG BYTES
038   IOROKEY    001      KEY PLUS 4 REQUIRED ZEROS

        BITS DEFINED FOR IOROKEY BY HCPEQUAT CSWSKEY

039   IOROFPI    001      FETCH, PROTECT AND INITIAL STATUS

        BITS DEFINED FOR IOROFPI BY HCPEQUAT CSWFPIZN

03A   IOROLPM    001      LOGICAL PATH MASK
03B   IOROORB7   001      BYTE 7 OF SYSTEM ORB
03C   IORCCWS    004      FIRST CHANNEL COMMAND WORD
03C   IORCPA     004      CHANNEL PROGRAM ADDRESS

                          VIRTUAL MACHINE'S ORB CONTROLS

040   IORUCTL    004      SAVED GUEST CONTROL FIELD VALUES
040   IORUKF     002      KEY AND FLAG BYTES
040   IORUKEY    001      KEY PLUS 4 REQUIRED ZEROS

        BITS DEFINED FOR IORUKEY BY HCPEQUAT CSWSKEY

041   IORUFPI    001      FETCH, PROTECT AND INITIAL STATUS

        BITS DEFINED FOR IORUFPI BY HCPEQUAT CSWFPIZN

042   IORULPM    001      LOGICAL PATH MASK
043   IORUORB7   001      BYTE 7 OF GUEST ORB
044   IORRCTL    004      CONTROLS PRESERVED FOR CHANNEL
                          PROGRAM RESUMPTION (EXCEPT CFLG)
044   IORCCTL    002      CONTROLS PRESERVED FOR CHANNEL
                          PROGRAM CONTINUATION
044   IORIFLG    001      SPECIAL INFORMATION BLOCK

        BITS DEFINED IN IORIFLG  (AT HEX DISPLACEMENT: 44)

        80    IORCONT     CHANNEL PROGRAM CONTINUATION
        40    IORMDLCK    MINI-DISK LOCK HELD FOR THIS REQUEST
        20    IORTRTRM    TRACE CCW'S FOR TERMINAL OUTPUT
        10    IORTRPRT    TRACE CCW'S FOR PRINTER  OUTPUT
        30    IORTRCCW    TRACE CCW'S FOR THIS OPERAT'N
        08    IORRESUM    CHANNEL PROGRAM RESUMPTION
        04    IORVXA      VIRTUAL XA GUEST I/O REQUEST

045   IORRFLG    001      I/O REQUEST CONTROL FLAGS

        BITS DEFINED IN IORRFLG  (AT HEX DISPLACEMENT: 45)

        80    IORSYNCH    SYNCHRONOUS.  MERGE SOLICITED STS.
                          IORBK WILL NOT BE DISPATCHED UNTIL
                          ALL  SOLICITED STATUS IS RECIEVED.
        40    IORDQUNS    DEQUEUE WITH  UNSOLICITED  STATUS.
                          IF UNSOLICITED STATUS IS  RECIEVED
                          WHILE THIS IORBK IS  START-PENDING
                          OR ENQUEUED ON A REAL DEVICE,  THE
                          UNSOLICITED STATUS WILL BECOME THE
                          COMPLETION  STATUS FOR THIS IORBK.
                          THIS DOES NOT APPLY TO UNSOLICITED
                          ATTENTION FROM A CTCA. ATTENTION +
                          BUSY FROM A CTCA IS SOLICITED WHEN
                          THE SENSE DATA INDICATES THAT  THE
                          COMMANDS ON THE TWO SIDES  OF  THE
                          ADAPTOR ARE CONFLICTING. WHEN THEY
                          ARE NOT CONFLICTING, THE STATUS IS
                          SIMPLY DISCARDED.
        20    IORERPEQ    DETECT  EQUIPMENT CHECKS WHICH MAY
                          AFFECT OTHER I/O REQUESTS FOR  THE
                          SAME REAL DEVICE.
        10    IORERPCP    PERFORM FULL CP I/O ERROR RECOVERY.
        08    IORERPNW    IF REAL DEVICE IS  NOT-READY, DON'T
                          WAIT FOR IT TO BECOME READY.
        04    IORUSRIO    USER (AS OPPOSED TO CP) IO OPERATION
        02    IORHSCH0    GENERATE NON-FINAL IORBK  FOR  CC 0
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                          FROM HOST HALT-SUBCHANNEL.
        01    IORDIAG     GUEST DIAGNOSE INTERFACE CCWS

046   IORCFLG    001      I/O REQUEST COMPLETION FLAGS

        BITS DEFINED IN IORCFLG  (AT HEX DISPLACEMENT: 46)

        80    IORUNSL     UNSOLICITED STATUS
        40    IORCOPY     NON-FINAL SOLICITED STATUS
        20    IORCCWTR    CCW TRANSLATION PERFORMED
        10    IORNOERP    ERP INVOCATION NOT ALLOWED
        08    IORCOMP     REQUEST COMPLETED WITHOUT ERROR
        04    IORFATL     UNRECOVERABLE I/O ERROR
        02    IORERDAS    CALLED FOR DASDI ERRORS
        01    IORDIA98    DIAGNOSE X'98' CCW TRANSLATION

047   IORCMD     001      COMMAND FIELD

        CODES DEFINED IN IORCMD   (AT HEX DISPLACEMENT: 47)

        01    IORSTART    START  REQUEST - ORB AT IORORB
        02    IORHALT     HALT   REQUEST - CSWRESPN  SET  IN
                          IOROFPI  TO  REQUEST  A  NON-FINAL
                          IORBK WHEN CC 0 RECEIVED FOR  HSCH
                          INSTRUCTION.
        03    IORHALTD    HALTED START REQUEST
        04    IORCLEAR    CLEAR  REQUEST
        05    IORMODFY    MODIFY REQUEST -  1ST  16 BYTES OF
                          PMCW   (THE  SECTION  WHICH CAN BE
                          MODIFIED) AT IORPMCW.

048   IORSTAT    001      I/O REQUEST STATUS FLAGS

        BITS DEFINED IN IORSTAT  (AT HEX DISPLACEMENT: 48)

        80    IORSNSRQ    SENSE WILL BE REQUIRED
        40    IORSNSAC    SENSE CURRENTLY ACTIVE ON DEVICE
        20    IORSNSIV    SENSE INFORMATION WILL BE INVALID
        10    IORSNS      VALID SENSE INFORMATION PRESENT
        04    IOR9C00     SIO OPERATION
        02    IORSIFCC    ADD INTERFACE CONTROL CHECK.  A
                          MISSING INTERRUPT WAS  DETECTED
                          OR THE DEVICE PRESENTED INVALID
                          STATUS  (ALERT THE USER SO  THE
                          DEVICE WILL BE FIXED)
        01    IORMBUPD    GUEST MEASUREMENT BLOCK UPDATED

049   IORKSTAT   001      STANDALONE PRELIMINARY SEEK CTLS

        BITS DEFINED IN IORKSTAT (AT HEX DISPLACEMENT: 49)

        80    IORSKREQ    PRELIMINARY SEEK IS REQUIRED
        40    IORSKACT    PRELIMINARY SEEK CURRENTLY ACTIVE

04A   IORPSTAT   001      PATH MANAGEMENT CONTROL STATUS

        BITS DEFINED IN IORPSTAT (AT HEX DISPLACEMENT: 4A)

        80    IORPNSTS    PNOM IN IORPNOM / POM IN IORPOM

04B   IORTYPE    001      I/O OPERATION REQUEST TYPE

        CODES DEFINED IN IORTYPE  (AT HEX DISPLACEMENT: 4B)

        00    IORSIO      START I/O
        FE    IORCUSER    CHANGE IORUSER TO "SYSTEM"
        FF    IORSPECL    INFORMATIONAL IORBK

04C   IORXFLG    001      EXTENDED INFORMATION FLAG

        BITS DEFINED IN IORXFLG  (AT HEX DISPLACEMENT: 4C)

        80    IORCPSUS    SUSPENDED CHANNEL PROGRAM
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         40     IORPMIP     PATH MASK RECONSTRUCTION IN PROGRESS
         20     IORISAM     IORBK CONTAINS ISAM RCWTASKS
         10     IORDISAB    IORBK CONTAINS DISABLE RCWTASK
         08     IORMALPM    I/O MAY AFFECT PATH MASK VALIDITY
         04     IORNOLPM    DISREGARD RDEVLPM ON SSCH'S
         02     IORMSWSP    SPECIAL PROCESSING
         01     IORUNLOK    PAGES ARE NOT LOCKED

04D              1X        RESERVED FOR FUTURE IBM USE
04E    IORTFLG   001       TERMINAL CONTROL FLAG

         BITS DEFINED IN IORTFLG  (AT HEX DISPLACEMENT: 4E)

         80     IORCLSCR    CLEAR SCREEN & ISSUE FULL SCREEN I/O

04F    IORSWCC   001       WCC CHARACTER

                    EQUATES

         01     IORCSENQ    REQUEST ENQUEUED ON RDEVBLOK
         02     IORCSWAD    REQUEST WAITING FOR AVAILABLE DEV
         04     IORCSWBY    REQUEST WAITING FOR BUSY TO CLEAR
         08     IORCSTRU    REQUEST STARTED, NOT CONFIRMED
         10     IORCSTRC    REQUEST STARTED, CONFIRMED
         20     IORCSPCM    PARTIAL COMPLETION (CE OR PCI)
         40     IORCSHLT    DEVICE HALTED PRIOR TO COMPLETION
         80     IORCSFCM    FULL COMPLETION (SEE IORTTERM)

                            INTERRUPT RESPONSE BLOCK


050    IORIRB    064       INTERRUPTION RESPONSE BLOCK
050    IORSCSW   012       SUBCHANNEL CSW AREA
050    IORSCTLS  002       SUBCHANNEL CSW CONTROLS
050    IORSKEY   001       SCSW KEY, LOGOUT, COND CODE

         BITS DEFINED FOR IORSKEY BY HCPEQUAT CSWSKEY

051    IORFPIZN  001       CCW CONTROLS & INITIAL RESPONSES

         BITS DEFINED FOR IORFPIZN BY HCPEQUAT CSWFPIZN

052    IORFCAC   002       FUNCTION AND ACTIVITY BYTES
052    IORFCTL   001       FUNCTION CONTROL BYTE

         BITS DEFINED FOR IORFCTL BY HCPEQUAT CSWFCTL

053    IORACTL   001       ACTIVITY CONTROL PART

         BITS DEFINED FOR IORACTL BY HCPEQUAT CSWACTL

054    IORCASC   008       COMBINED CCW ADDRESS, DEVICE STATUS,
                           SUBCHANNEL STATUS, AND RESIDUAL
                           COUNT FIELDS
054    IORCCWA   004       SCSW CHANNEL CMD WORD ADDR
058    IORCSC    004       COMBINED DEVICE STATUS,
                           SUBCHANNEL STATUS, AND RESIDUAL
                           COUNT FIELDS
058    IORSTFLG  002       STATUS FLAG FIELDS TOGETHER
058    IORDVST   001       SCSW DEVICE STATUS BITS

         BITS DEFINED FOR IORDVST BY HCPEQUAT CSWDVST

059    IORSCST   001       SCSW SUBCHANNEL STATUS BITS

         BITS DEFINED FOR IORSCST BY HCPEQUAT CSWSCST

05A    IORCNT    002       SCSW RESIDUAL CCW DATA COUNT
05C    IORIRLG   004       LIMITED SUBCHANNEL LOGOUT WORD
05C    IORDETCT  001       S/370 ERROR DETECT FIELD

         BITS DEFINED FOR IORDETCT BY HCPEQUAT CSWDETCT
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05C   IORECF      001       ERROR CHECK FLAGS

        BITS DEFINED FOR IORECF BY HCPEQUAT CSWECF

05D   IORSOURC    001       S/370 ERROR SOURCE FIELD

        BITS DEFINED FOR IORSOURC BY HCPEQUAT CSWSOURC

05D   IORLPUM     001       LAST PATH USED
05E   IORDCTI     002       DEVICE CONNECT TIME
05E   IORFVF      001       FIELD VALIDITY FLAGS

        BITS DEFINED FOR IORFVF BY HCPEQUAT CSWFVF

05F   IORTMSEQ    001       TERMINATION AND SEQUENCE CODES

        BITS DEFINED FOR IORTMSEQ BY HCPEQUAT CSWTMSEQ

060                 1F      RESERVED FOR FUTURE HARDWARE USE
064                 1F      RESERVED FOR FUTURE HARDWARE USE
068                 1F      RESERVED FOR FUTURE HARDWARE USE
06C                 1F      RESERVED FOR FUTURE HARDWARE USE
070   IORXTLOG    032       I/O EXTENDED LOGOUT AREA
090   IORPNOM     001       PNOM MASK IF N-BIT OR I/O CC 3
091   IORPOM      001       POM  MASK IF N-BIT OR I/O CC 3
092   IORSEEK     006       BBCCHH FOR COUNT-KEY-DATA
092   IORSBBCC    004       BIN AND CYLINDER FOR COUNT-KEY-DATA
092   IORBIN      002       BIN NUMBER FOR COUNT-KEY-DATA
094   IORCYL      002       CYLINDER NUMBER FOR COUNT-KEY-DATA
096   IORHEAD     002       HEAD NUMBER FOR COUNT-KEY-DATA
098   IORSKCCW    008       PRELIMINARY SEEK TO BE EXECUTED
098   IORSCCW     008       SENSE CCW TO BE EXECUTED
098                 1X      CCW OPCODE
099                 1X      CCW FLAG BYTE
09A   IORSCNT     002       CCW COUNT FIELD / SENSE BYTE COUNT
09C                 1F      CCW ADDRESS FIELD
0A0   IOREXTN     004       POINTER TO EXTENSION DATA
0A4                 1H      RESERVED FOR FUTURE IBM USE
0A6   IORERMSG    001       ERROR MESSAGE CODE

        CODES DEFINED IN IORERMSG (AT HEX DISPLACEMENT: A6)

          00    IORMREJ     COMMAND REJECT MESSAGE
          01    IORMIRQ     INTERVENTION REQUIRED MESSAGE
          02    IORMBUS     BUSOUT CHECK MESSAGE
          03    IORMEQP     EQUIPMENT CHECK MESSAGE
          04    IORMDTA     DATA CHECK MESSAGE
          05    IORMOVR     OVERRUN MESSAGE
          06    IORMTRK     TRACK CONDITION MESSAGE
          07    IORMSEK     SEEK CHECK MESSAGE
          08    IORMPRM     PERMANENT ERROR MESSAGE
          09    IORMTOV     TRACK OVERFLOW MESSAGE
          0A    IORMCNV     CONVERTOR CHECK MESSAGE
          0B    IORMCMP     COMPATIBILITY CHECK MESSAGE
          0C    IORMLDP     LOAD POINT MESSAGE
          0D    IORMPRT     PROTECTION CHECK MESSAGE
          0E    IORMNRF     NO RECORD FOUND MESSAGE
          0F    IORMEOC     END OF CYLINDER MESSAGE
          10    IORMBSN     BAD SENSE MESSAGE
          11    IORMUNK     UNKNOWN CCW MESSAGE
          12    IORMRCV     RECOVERY ERROR MESSAGE
          13    IORMPEB     PE BURST MESSAGE
          14    IORMCHN     CHANNEL ERROR MESSAGE
          15    IORMNDV     NO DEVICE MESSAGE
          16    IORMGAP     ERASE GAP ERROR MESSAGE
          17    IORMCTL     CONTROL CHECK MESSAGE
          18    IORMLDC     LOAD CHECK MESSAGE
          19    IORMFMT     FORMAT CHECK MESSAGE
          1A    IORDSEF     TAPE DATA SECURITY ERASE FAILED
          1B    IORMLST     LOST DATA MESSAGE
          1C    IORMTIM     TIME OUT MESSAGE
          1D    IORMPAR     PARITY CHECK MESSAGE
          1E    IORMUSP     UNIT SPECIFICATION
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         1F     IORMDCK      DISPLAY CONTROL CHECK
         20     IORMOCK      OPERATION CHECK
         21     IORMEQPA     EQUPMENT CHECK WITH OPERATOR'S ACTION
         22     IORMUCS      UNUSUAL COMMAND SEQUENCE
         23     IORMOFF      DEVICE VARIED OFFLINE MESSAGE
         24     IORMWLB      DASD PACKED LABEL NOT MATCHED
         25     IORMELB      DASD LABEL CAN NOT BE READ
         26     IORMUNS      REPETITIVE UNSOLICITED DEVICE END
         27     IORMHDC      DASD POTENTIAL HEAD CRASH
         28     IORMSUP      COMMAND SUPPRESSION MESSSAGE
         2A     IORMINC      OPERATION INCOMPLETE
         57     IORMPEDP     MULTIPLE ENVIRONMENTAL DATA PRESENT
         5B     IORMCPRG     CHANNEL PROGRAM CHECK
         5F     IORMDLB      DASD LABEL DAMAGED
         EE     IORMBLFL     INDICATE BUFFER LOG FULL
         FE     IORMSGER     NON-CP (GUEST) ERROR

0A7              1X          RESERVED FOR FUTURE IBM USE
0A8   IORSDATA   032         BUFFER FOR 32 BYTES OF SENSE DATA
0A8   IORSDB00   001         BYTE 0 OF SENSE DATA
0A9   IORSDB01   001         BYTE 1 OF SENSE DATA
0AA   IORSDB02   001         BYTE 2 OF SENSE DATA
0AB   IORSDB03   001         BYTE 3 OF SENSE DATA
0AC   IORSDB04   001         BYTE 4 OF SENSE DATA
0AD   IORSDB05   001         BYTE 5 OF SENSE DATA
0AE   IORSDB06   001         BYTE 6 OF SENSE DATA
0AF   IORSDB07   001         BYTE 7 OF SENSE DATA
0B0   IORSDB08   001         BYTE 8 OF SENSE DATA
0B1   IORSDB09   001         BYTE 9 OF SENSE DATA
0B2   IORSDB10   001         BYTE 10 OF SENSE DATA
0B3   IORSDB11   001         BYTE 11 OF SENSE DATA
0B4   IORSDB12   001         BYTE 12 OF SENSE DATA
0B5   IORSDB13   001         BYTE 13 OF SENSE DATA
0B6   IORSDB14   001         BYTE 14 OF SENSE DATA
0B7   IORSDB15   001         BYTE 15 OF SENSE DATA
0B8   IORSDB16   001         BYTE 16 OF SENSE DATA
0B9   IORSDB17   001         BYTE 17 OF SENSE DATA
0BA   IORSDB18   001         BYTE 18 OF SENSE DATA
0BB   IORSDB19   001         BYTE 19 OF SENSE DATA
0BC   IORSDB20   001         BYTE 20 OF SENSE DATA
0BD   IORSDB21   001         BYTE 21 OF SENSE DATA
0BE   IORSDB22   001         BYTE 22 OF SENSE DATA
0BF   IORSDB23   001         BYTE 23 OF SENSE DATA
0C0   IORSDB24   001         BYTE 24 OF SENSE DATA
0C1   IORSDB25   001         BYTE 25 OF SENSE DATA
0C2   IORSDB26   001         BYTE 26 OF SENSE DATA
0C3   IORSDB27   001         BYTE 27 OF SENSE DATA
0C4   IORSDB28   001         BYTE 28 OF SENSE DATA
0C5   IORSDB29   001         BYTE 29 OF SENSE DATA
0C6   IORSDB30   001         BYTE 30 OF SENSE DATA
0C7   IORSDB31   001         BYTE 31 OF SENSE DATA
0C8   IORMIPTR   004         POINTER TO BLOCKS USED FOR HANDLING
                             MISSING INTERRUPT CONDITIONS (HCPMIHDR)
0CC   IORSUSND   004         ADDRESS OF ROUTINE TO ALLOW A SUSPENDED
                             CHANNEL PROGRAM TO COMPLETE
0D0   IORCPTCA   004         POINTER TO CHANNEL PROGRAM
                             TRANSLATION COMMUNICATION AREA
0D4   IORRDRV    036         DASD INFO PRESERVED DURING REDRIVE
0D4   IORDEXNT   016         DEFINE EXTENT DATA
0E4   IORFMASK   001         SET FILE MASK DATA
0E5   IORDFLG    001         DASD FLAG

        BITS DEFINED IN IORDFLG  (AT HEX DISPLACEMENT: E5)

         80     IORFMSET     FILE MASK CCW WAS TRANSLATED
         40     IORDESET     DEFINE EXTENT CCW WAS TRANSLATED
         20     IORSCSET     SPACE COUNT CCW WAS TRANSLATED
         10     IORLRSET     LOCATE RECORD WAS TRANSLATED
         08     IORRASET     RESET ALLEGIENCE WAS SIMULATED
         04     IORSKSET     SEEK WAS SIMULATED

0E6   IORRLCMD   001         LAST EXECUTED REAL COMMAND CODE
0E7   IORLRCNT   001         COUNT OF CCWS TRANSLATED AFTER A
```

			LOCATE RECORD
0E8	IORLREC	016	LOCATE RECORD DATA
0F8	IORSEKCT	004	MONITOR SEEK COUNT
0FC	IORSEKSM	004	MONITOR DASD ARM MOTION

EQUATES

20	IORSIZE	IORBLOK BLOCK SIZE

REDEFINITION - SCHIB OVERLAY

050	IORDEVIB	008	SCHIB LOCATION FOR STSCH/MSCH
050	IORSCHIB	024	AREA TO COLLECT A SCHIB

REDEFINITION - SCMBK OVERLAY

070	IORSCMBK	004	OVERLAY FOR MEASUREMENT INFO
070	IORNSSCH	002	INITIAL/DELTA SSCH OR RSCH COUNT
072	IORNSAMP	002	INITIAL/DELTA SAMPLE COUNT
074	IORCNTIM	004	INITIAL/DELTA DEVICE-CONNECT TIME
078	IORFPTIM	004	INITIAL/DELTA FUNCTION-PENDING TIME
07C	IORDDTIM	004	INITIAL/DELTA DEVICE-DISCONNECT TIME
080		1F	RESERVED FOR FUTURE HARDWARE USE
084		1F	RESERVED FOR FUTURE HARDWARE USE
088		1F	RESERVED FOR FUTURE HARDWARE USE
08C		1F	RESERVED FOR FUTURE HARDWARE USE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
IORACT	001	010	IORCYL	002	094	IORFVF	001	05E
IORACTL	001	053	IORDCTI	002	05E	IORHALT	001	002
IORBIN	002	092	IORDDTIM	004	07C	IORHALTD	001	003
IORBK	001	000	IORDESET	001	040	IORHEAD	002	096
IORBPNT	004	00C	IORDETCT	001	05C	IORHIPRI	001	080
IORCASC	008	054	IORDEVIB	008	050	IORHSCH0	001	002
IORCCTL	002	044	IORDEXNT	016	0D4	IORIDTRQ	001	001
IORCCWA	004	054	IORDFLG	001	0E5	IORIFLG	001	044
IORCCWS	004	03C	IORDIAG	001	001	IORIRA	004	004
IORCCWTR	001	020	IORDIA98	001	001	IORIRB	064	050
IORCFLG	001	046	IORDISAB	001	040	IORIRLG	004	05C
IORCLEAR	001	004	IORDISPN	004	010	IORISAM	001	020
IORCLSCR	001	080	IORDQUNS	001	040	IORKSTAT	001	049
IORCMD	001	047	IORDSEF	001	01A	IORLPUM	001	05D
IORCNT	002	05A	IORDVST	001	058	IORLRCNT	001	0E7
IORCNTIM	004	074	IORECF	001	05C	IORLREC	016	0E8
IORCOMP	001	008	IORECLVL	002	02C	IORLRSET	001	010
IORCONT	001	080	IORERDAS	001	002	IORMALPM	001	008
IORCOPY	001	040	IORERMSG	001	0A6	IORMBLFL	001	0EE
IORCPA	004	03C	IORERPCP	001	010	IORMBSN	001	010
IORCPSUS	001	080	IORERPEQ	001	020	IORMBUPD	001	001
IORCPTCA	004	0D0	IORERPNW	001	008	IORMBUS	001	002
IORCSC	004	058	IORETCOD	002	02E	IORMCHN	001	014
IORCSENQ	001	001	IOREXTN	004	0A0	IORMCMP	001	00B
IORCSFCM	001	080	IORFATL	001	004	IORMCNV	001	00A
IORCSHLT	001	040	IORFCAC	002	052	IORMCPRG	001	05B
IORCSPCM	001	020	IORFCTL	001	052	IORMCTL	001	017
IORCSTRC	001	010	IORFMASK	001	0E4	IORMDCK	001	01F
IORCSTRU	001	008	IORFMSET	001	080	IORMDLB	001	05F
IORCSWAD	001	002	IORFPIZN	001	051	IORMDLCK	001	040
IORCSWBY	001	004	IORFPNT	004	008	IORMDTA	001	004
IORCUSER	001	0FE	IORFPTIM	004	078	IORMELB	001	025

Name	Len	Val/Disp
IORMEOC	001	00F
IORMEQP	001	003
IORMEQPA	001	021
IORMFMT	001	019
IORMGAP	001	016
IORMHDC	001	027
IORMINC	001	02A
IORMIPTR	004	0C8
IORMIRQ	001	001
IORMLDC	001	018
IORMLDP	001	00C
IORMLST	001	01B
IORMNDV	001	015
IORMNRF	001	00E
IORMOCK	001	020
IORMODFY	001	005
IORMOFF	001	023
IORMOVR	001	005
IORMPAR	001	01D
IORMPEB	001	013
IORMPEDP	001	057
IORMPRM	001	008
IORMPRT	001	00D
IORMRCV	001	012
IORMREJ	001	000
IORMSEK	001	007
IORMSGER	001	0FE
IORMSUP	001	028
IORMSWSP	001	002
IORMTIM	001	01C
IORMTOV	001	009
IORMTRK	001	006
IORMUCS	001	022
IORMUNK	001	011
IORMUNS	001	026
IORMUSP	001	01E
IORMWLB	001	024
IORMXGCT	001	801
IORMXRCT	001	00A
IORNOERP	001	010
IORNOLPM	001	004
IORNSAMP	002	072
IORNSSCH	002	070
IOROCTL	004	038
IOROFPI	001	039
IOROKEY	001	038
IOROKF	002	038
IOROLPM	001	03A
IOROORB7	001	03B
IORORB	012	034
IORPIOR	004	01C
IORPMCW	016	034
IORPMIP	001	040
IORPMW01	008	034
IORPNOM	001	090
IORPNSTS	001	080
IORPOM	001	091
IORPSTAT	001	04A
IORQACTV	001	040
IORQANCH	001	001
IORQDSP	001	020
IORQQUED	001	080
IORQSTAT	001	010
IORRASET	001	008
IORRCDRV	001	004
IORRCEOF	001	008
IORRCFTL	001	00C
IORRCKIL	001	010
IORRCNCL	001	014
IORRCOK	001	000
IORRCTL	004	044
IORRDEV	004	034
IORRDFND	004	024
IORRDRV	036	0D4
IORRESUM	001	008
IORRFLG	001	045
IORRLCMD	001	0E6
IORSAVE	004	018
IORSBBCC	004	092
IORSCCW	008	098
IORSCHED	001	012
IORSCHIB	024	050
IORSCMBK	004	070
IORSCNT	002	09A
IORSCSET	001	020
IORSCST	001	059
IORSCSW	012	050
IORSCTLS	002	050
IORSDATA	032	0A8
IORSDB00	001	0A8
IORSDB01	001	0A9
IORSDB02	001	0AA
IORSDB03	001	0AB
IORSDB04	001	0AC
IORSDB05	001	0AD
IORSDB06	001	0AE
IORSDB07	001	0AF
IORSDB08	001	0B0
IORSDB09	001	0B1
IORSDB10	001	0B2
IORSDB11	001	0B3
IORSDB12	001	0B4
IORSDB13	001	0B5
IORSDB14	001	0B6
IORSDB15	001	0B7
IORSDB16	001	0B8
IORSDB17	001	0B9
IORSDB18	001	0BA
IORSDB19	001	0BB
IORSDB20	001	0BC
IORSDB21	001	0BD
IORSDB22	001	0BE
IORSDB23	001	0BF
IORSDB24	001	0C0
IORSDB25	001	0C1
IORSDB26	001	0C2
IORSDB27	001	0C3
IORSDB28	001	0C4
IORSDB29	001	0C5
IORSDB30	001	0C6
IORSDB31	001	0C7
IORSEEK	006	092
IORSEEKA	004	014
IORSEKCT	004	0F8
IORSEKSM	004	0FC
IORSIFCC	001	002
IORSIO	001	000
IORSIZE	001	020
IORSKACT	001	040
IORSKCCW	008	098
IORSKEY	001	050
IORSKREQ	001	080
IORSKSET	001	004
IORSNS	001	010
IORSNSAC	001	040
IORSNSIV	001	020
IORSNSRQ	001	080
IORSOURC	001	05D
IORSPECL	001	0FF
IORSTART	001	001
IORSTAT	001	048
IORSTFLG	002	058
IORSUSND	004	0CC
IORSWCC	001	04F
IORSYNCH	001	080
IORTASK	004	020
IORTFLG	001	04E
IORTMSEQ	001	05F
IORTRCCW	001	030
IORTRPRT	001	010
IORTRTRM	001	020
IORTYGBL	002	028
IORTYLCL	002	02A
IORTYPE	001	04B
IORUCALL	001	040
IORUCTL	004	040
IORUFPI	001	041
IORUKEY	001	040
IORUKF	002	040
IORULPM	001	042
IORUNLOK	001	001
IORUNSL	001	080
IORUORB7	001	043
IORUSER	004	000
IORUSRIO	001	004
IORVDEV	004	030
IORVXA	001	004
IORXFLG	001	04C
IORXTLOG	032	070
IOR9C00	001	004

HCPIOWBK— DATATRACE TYPE IO WORKAREA

DSECT NAME: IOWBK

DESCRIPTIVE NAME: DATATRACE TYPE IO WORKAREA

FUNCTION: PROCESSOR LOCAL WORKAREA FOR TYPE IO EVENT HANDLER

LOCATED BY:

EVTIOWK

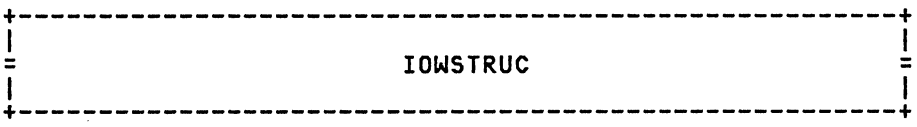
CREATED BY:

HCPTXW

DELETED BY:

HCPTXW

IOWBK - DATATRACE TYPE IO WORKAREA



disp	name	length	description
000	IOWSTRUC	008	TABLE OF CCW ADDRESSES IN IO TRACE

EQUATES

50	IOWSIZEB	SIZE OF IOWBK IN BYTES
AA	IOWSIZE	SIZE OF IOWBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IOWBK	001	000
IOWSIZE	001	0AA
IOWSIZEB	001	550
IOWSTRUC	008	000

IPARML— IUCV PARAMETER LIST AND EXTERNAL INTERRUPT

DSECT NAME: IPARML

DESCRIPTIVE NAME: IUCV PARAMETER LIST AND EXTERNAL INTERRUPT MAPPING MACRO

FUNCTION: TO MAP THE PARAMETER LIST USED WHEN AN IUCV FUNCTION IS ISSUED, AND TO MAP THE EXTERNAL INTERRUPT BUFFER WHEN AN IUCV EXTERNAL INTERRUPT IS REFLECTED TO A VIRTUAL MACHINE.

LOCATED BY:

PARAMETER LIST ADDRESS IS SPECIFIED BY A USER VIRTUAL MACHINE.
EXTERNAL INTERRUPT IS SPECIFIED BY THE USER VIRTUAL MACHINE AND MAINTAINED IN IUCBFAD1 AND IUCBFAD2 FIELDS IN HCPIUCVB.

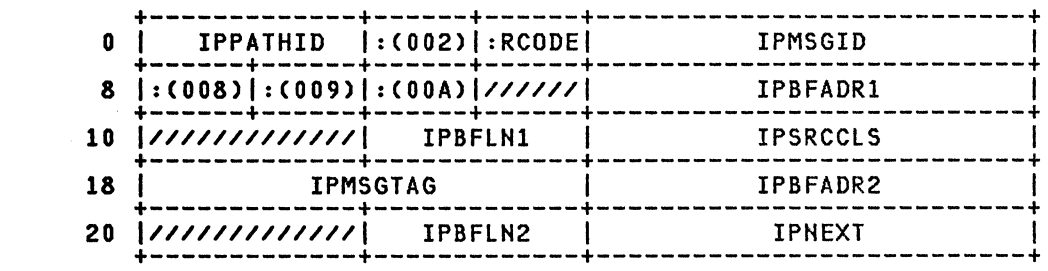
CREATED BY:

-PARAMETER LIST PASSED ON MOST IUCV FUNCTIONS

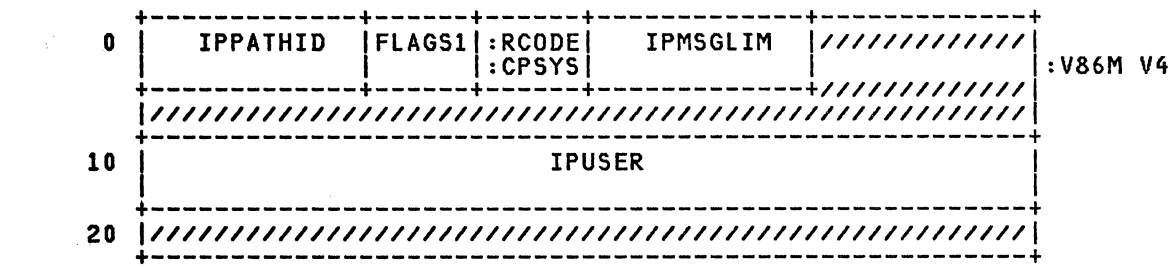
DELETED BY:

USER VIRTUAL MACHINE

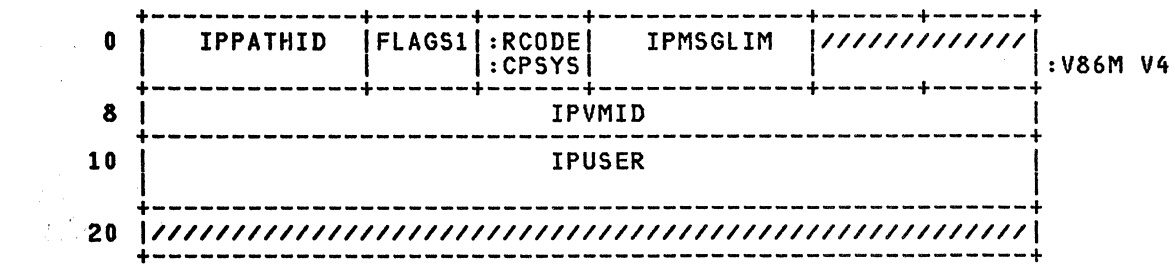
IPARML - IUCV PARAMETER LIST AND EXTERNAL INTERRUPT

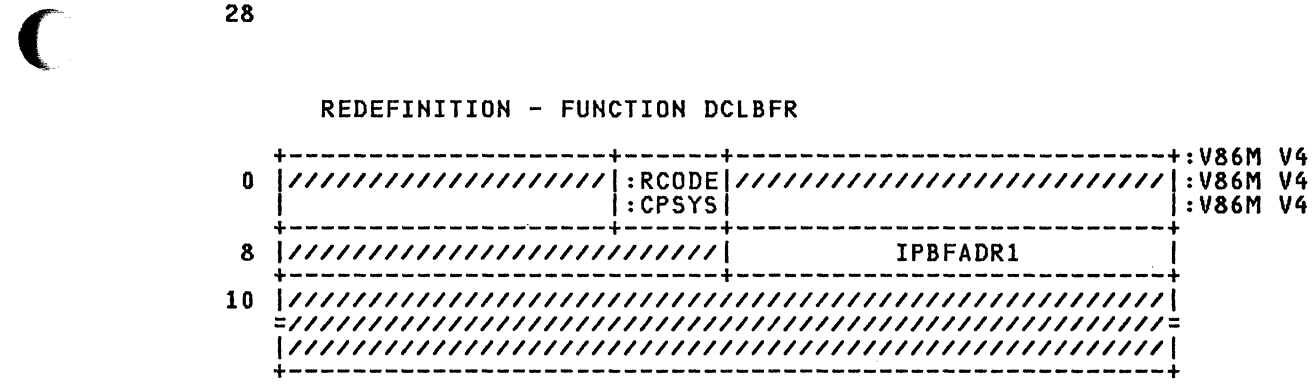


REDEFINITION - FUNCTION ACCEPT



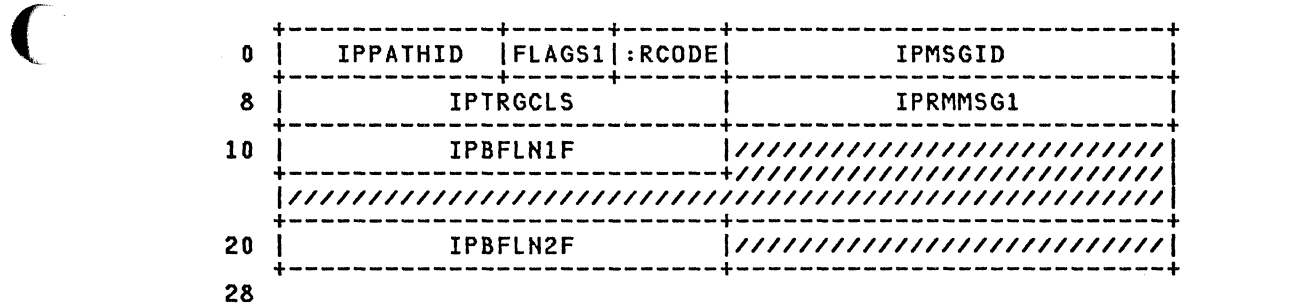
REDEFINITION - FUNCTION CONNECT



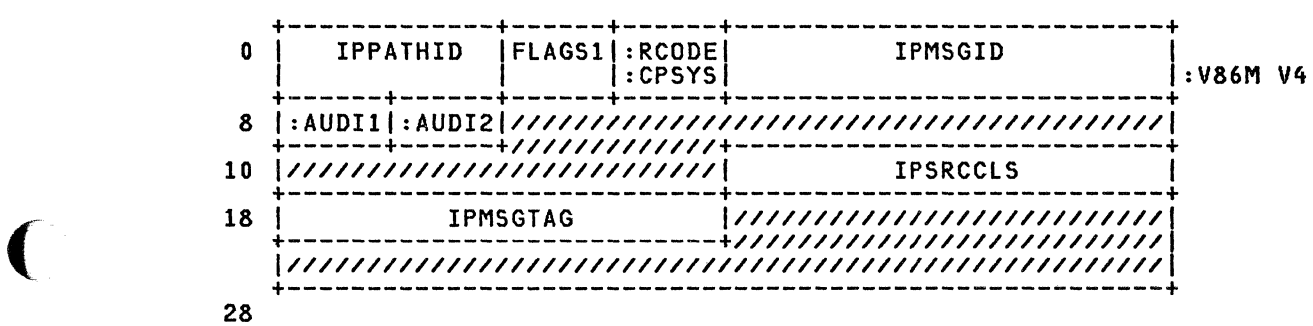


REDEFINITION - FUNCTION DCLBFR

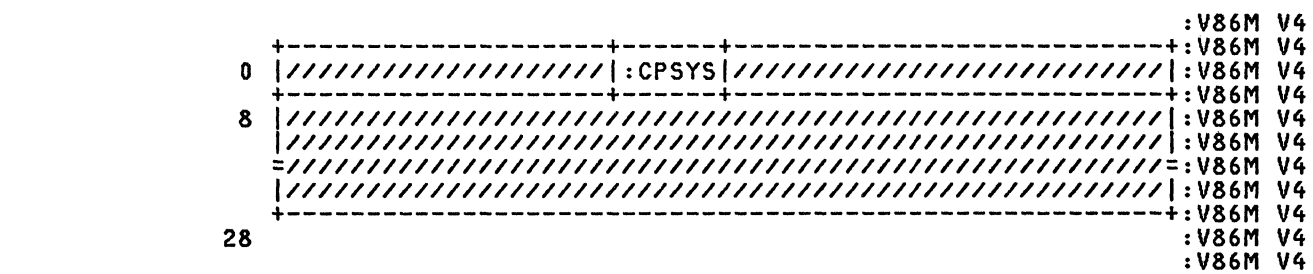
REDEFINITION - FUNCTION DESCRIBE



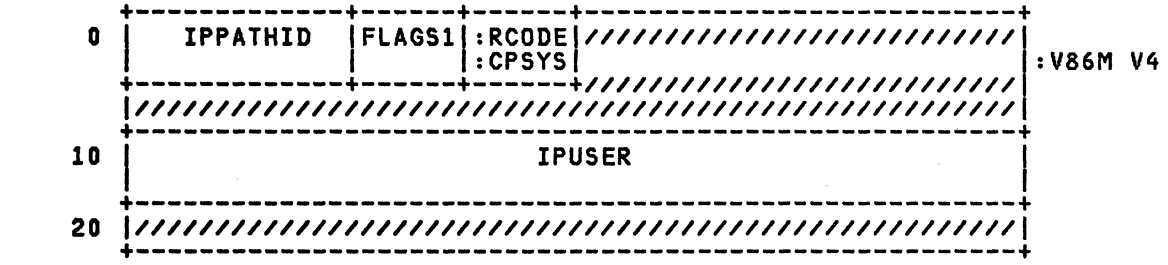
REDEFINITION - FUNCTION PURGE



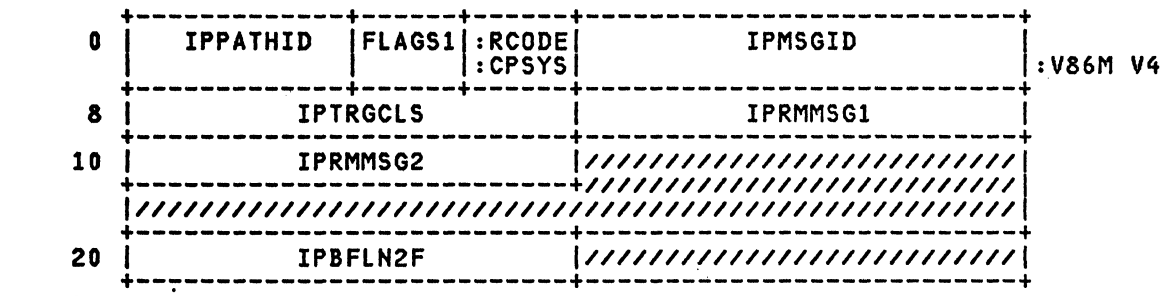
REDEFINITION - FUNCTION QUERY



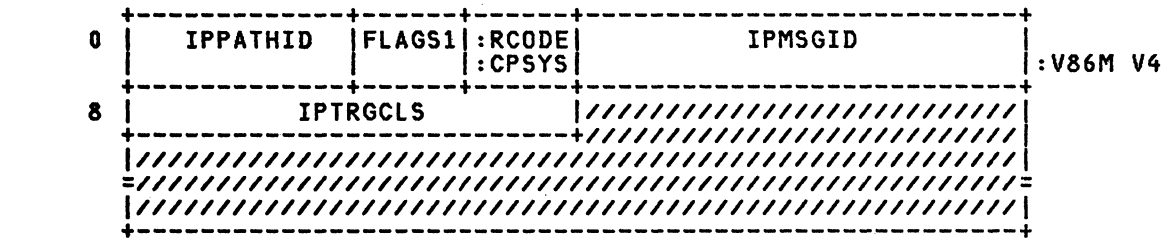
REDEFINITION - FUNCTION QUIESCE



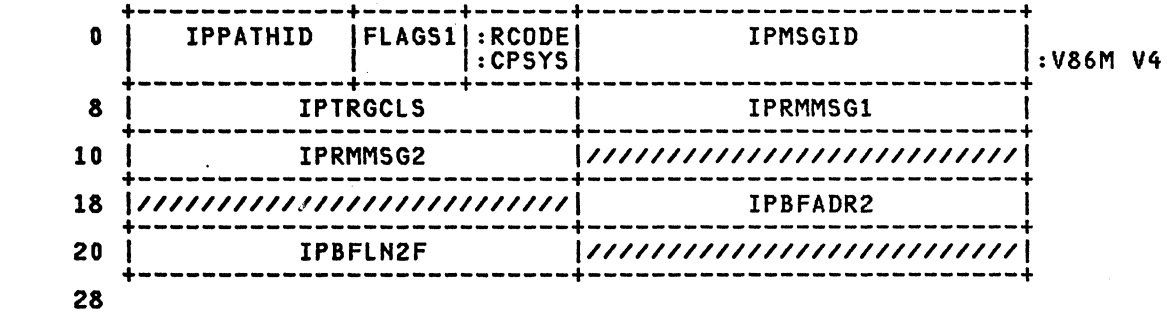
REDEFINITION - FUNCTION RECEIVE



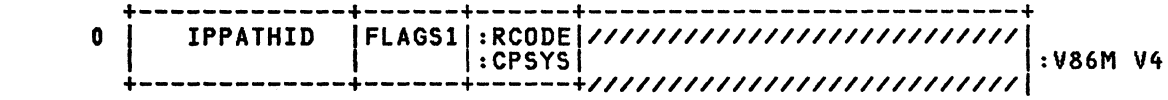
REDEFINITION - FUNCTION REJECT

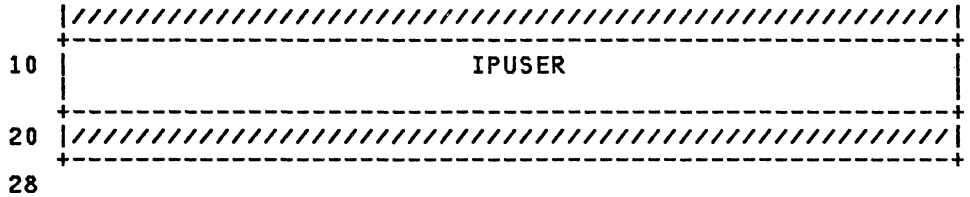


REDEFINITION - FUNCTION REPLY

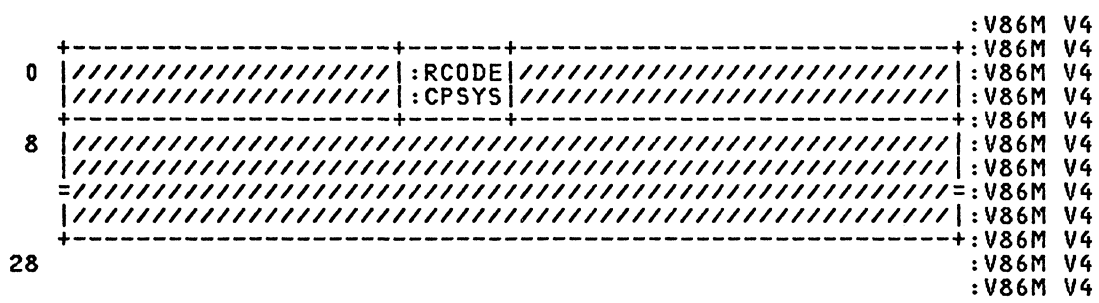


REDEFINITION - FUNCTION RESUME

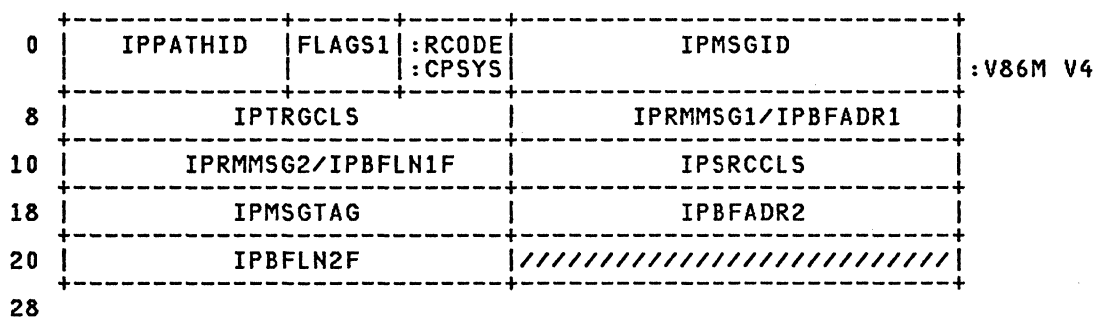




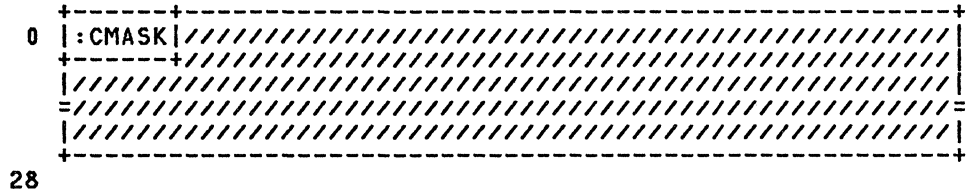
REDEFINITION - FUNCTION RTRVBFR



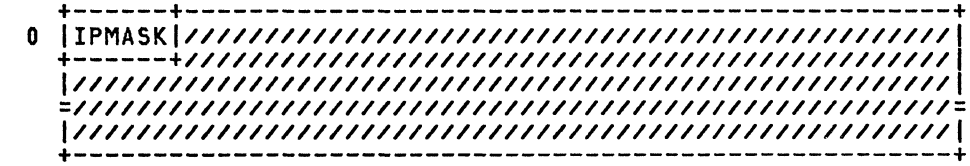
REDEFINITION - FUNCTION SEND



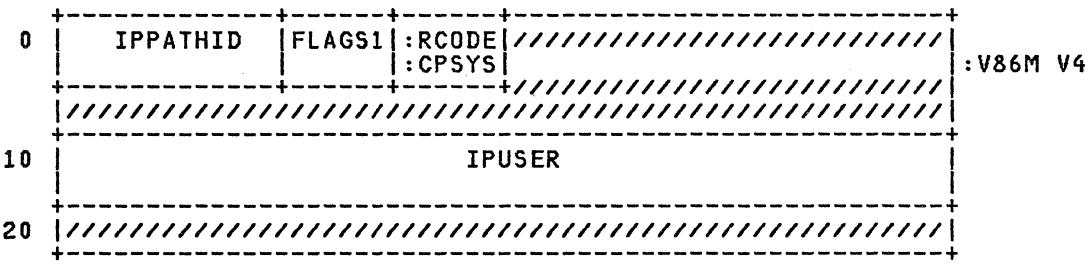
REDEFINITION - FUNCTION SETCMASK



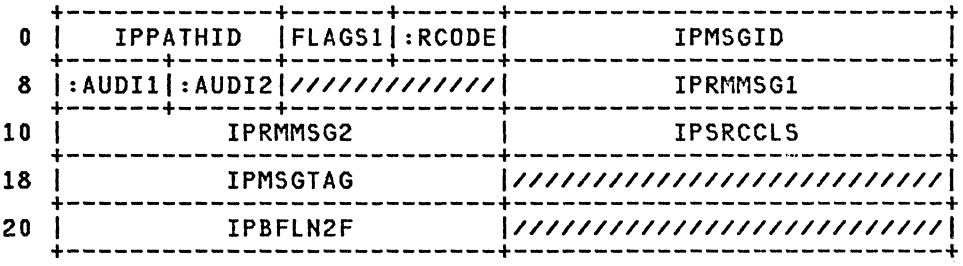
REDEFINITION - FUNCTION SETMASK



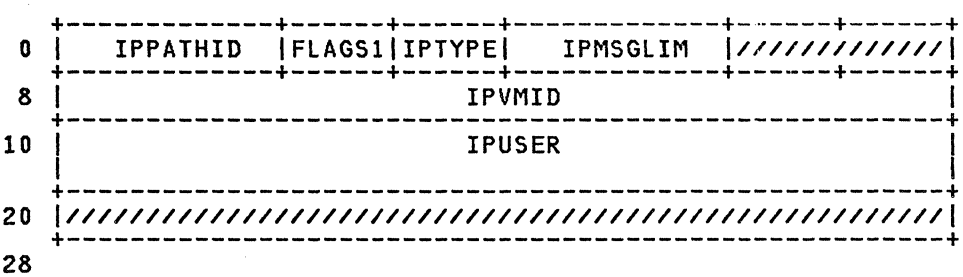
REDEFINITION - FUNCTION SEVER



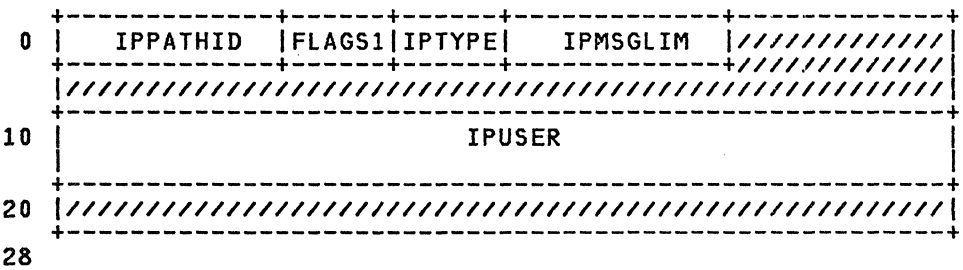
REDEFINITION - FUNCTION TESTCMPL



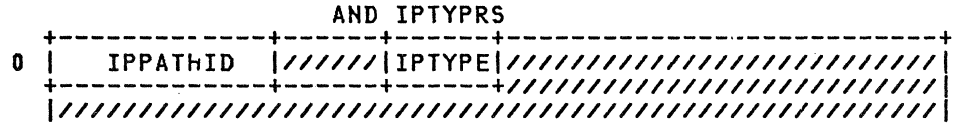
REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPPC



REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPCC



REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPSV, IPTYPQS,
AND IPTYPRS



```
   +-----------------------------------------------------------+
10 |                          IPUSER                           |
   |                                                           |
   +-----------------------------------------------------------+
20 |///////////////////////////////////////////////////////////|
   +-----------------------------------------------------------+
28
```

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPRP AND IPTYPR

```
   +-------------+------+------+---------------------------+
 0 |   IPPATHID  |FLAGS1|IPTYPE|          IPMSGID          |
   +------+------+------+------+---------------------------+
 8 |:AUDI1|:AUDI2|////////////|          IPRMMSG1         |
   +------+------+------------+---------------------------+
10 |          IPRMMSG2        |          IPSRCCLS         |
   +--------------------------+---------------------------+
18 |          IPMSGTAG        |///////////////////////////|
   +--------------------------+---------------------------+
20 |          IPBFLN2F        |///////////////////////////|
   +--------------------------+---------------------------+
28
```

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPMP AND IPTYPM

```
   +-------------+------+------+---------------------------+
 0 |   IPPATHID  |FLAGS1|IPTYPE|          IPMSGID          |
   +-------------+------+------+---------------------------+
 8 |          IPTRGCLS        |          IPRMMSG1         |
   +--------------------------+---------------------------+
10 |       IPRMMSG2/IPBFLN1F  |///////////////////////////|
   +--------------------------+///////////////////////////|
   |///////////////////////////////////////////////////////|
   +--------------------------+---------------------------+
20 |          IPBFLN2F        |///////////////////////////|
   +--------------------------+---------------------------+
28
```

disp	name	length	description
000	IPMASK	001	ENABLE MASK

BITS DEFINED IN IPMASK (AT HEX DISPLACEMENT: 0)

80	IPSNDN	ENABLE FOR NON-PRIORITY MESSAGES
40	IPSNDP	ENABLE FOR PRIORITY MESSAGES
20	IPRPYN	ENABLE FOR NON-PRIORITY REPLIES
10	IPRPYP	ENABLE FOR PRIORITY REPLIES
08	IPCTRL	ENABLE FOR IUCV CONTROL INTERRUPT

000	IPCMASK	001	ENABLE CONTROL MASK

BITS DEFINED IN IPCMASK (AT HEX DISPLACEMENT: 0)

80	IPCLPC	ENABLE FOR PENDING CONNECTION
40	IPCLCC	ENABLE FOR COMPLETE CONNECTION
20	IPCLPS	ENABLE FOR SEVER INTERRUPT
10	IPCLPQ	ENABLE FOR QUIESCE INTERRUPT
08	IPCLPR	ENABLE FOR RESUME INTERRUPT

000	IPPATHID	002	PATHID
002	IPFLAGS1	001	FLAGS BYTE

BITS DEFINED IN IPFLAGS1 (AT HEX DISPLACEMENT: 2)

80	IPALL	QUIESCE, RESUME, SEVER ALL
80	IPRMDATA	MESSAGE IS IN PARAMETER LIST
40	IPQUSCE	CONNECT IN QUIESCE MODE
40	IPBUFLST	INDICATES BUFFER LIST OPTION
20	IPPRTY	PRIORITY MESSAGE OR REPLY
10	IPNORPY	ONE WAY PROTOCOL
08	IPAPPC	USED IN SUPPORT OF CMS5.5 ONLY
08	IPANSLST	INDICATES ANSWER LIST OPTION
04	IPFGMID	MESSAGE ID SPECIFIED
04	IPCNTRL	INDICATES CONTROL BUFFER OPTION
02	IPFGPID	PATH ID SPECIFIED
01	IPFGMCL	MESSAGE CLASS SPECIFIED

003	IPTYPE	001	EXTERNAL INTERRUPT CODE

CODES DEFINED IN IPTYPE (AT HEX DISPLACEMENT: 3)

01	IPTYPPC	EXT INT TYPE - PENDING CONNECTION
02	IPTYPCC	EXT INT TYPE - CONNECTION COMP.
03	IPTYPSV	EXT INT TYPE - SEVERED CONNECTION
04	IPTYPQS	EXT INT TYPE - QUIESCED CONN.
05	IPTYPRS	EXT INT TYPE - RESUMED CONNECTION
06	IPTYPRP	EXT INT TYPE - INCOMING PRTY RPLY
07	IPTYPRNP	EXT INT TYPE - INCOMING REPLY
08	IPTYPMP	EXT INT TYPE - INCOMING PRTY MSG
09	IPTYPMNP	EXT INT TYPE - INCOMING MESSAGE
81	IPTYPPCA	USED ONLY TO SUPPORT CMS5.5

003	IPCPSYS	001	CP SYSTEM ON THE INVOKER= PARM
003	IPRCODE	001	RETURN CODE
004	IPMSGLIM	002	MESSAGE LIMIT
004	IPMSGID	004	MESSAGE IDENTIFICATION
008	IPVMID	008	TARGET VIRTUAL MACHINE ID
008	IPTRGCLS	004	TARGET CLASS
008	IPAUDIT	003	AUDIT TRAIL
008	IPAUDIT1	001	AUDIT TRAIL BYTE 1

BITS DEFINED IN IPAUDIT1 (AT HEX DISPLACEMENT: 8)

80	IPADRPLE	REPLY TOO LONG FOR BUFFER
40	IPADSNPX	PROTECTION EXCEPTION ON SEND BUFF
20	IPADSNAX	ADDRESSING EXCEPTION ON SEND BUFF
10	IPADANPX	PROTECTION EXCEPTION ANSWER BUFF
08	IPADANAX	ADDRESSING EXCEPTION ANSWER BUFF
04	IPADRJCT	MESSAGE WAS REJECTED
02	IPADPRMD	REPLY SENT IN PARAMETER LIST

009	IPAUDIT2	001	AUDIT TRAIL BYTE 2

BITS DEFINED IN IPAUDIT2 (AT HEX DISPLACEMENT: 9)

80	IPADRCPX	PROTECTION EXCEPTION RECEIVE BUFF
40	IPADRCAX	ADDRESSING EXCEPTION RECEIVE BUFF
20	IPADRPPX	PROTECTION EXCEPTION REPLY BUFF
10	IPADRPAX	ADDRESSING EXCEPTION REPLY BUFF
08	IPADSVRD	PATH WAS SEVERED
04	IPADRLST	INVALID RECEIVE/REPLY LIST

00A	IPAUDIT3	001	AUDIT TRAIL BYTE 3

BITS DEFINED IN IPAUDIT3 (AT HEX DISPLACEMENT: A)

80	IPADBLEN	BAD LENGTH IN SEND BUFFER LIST
40	IPADALEN	BAD LENGTH IN SEND ANSWER LIST
20	IPADBTOT	RESERVED: VM/SP USES THIS TO FLAG:

00B		XL1	RESERVED
00C	IPRMMSG	008	MESSAGE DATA IN PARAMETER LIST
00C	IPRMMSG1	004	FIRST FULLWORD OF PRMLIST DATA
00C	IPBFADR1	004	ADDRESS OF BUFFER
010	IPRMMSG2	004	SECOND FULLWORD OF PRMLIST DATA
010	IPBFLN1F	004	FULLWORD LENGTH OF IPBFADR1
010	IPUSER	016	USER DATA
010		H	
012	IPBFLN1	002	HALFWORD LENGTH OF IPBFADR1
014	IPSRCCLS	004	SOURCE CLASS
018	IPMSGTAG	004	MESSAGE TAG
01C	IPBFADR2	004	ADDRESS OF BUFFER 2
020	IPBFLN2F	004	FULLWORD LENGTH OF IPBFADR2
020		H	RESERVED
022	IPBFLN2	002	HALFWORD LENGTH OF IPBFADR2
024	IPNEXT	004	ADDRESS OF NEXT PENDING EXT INT

EQUATES

05	IPSIZE	IPARML SIZE IN DOUBLE WORDS

REDEFINITION - FUNCTION ACCEPT

REDEFINITION - FUNCTION CONNECT

REDEFINITION - FUNCTION DCLBFR

REDEFINITION - FUNCTION DESCRIBE

REDEFINITION - FUNCTION PURGE

REDEFINITION - FUNCTION QUERY

REDEFINITION - FUNCTION QUIESCE

REDEFINITION - FUNCTION RECEIVE

REDEFINITION - FUNCTION REJECT

REDEFINITION - FUNCTION REPLY

REDEFINITION - FUNCTION RESUME

REDEFINITION - FUNCTION RTRVBFR

REDEFINITION - FUNCTION SEND

REDEFINITION - FUNCTION SETCMASK

REDEFINITION - FUNCTION SETMASK

REDEFINITION - FUNCTION SEVER

REDEFINITION - FUNCTION TESTCMPL

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPPC

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPCC

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPSV, IPTYPQS

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPRP AND IPTY

REDEFINITION - EXTERNAL INTERRUPT FOR IPTYPMP AND IPTY

MORE EQUATES

001	IPRCNPTH	INVALID PATH ID
002	IPRCNSND	PATH QUIESCED - NO SENDS ALLOWED NOTE: IPRCNSND WILL ALSO BE ISSUED IF, DURING SEND PROCESSING, IT IS DETERMINED THAT THE TARGET HAS SEVERED THE PATH OR A SEVER IS IN PROGRESS.
003	IPRCMSCT	MESSAGE LIMIT EXCEEDED
004	IPRCNPTY	PRTY MESSAGES NOT ALLOWED ON PATH
005	IPRCRCVS	BUFFER TOO SHORT FOR MESSAGE
006	IPRCPRTC	FETCH PROTECTION EXCEPTION
007	IPRCADRC	ADDRESSING EXCEPTION
008	IPRCNODT	MSGID FND, BUT CLASS/PATH INVALID
009	IPRCPRGD	MESSAGE HAS BEEN PURGED
00A	IPRCMSLN	MESSAGE LENGTH NEGITIVE
00B	IPRCNLOG	TARGET IS NOT LOGGED ON
00C	IPRCNTRG	TARGET HAS NOT DECLARED A BUFFER
00D	IPRC2MYI	INVOKER MAX CONNECTIONS EXCEEDED
00E	IPRC2MYT	TARGET MAX CONNECTIONS EXCEEDED
00F	IPRCBADR	NOT AUTHORIZED TO CONNECT TO TARG
010	IPRCINSV	INVALID CP SYSTEM SERVICE NAME
011	IPRCBDFN	INVALID FUNCTION CODE
012	IPRCBDLM	INVALID MSGLIMIT
013	IPRCHSBF	ALREADY HAS DECLARED A BUFFER
014	IPRCPTSV	PATH HAS BEEN SEVERED
015	IPRCNPRM	PARAM. LIST MESSAGE NOT ALLOWED
016	IPRCSLST	SEND LIST INVALID
017	IPRCNLEN	NEGATIVE LENGTH IN LIST
018	IPRCTLEN	RESERVED: VM/SP USES THIS RC TO
019	IPRCPLST	PRMMSG & BUF/ANSLIST NOT ALLOWED
01A	IPRCBBND	BUFFER LIST NOT D-WORD ALIGNED
01B	IPRCABND	ANSWER LIST NOT D-WORD ALIGNED
01C	IPRCNCTL	NO CONTROL BUFFER EXISTS
030	IPRCNFCT	FUNCTION NOT SUPPORTED FOR CSS
010	IPADATOT	RESERVED: VM/SP USES THIS TO FLA

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
IPADALEN	001	040	IPADATOT	001	010	IPADPRMD	001	002
IPADANAX	001	008	IPADBLEN	001	080	IPADRCAX	001	040
IPADANPX	001	010	IPADBTOT	001	020	IPADRCPX	001	080

Name	Len	Val/Disp	Name	Len	Val/Disp
IPADRJCT	001	004	IPRCPTSV	001	014
IPADRLST	001	004	IPRCRCVS	001	005
IPADRPAX	001	010	IPRCSLST	001	016
IPADRPLE	001	080	IPRCTLEN	001	018
IPADRPPX	001	020	IPRC2MYI	001	00D
IPADSNAX	001	020	IPRC2MYT	001	00E
IPADSNPX	001	040	IPRMDATA	001	080
IPADSVRD	001	008	IPRMMSG	008	00C
IPALL	001	080	IPRMMSG1	004	00C
IPANSLST	001	008	IPRMMSG2	004	010
IPAPPC	001	008	IPRPYN	001	020
IPARML	001	000	IPRPYP	001	010
IPAUDIT	003	008	IPSIZE	001	005
IPAUDIT1	001	008	IPSNDN	001	080
IPAUDIT2	001	009	IPSNDP	001	040
IPAUDIT3	001	00A	IPSRCCLS	004	014
IPBFADR1	004	00C	IPTRGCLS	004	008
IPBFADR2	004	01C	IPTYPCC	001	002
IPBFLN1	002	012	IPTYPE	001	003
IPBFLN1F	004	010	IPTYPMNP	001	009
IPBFLN2	002	022	IPTYPMP	001	008
IPBFLN2F	004	020	IPTYPPC	001	001
IPBUFLST	001	040	IPTYPPCA	001	081
IPCLCC	001	040	IPTYPQS	001	004
IPCLPC	001	080	IPTYPRNP	001	007
IPCLPQ	001	010	IPTYPRP	001	006
IPCLPR	001	008	IPTYPRS	001	005
IPCLPS	001	020	IPTYPSV	001	003
IPCMASK	001	000	IPUSER	016	010
IPCNTRL	001	004	IPVMID	008	008
IPCPSYS	001	003			
IPCTRL	001	008			
IPFGMCL	001	001			
IPFGMID	001	004			
IPFGPID	001	002			
IPFLAGS1	001	002			
IPMASK	001	000			
IPMSGID	004	004			
IPMSGLIM	002	004			
IPMSGTAG	004	018			
IPNEXT	004	024			
IPNORPY	001	010			
IPPATHID	002	000			
IPPRTY	001	020			
IPQUSCE	001	040			
IPRCABND	001	01B			
IPRCADRC	001	007			
IPRCBADR	001	00F			
IPRCBBND	001	01A			
IPRCBDFN	001	011			
IPRCBDLM	001	012			
IPRCHSBF	001	013			
IPRCINSV	001	010			
IPRCMSCT	001	003			
IPRCMSLN	001	00A			
IPRCNCTL	001	01C			
IPRCNFCT	001	030			
IPRCNLEN	001	017			
IPRCNLOG	001	00B			
IPRCNODT	001	008			
IPRCNPRM	001	015			
IPRCNPTH	001	001			
IPRCNPTY	001	004			
IPRCNSND	001	002			
IPRCNTRG	001	00C			
IPRCODE	001	003			
IPRCPLST	001	019			
IPRCPRGD	001	009			
IPRCPRTC	001	006			

HCPIRBLK— INTERRUPTION RESPONSE BLOCK MAPPING

DSECT NAME: IRBLK

DESCRIPTIVE NAME: INTERRUPTION RESPONSE BLOCK MAPPING

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS RETURNED BY AN XA MACHINE IN RESPONSE TO A TSCH INSTRUCTION THAT SETS CONDITION CODE ZERO.

LOCATED BY:

N/A

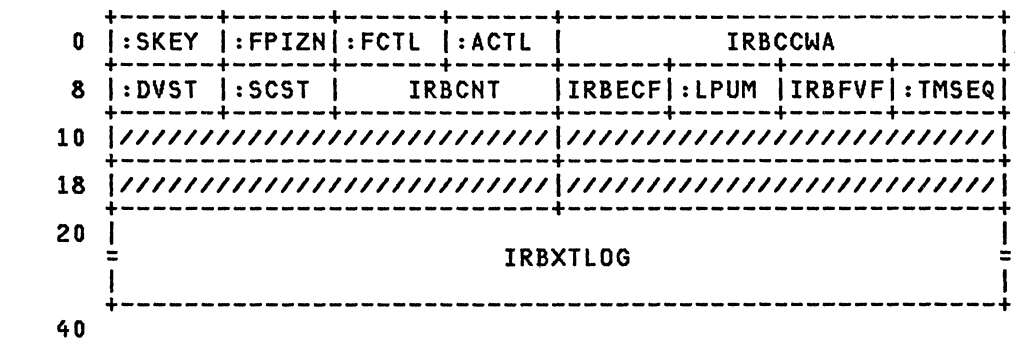
CREATED BY:

N/A

DELETED BY:

N/A

IRBLK - INTERRUPT RESPONSE BLOCK



disp	name	length	description
000	IRBSCSW	012	EXTENDED STATUS CSW
000	IRBWORD1	004	IRB WORD-1
000	IRBSKEY	001	KEY, EXTENDED STATUS AND DEFERRED CC
	BITS DEFINED FOR IRBSKEY BY HCPEQUAT CSWSKEY		
001	IRBFPIZN	001	CCW CONTROLS AND INITIAL RESPONSES
	BITS DEFINED FOR IRBFPIZN BY HCPEQUAT CSWFPIZN		
002	IRBFCTL	001	FUNCTION CONTROL BYTE
	BITS DEFINED FOR IRBFCTL BY HCPEQUAT CSWFCTL		
003	IRBACTL	001	ACTIVITY CONTROL BYTE
	BITS DEFINED FOR IRBACTL BY HCPEQUAT CSWACTL		
004	IRBCCWA	004	ADDRESS OF CCW AT INTERRUPT (+8)
008	IRBCSC	004	COMBINED DEVICE STATUS, SUBCHANNEL STATUS, AND RESIDUAL COUNT FIELDS
008	IRBDVST	001	DEVICE STATUS FLAGS
	BITS DEFINED FOR IRBDVST BY HCPEQUAT CSWDVST		
009	IRBSCST	001	SUBCHANNEL STATUS FLAGS
	BITS DEFINED FOR IRBSCST BY HCPEQUAT CSWSCST		

```
00A   IRBCNT     002      UNEXPIRED COUNT IN CCW
00C   IRBXSTAT   004      EXTENDED STATUS/TIME WORD
00C   IRBECF     001      CHANNEL PROGRAM ERROR CHECK FLAGS

        BITS DEFINED FOR IRBECF BY HCPEQUAT CSWECF

00D   IRBLPUM    001      LAST-PATH-USED MASK

                    EQUATES

        0D    IRBCPID     *** TEMPORARY UNTIL CODE CHANGE ***

00E   IRBDCTI    002      DEVICE CONNECT TIME INTERVAL
00E   IRBFVF     001      TERMINATION CODE VALIDATION BITS

        BITS DEFINED FOR IRBFVF BY HCPEQUAT CSWFVF

00F   IRBTMSEQ   001      TERMINATION,ALERT AND SEQUENCE CODES

        BITS DEFINED FOR IRBTMSEQ BY HCPEQUAT CSWTMSEQ

010             1F       RESERVED FOR FUTURE HARDWARE USE
014             1F       RESERVED FOR FUTURE HARDWARE USE
018             1F       RESERVED FOR FUTURE HARDWARE USE
01C             1F       RESERVED FOR FUTURE HARDWARE USE

                    EQUATES

        20    IRBLEN      LENGTH OF THE IRB WITHOUT XLOGOUT

020   IRBXTLOG   032      EXTENDED LOGOUT INFORMATION

                    EQUATES

        40    IRBLENG     LENGTH OF ARCHITECTED IRB IN BYTES
        08    IRBSIZE     SIZE IN BYTES FOR CP ALLOCATION
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
IRBACTL	001	003	IRBXTLOG	032	0 0
IRBCCWA	004	004			
IRBCNT	002	00A			
IRBCPID	001	00D			
IRBCSC	004	008			
IRBDCTI	002	00E			
IRBDVST	001	008			
IRBECF	001	00C			
IRBFCTL	001	002			
IRBFPIZN	001	001			
IRBFVF	001	00E			
IRBLEN	001	020			
IRBLENG	001	040			
IRBLK	001	000			
IRBLPUM	001	00D			
IRBSCST	001	009			
IRBSCSW	012	000			
IRBSIZE	001	008			
IRBSKEY	001	000			
IRBTMSEQ	001	00F			
IRBWORD1	004	000			
IRBXSTAT	004	00C			

HCPIRMBK— INTENSIVE RECORDING MODE BLOCK

DSECT NAME: IRMBK

DESCRIPTIVE NAME: INTENSIVE RECORDING MODE BLOCK

FUNCTION: CONTAINS OPTIONS SET BY "SET RECORD ON" COMMAND

LOCATED BY:

SYSIRM FIELD OF SYSCM - IRMBK, INTENSIVE RECORDING OPTIONS

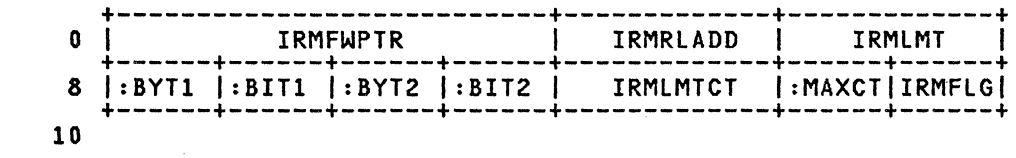
CREATED BY:

HCPCFO

DELETED BY:

HCPCFO, HCPIOE

IRMBK - INTENSIVE RECORDING MODE BLOCK



disp	name	length	description
000	IRMFWPTR	004	RESERVED
004	IRMRLADD	002	DEVICE ADDRESS TO BE MONITORED
006	IRMLMT	002	LIMIT COUNT - RECORD EVERY 'NTH' ERROR
008	IRMBYT1	001	FIRST SENSE BYTE SPECIFIED
009	IRMBIT1	001	SENSE BIT WITHIN SENSE BYTE
00A	IRMBYT2	001	SECOND SENSE BYTE SPECIFIED
00B	IRMBIT2	001	SENSE BIT WITHIN SENSE BYTE
00C	IRMLMTCT	002	SUMMARY COUNT FOR LIMIT DETECTION
00E	IRMMAXCT	001	COUNT OF RECORDINGS FOR THIS REQUEST
00F	IRMFLG	001	FLAG BYTE

BITS DEFINED IN IRMFLG (AT HEX DISPLACEMENT: F)

80	IRMAND	'AND' CONDITION SPECIFIED
40	IRMOR	'OR' CONDITION SPECIFIED
02	IRMSIZE	IRMBK SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
IRMAND	001	080	IRMLMTCT	002	00C
IRMBIT1	001	009	IRMMAXCT	001	00E
IRMBIT2	001	00B	IRMOR	001	040
IRMBK	001	000	IRMRLADD	002	004
IRMBYT1	001	008	IRMSIZE	001	002
IRMBYT2	001	00A			
IRMFLG	001	00F			
IRMFWPTR	004	000			
IRMLMT	002	006			

HCPIUCVB— IUCV CONTROL BLOCK

DSECT NAME: IUCVB

DESCRIPTIVE NAME: IUCV CONTROL BLOCK

FUNCTION: THIS CONTROL BLOCK DEFINES THE INTER-USER COMMUNICATIONS VEHICLE CONTROL BLOCK FOR AN IUCV USER.

LOCATED BY:

-VMDIUCV FIELD OF HCPVMDBK FOR VIRTUAL MACHINES
-CALL TO HCPIUGAI FOR CP SYSTEM SERVICES

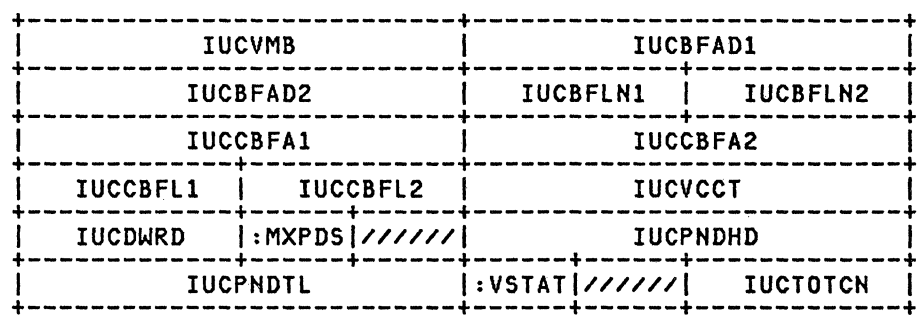
CREATED BY:

IUCV DECLARE BUFFER FUNCTION - HCPIUBDB

DELETED BY:

IUCV RETRIEVE BUFFER FUNCTION - HCPIUERB

IUCVB - IUCV CONTROL BLOCK



disp	name	length	description
000	IUCVMB	004	ADDRESS OF VMDBK
004	IUCBFAD1	004	ADDRESS OF EXTERNAL BUFFER
008	IUCBFAD2	004	2ND PAGE OF EXTERNAL BUFFER
00C	IUCBFLN1	002	LENGTH OF BUFF IN 1ST PAGE - 1
00E	IUCBFLN2	002	LENGTH OF BUFF IN 2ND PAGE - 1
010	IUCCBFA1	004	ADDRESS OF EXTERNAL CNTL BUFFER
014	IUCCBFA2	004	2ND PAGE OF EXTERNAL CNTL BUFFER
018	IUCCBFL1	002	LENGTH OF CNTL BUFF IN 1ST PAGE
01A	IUCCBFL2	002	LENGTH OF CNTL BUFF IN 2ND PAGE
01C	IUCVCCT	004	POINTER TO THE USER'S CCT
020	IUCDWRD	002	TOTAL D-WORDS IN CCT
022	IUCMXCN	002	MAX NUM OF CONN FROM DIRECTORY OR DEFAULT
022	IUCMXPDS	001	HIGHEST PDSEG NUMBER FROM MAX NUMBER OF CONNECTIONS
023		X	RESERVED
024	IUCPNDHD	004	PENDING CONTROL INT QUEUE HEAD
028	IUCPNDTL	004	PENDING CONTROL INT QUEUE TAIL
02C	IUCVSTAT	001	IUCV STATUS
	BITS DEFINED IN IUCVSTAT (AT HEX DISPLACEMENT: 2C)		
	80 IUCVWAIT		IUCV WAIT
02D		X	RESERVED
02E	IUCTOTCN	002	TOTAL NUMBER OF CONNECTIONS
030		F	RESERVED

EQUATES

07 IUCSIZE IUCVB SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
IUCBFAD1	004	004
IUCBFAD2	004	008
IUCBFLN1	002	00C
IUCBFLN2	002	00E
IUCCBFA1	004	010
IUCCBFA2	004	014
IUCCBFL1	002	018
IUCCBFL2	002	01A
IUCDWRD	002	020
IUCMXCN	002	022
IUCMXPDS	001	022
IUCPNDHD	004	024
IUCPNDTL	004	028
IUCSIZE	001	007
IUCTOTCN	002	02E
IUCVB	001	000
IUCVCCT	004	01C
IUCVMB	004	000
IUCVSTAT	001	02C
IUCVWAIT	001	080

HCPIUSBK— IUCV WORK AREA MAPPING MACRO

DSECT NAME: IUSBK

DESCRIPTIVE NAME: IUCV WORK AREA MAPPING MACRO

FUNCTION: TO PASS INFORMATION BETWEEN IUCV ENTRY POINTS.

LOCATED BY:

SEE ENTRY POINT REGISTERS

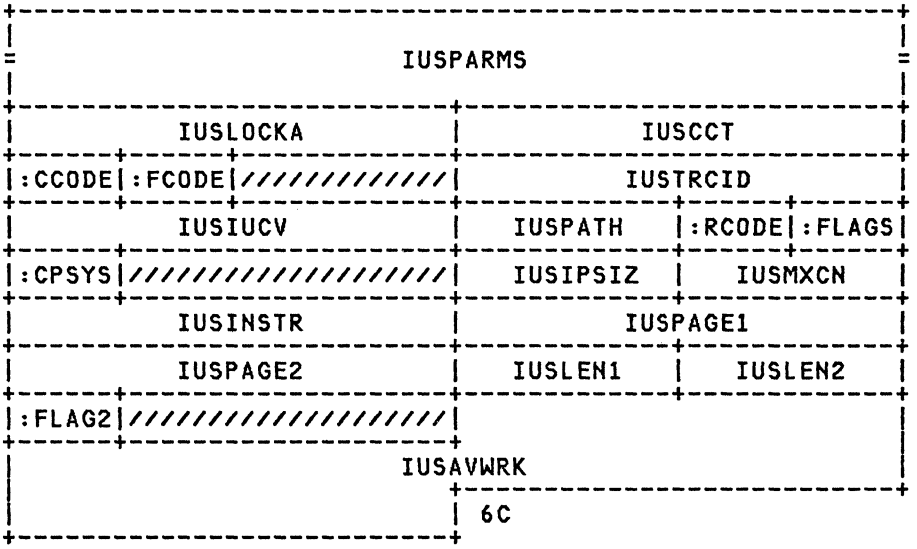
CREATED BY:

HCPIUAVM, HCPIUAIU, OR HCPIUACP

DELETED BY:

CREATOR (SEE ABOVE)

IUSBK - IUCV WORK AREA MAPPING MACRO



disp	name	length	description
000	IUSPARMS	008	PARM LIST - TEMP DATAMAP FIX
028	IUSLOCKA	004	IUCV LOCKWORD ADDRESS
02C	IUSCCT	004	CCTBK ADDRESS
030	IUSCCODE	001	CP CONDITION CODE
031	IUSFCODE	001	TRACE SUBTYPE
032		H	RESERVED
034	IUSTRCID	004	TRACE CODE IUSTRACE MUST BE ON A FULLWORD BOUNDRY
038	IUSTRACE	020	TRACE TABLE ENTRY
038	IUSIUCV	004	IUCVB ADDRESS
03C	IUSMASK	001	MASK FIELD
03C	IUSCC	001	CONDITON CODE FROM TESTMSG
03C	IUSPATH	002	PATH ID
03E	IUSRCODE	001	RETURN CODE
03F	IUSFLAGS	001	IUCV INPUT FLAGS
040	IUSCPSYS	001	CP SYSTEM SERVICE
041		XL3	RESERVED
044	IUSMSGBK	004	MSGBLOK ADDRESS
044	IUSBUFF	004	DECLARE BUFFER ADDRESS
044	IUSIPSIZ	002	PARMLIST SIZE FROM QUERY
046	IUSMXCN	002	MAXIMUM CONNECT FROM QUERY
048	IUSINSTR	004	IUCV INSTRUCTION ADDRESS

```
                                END OF TRACE TABLE ENTRY
04C    IUSPAGE1    004          VIRTUAL ADDR OF PAGE ONE
050    IUSPAGE2    004          VIRTUAL ADDR OF PAGE TWO
054    IUSLEN1     002          LENGTH IN IUSPAGE1 - 1
056    IUSLEN2     002          LENGTH IN IUSPAGE2 - 1

058    IUSFLAG2    001

         BITS DEFINED IN IUSFLAG2 (AT HEX DISPLACEMENT: 58)

         80     IUSCPENT       INDICATES CP ENTRY

059                 XL3         RESERVED
05C    IUSAVWRK     004         SAVEWORK AREA OF 4 FULLWORDS


                       EQUATES

         0E     IUSSIZE        IUSBK SIZE IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
IUSAVWRK	004	05C
IUSBK	001	000
IUSBUFF	004	044
IUSCC	001	03C
IUSCCODE	001	030
IUSCCT	004	02C
IUSCPENT	001	080
IUSCPSYS	001	040
IUSFCODE	001	031
IUSFLAGS	001	03F
IUSFLAG2	001	058
IUSINSTR	004	048
IUSIPSIZ	002	044
IUSIUCV	004	038
IUSLEN1	002	054
IUSLEN2	002	056
IUSLOCKA	004	028
IUSMASK	001	03C
IUSMSGBK	004	044
IUSMXCN	002	046
IUSPAGE1	004	04C
IUSPAGE2	004	050
IUSPARMS	008	000
IUSPATH	002	03C
IUSRCODE	001	03E
IUSSIZE	001	00E
IUSTRACE	020	038
IUSTRCID	004	034

HCPIUUBK— IUCV USERID AUTHORIZATION BLOCK

DSECT NAME: IUUBK

DESCRIPTIVE NAME: IUCV USERID AUTHORIZATION BLOCK

FUNCTION: USED TO DETERMINE IF A USER IS AUTHORIZED TO INITIATE IUCV COMMUNICATION WITH ANOTHER USER OR CP SYSTEM SERVICE.

LOCATED BY:

GPR1 IN ENTRY POINT HCPIUBAC
GPR1 IN ENTRY POINT HCPIUBCO
GPR1 IN ENTRY POINT HCPUDRIA

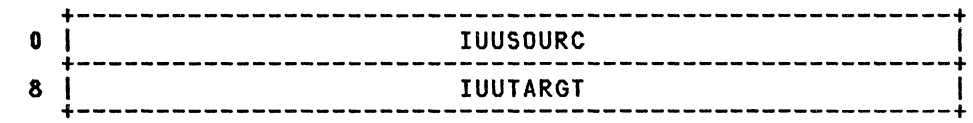
CREATED BY:

HCPIUBAC, HCPIUBCO

DELETED BY:

HCPIUBAC, HCPIUBCO

IUUBK - IUCV USERID AUTHORIZATION BLOCK



disp	name	length	description
000	IUUSOURC	008	USERID OF SOURCE COMMUNICATOR
008	IUUTARGT	008	USERID OF TARGET COMMUNICATOR

EQUATES

02	IUUSIZE	IUU BLOCK SIZE IN DW'S
17	IUULEN	IUU BLOCK SIZE IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp
IUUBK	001	000
IUULEN	001	017
IUUSIZE	001	002
IUUSOURC	008	000
IUUTARGT	008	008

HCPIXBLK— IUCV DEFERRED EXECUTION BLOCK

DSECT NAME: IXBLK

DESCRIPTIVE NAME: IUCV DEFERRED EXECUTION BLOCK

FUNCTION: TO DEFER EXECUTION OF AN IUCV FUNCTION. USED BY IUCV CP SYSTEM SERVICES FOR THE SEND AND CONNECT IUCV FUNCTIONS.

LOCATED BY:

IUCPNDHD FIELD OF HCPCCTBK

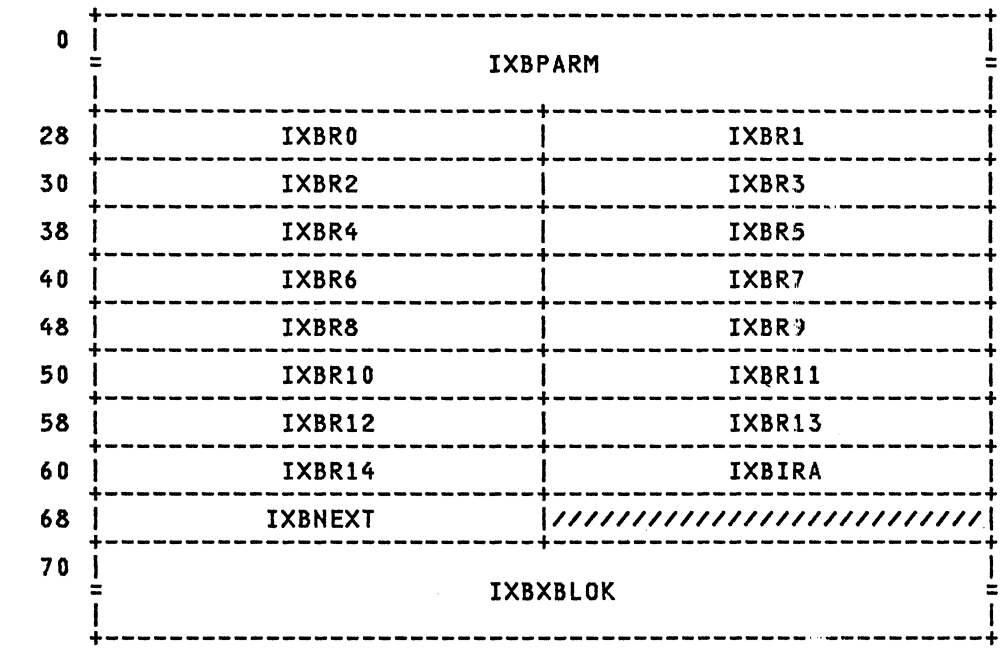
CREATED BY:

INVOKER OF IUCV FUNCTION

DELETED BY:

INVOKER OF IUCV FUNCTION

IXBLK - IUCV DEFERRED EXECUTION BLOCK



disp	name	length	description
000	IXBPARM	008	PARM LIST AREA
028	IXBREGS	064	REGISTER SAVE AREA
028	IXBR0	004	
02C	IXBR1	004	
030	IXBR2	004	
034	IXBR3	004	
038	IXBR4	004	
03C	IXBR5	004	
040	IXBR6	004	
044	IXBR7	004	
048	IXBR8	004	
04C	IXBR9	004	
050	IXBR10	004	
054	IXBR11	004	
058	IXBR12	004	
05C	IXBR13	004	
060	IXBR14	004	

```
064    IXBIRA      004       INTERRUPT RETURN ADDRESS
068    IXBNEXT     004       ADD OF NEXT IXBLK IN PEND. CHAIN
06C                F         RESERVED

                             * * THE VALUE OF IPSIZE FOR DATAMAP IS 5
070    IXBXBLOK    008       EXTERNAL BUFFER AREA
```

EQUATES

```
13     IXBSIZE     IXBLOK SIZE IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
IXBIRA	004	064
IXBLK	001	000
IXBNEXT	004	068
IXBPARM	008	000
IXBREGS	064	028
IXBR0	004	028
IXBR1	004	02C
IXBR10	004	050
IXBR11	004	054
IXBR12	004	058
IXBR13	004	05C
IXBR14	004	060
IXBR2	004	030
IXBR3	004	034
IXBR4	004	038
IXBR5	004	03C
IXBR6	004	040
IXBR7	004	044
IXBR8	004	048
IXBR9	004	04C
IXBSIZE	001	013
IXBXBLOK	008	070

HCPLBPBK— LOADBUF PARAMETER BLOCK

DSECT NAME: LBPBK

DESCRIPTIVE NAME: LOADBUF PARAMETER BLOCK

FUNCTION: PASSES THE INFORMATION NEEDED BY HCPCSB TO LOAD A FORMS CONTROL BUFFER OR A UNIVERSAL CHARACTER SET IN FROM THE SPECIFIED IMAGE LIBRARY.

LOCATED BY:

R1 ON ENTRY TO HCPCSBIN.

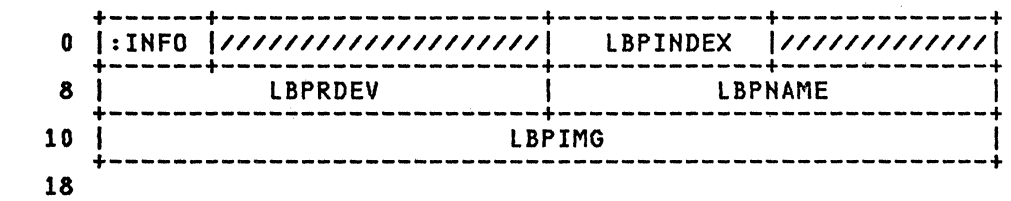
CREATED BY:

HCPCSS - START COMMAND
HCPLBF - LOADBUF COMMAND
HCPRSP - REAL PRINTER PROCESSING

DELETED BY:

HCPCSS - AFTER RETURN FROM HCPCSB
HCPLBF - AFTER RETURN FROM HCPCSB
HCPRSP - AFTER RETURN FROM HCPCSB

LBPBK - LOAD BUFF PARAMETER BLOCK



disp	name	length	description
000	LBPINFO	001	INFORMATION FOR LOADBUF
	BITS DEFINED IN LBPINFO (AT HEX DISPLACEMENT: 0)		
	80 LBPFCB		LOAD AN FCB
	40 LBPUCS		LOAD A UCS
	20 LBPFOLD		FOLD CHARACTERS INTO UPPERCASE
	10 LBPVER		VERIFY SPECIFIED ON LOADBUF
	08 LBPINDX		START PRINTING IN POSITION SPECIFIED BY LBPINDEX
	04 LBPCMD		LOADBUF OR START COMMAND ISSUED.
	02 LBPRSP		BUFFER LOAD OCCURING FROM RSP.
001		3X	RESERVED FOR IBM USE
004	LBPINDEX	001	INDEX VALUE
006		2X	RESERVED FOR IBM USE
008	LBPRDEV	004	RDEV OF DEVICE TO LOAD FCB OR UCS ONTO
00C	LBPNAME	004	NAME OF FCB OR UCS TO BE LOADED
010	LBPIMG	008	IMAGE LIBRARY WHERE FCB OR UCS CAN BE FOUND
	EQUATES		
	03 LBPSIZE		SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
LBPBK	001	000
LBPCMD	001	004
LBPFCB	001	080
LBPFOLD	001	020
LBPIMG	008	010
LBPINDEX	001	004
LBPINDX	001	008
LBPINFO	001	000
LBPNAME	004	00C
LBPRDEV	004	008
LBPRSP	001	002
LBPSIZE	001	003
LBPUCS	001	040
LBPVER	001	010

HCPLCKBK— LOCK BLOCK

DSECT NAME: LCKBK

DESCRIPTIVE NAME: LOCK BLOCK

FUNCTION: HCPLCKBK IS USED TO SYNCHRONIZE EXECUTION FOR SECTIONS OF NONREENTERABLE CODE. EACH SUCH SECTION OF CODE HAS ITS OWN UNIQUE 8 BYTE IDENTIFIER (NAME) WHICH IS PASSED TO THE LOCKING ROUTINES AS AN ARGUMENT. THIS IDENTIFIER IS SAVED IN 'LCKNAME'. A TASK THAT ATTEMPTS TO GET A LOCK THAT IS ALREADY HELD BY ANOTHER TASK IS FORCED TO WAIT UNTIL THE EARLIER TASK RELEASES THE LOCK. WHILE THE TASK IS WAITING, IT IS REPRESENTED BY A CPEBK THAT IS TEMPORARILY CHAINED OFF OF 'LCKQUE'. WHEN THE TASK HOLDING THE LOCK RELEASES IT, THE CPEBK REPRESENTING THE WAITING TASK IS STACKED SO THAT THE WAITING TASK RESUMES EXECUTION.

LOCATED BY:

SYSLOKQ	LOCK BLOCK ANCHOR: POINTS TO CHAIN OF LOCK BLOCKS.
LCKNEXT	POINTER TO NEXT LOCK BLOCK IN CHAIN.

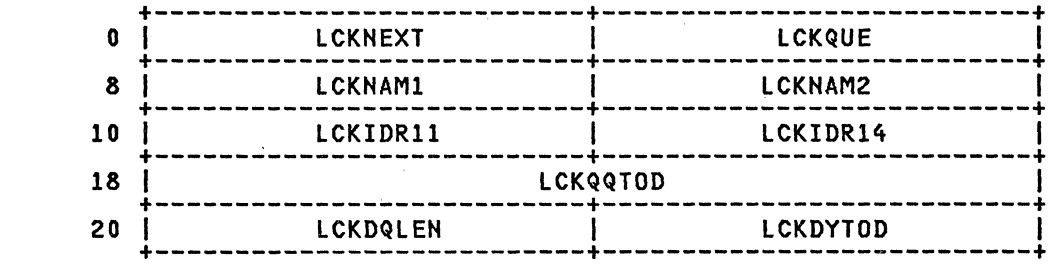
CREATED BY:

HCPLOC	WHEN A LOCK IS REQUESTED TO BE PUT ON A RESOURCE AND THAT RESOURCE IS NOT CURRENTLY LOCKED.

DELETED BY:

HCPLOC	WHEN A TASK RELEASES THE LOCK AND THERE ARE NO OTHER TASKS QUEUED ON THE LOCK.

LCKBK - LOCK BLOCK



disp	name	length	description
000	LCKNEXT	004	POINTER TO THE NEXT LOCK BLOCK
004	LCKQUE	004	POINTER TO CPEXBLOK QUEUE
008	LCKNAME	008	LOCK SYMBOL
008	LCKNAM1	004	FIRST FOUR BYTES OF SYMBOL
00C	LCKNAM2	004	SECOND FOUR BYTES OF SYMBOL
010	LCKIDR11	004	R11 OF LOCK REQUESTOR
014	LCKIDR14	004	R14 OF LOCK REQUESTOR
018	LCKQQTOD	008	TOD SAVED AT LAST ENQUEUE/DEQUEUE. (ONLY STAMPED IF THERE'S A QUEUE FOR THIS SYMBOLIC DEFER LOCK.)
020	LCKDQLEN	004	CURRENT LENGTH OF QUEUE WAITING FOR THIS SYMBOLIC DEFER LOCK. (NOTE: WE COULD SHORTEN LCKDQLEN TO A HALFWORD AND REGAIN 2 BYTES.)
024	LCKDYTOD	004	TOD SAVED AT START OF LAST "DELAY" PERIOD. IT'S THE TIME THE LOCK WAS LAST GRANTED (IF IT HAD A QUEUE AT THAT TIME) OR THE TIME AT WHICH THE QUEUE SIZE LAST CHANGED FROM 0 TO 1. UNITS ARE TOD WITH BITS 32-63 DISCARDED.

EQUATES

05 LCKSIZE LOCK BLOCK SIZE IN DWORDS

CROSS REFERENCE

Name	Len	Val/Disp
LCKBK	001	000
LCKDQLEN	004	020
LCKDYTOD	004	024
LCKIDR11	004	010
LCKIDR14	004	014
LCKNAME	008	008
LCKNAM1	004	008
LCKNAM2	004	00C
LCKNEXT	004	000
LCKQQTOD	008	018
LCKQUE	004	004
LCKSIZE	001	005

HCPLDDBK— LOGICAL DISPLAY DEVICE SIMULATION BLOCK

DSECT NAME: LDDBK

DESCRIPTIVE NAME: LOGICAL DISPLAY DEVICE SIMULATION BLOCK

FUNCTION: THE LDDBK IS USED TO MAINTAIN INFORMATION NEEDED TO EFFECTIVELY SIMULATE LOGICAL 327X AND 328X DEVICES. THE DATA STRUCTURE THAT THESE BLOCKS RESIDE IN IS MAINTAINED IN THE MODULE HCPLDA, AND THESE BLOCKS ARE ONLY AVAILABLE VIA CALL TO THAT MODULE. SEE HCPLDA FOR DETAILS.

LOCATED BY:

HCPLDAFE

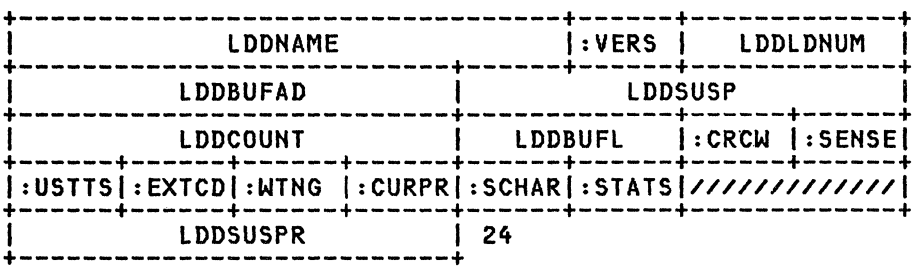
CREATED BY:

HCPLDACR

DELETED BY:

HCPLDADD

LDDBK - DISPLAY DEVICE SIMULATION BLOCK



disp	name	length	description
000	LDDBKID	008	BLOCK IDENTIFIER
000	LDDNAME	005	BLOCK NAME 'LDDBK'
005	LDDVERS	001	BLOCK VERSION NUMBER
	CODES DEFINED IN LDDVERS (AT HEX DISPLACEMENT: 5)		
	01 LDDCURVR		CURRENT VERSION OF THE LDDBK
	01 LDDMAR1		VM/XA MA RELEASE 1
006	LDDLDNUM	002	LOGICAL DEVICE NUMBER
008	LDDBUFAD	004	PENDING DATA BUFFER ADDRESS
00C	LDDSUSP	004	CPEBK ADDRESS FOR SUSPENDED TASK
010	LDDCOUNT	004	PENDING CCW DATA COUNT
014	LDDBUFL	002	PENDING DATA BUFFER LENGTH - BYTES
016	LDDCRCW	001	CURRENT CCW OPCODE
017	LDDSENSE	001	SENSE INFORMATION
018	LDDUSTTS	001	UNIT STATUS INFORMATION
019	LDDEXTCD	001	EXTERNAL INTERRUPT CODE TO REFLECT TO HOST MACHINE
	CODES DEFINED IN LDDEXTCD (AT HEX DISPLACEMENT: 19)		
	01 LDDKILLD		CP HAS TERMINATED THIS DEVICE
	02 LDDWRT		A WRITE WAS ISSUED TO THIS DEVICE
	03 LDDNTFY		A PREVIOUS PRESENT IS NOW COMPLETE
	04 LDDRDBUF		READ-BUFFER ISSUED TO THIS DEVICE
	05 LDDRDMOD		READ-MODIFIED ISSUED TO THIS DEVIC
01A	LDDWTNG	001	FUNCTION WE ARE WAITING FOR
	BITS DEFINED IN LDDWTNG (AT HEX DISPLACEMENT: 1A)		


```
         80     LDDACCWT    ACCEPT - WRITE CCW PENDING
         40     LDDPRBWT    PRESENT - READ-BUFFER PENDING
         20     LDDPRMWT    PRESENT - READ-MODIFIED PENDING
         10     LDDSTAWT    WAITING FOR STATUS DIAGNOSE
         08     LDDWACWT    IN WRITE/ACCEPT CHAIN - DON'T MOVE
                            CCW INTO DATA BUFFER
         04     LDDPREXT    PRESENT IN PROGRESS - REFLECT
                            INTERRUPT CODE 3 ON COMPLETION

01B   LDDCURPR   001        CURRENT PROCESSING FLAGS

        BITS DEFINED IN LDDCURPR (AT HEX DISPLACEMENT: 1B)

         80     LDDPRES     PRESENT IN PROGRESS
         40     LDDACCPT    ACCEPT IN PROGRESS
         20     LDDEXTRN    EXTERNAL INTERRUPT BEING REFLECTED
         10     LDDMVPTL    MOVE PARTIAL DATA ON ACCEPT
         08     LDDPRDBU    PRESENT OF READ BUFFER DATA

01C   LDDSCHAR   001        SPECIAL DEVICE CHARACTERISTICS

        BITS DEFINED IN LDDSCHAR (AT HEX DISPLACEMENT: 1C)

         80     LDDACCST    STATUS MUST FOLLOW ACCEPT FUNCTION
         40     LDDEXTFT    EXTENDED FEATURES SUPPORTED
         20     LDDNOEWA    ERASE/WRITE ALTERNATE NOT SUPPORTED

01D   LDDSTATS   001        MISCELLANEOUS STATUS

        BITS DEFINED IN LDDSTATS (AT HEX DISPLACEMENT: 1D)

         80     LDDPURGE    PRESENT DATA BUFFER WAS PURGED
         40     LDDCPBUF    BUFFER AT LDDBUFAD IS IN CP
                            STORAGE.
         20     LDDLERR     ERROR DETECTED DURING LIST FORM
                            PRESENT
         10     LDDDEAD     LOGICAL DEVICE IS DECEASED
         08     LDDBUFPG    BUFFER AT LDDBUFAD IS A PAGE AND WAS

01E              H          RESERVED
020              F          RESERVED

                    EQUATES

         05     LDDSIZE     SIZE OF LDDBK IN DOUBLEWORDS


                  MORE EQUATES

        004     LDDSELR     SELECTIVE RESET HAS BEEN DONE
                            ON THIS LDDBK.
        002     LDDNTYDN    PRESENT LIST FORMAT EXT INT DONE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
LDDACCPT	001	040	LDDBUFL	002	014	LDDCURVR	001	001
LDDACCST	001	080	LDDBUFPG	001	008	LDDDEAD	001	010
LDDACCWT	001	080	LDDCOUNT	004	010	LDDEXTCD	001	019
LDDBK	001	000	LDDCPBUF	001	040	LDDEXTFT	001	040
LDDBKID	008	000	LDDCRCW	001	016	LDDEXTRN	001	020
LDDBUFAD	004	008	LDDCURPR	001	01B	LDDKILLD	001	001

Name	Len	Val/Disp
LDDLDNUM	002	006
LDDLERR	001	020
LDDMAR1	001	001
LDDMVPTL	001	010
LDDNAME	005	000
LDDNOEWA	001	020
LDDNTFY	001	003
LDDNTYDN	001	002
LDDPRBWT	001	040
LDDPRDBU	001	008
LDDPRES	001	080
LDDPREXT	001	004
LDDPRMWT	001	020
LDDPURGE	001	080
LDDRDBUF	001	004
LDDRDMOD	001	005
LDDSCHAR	001	01C
LDDSELR	001	004
LDDSENSE	001	017
LDDSIZE	001	005
LDDSTATS	001	01D
LDDSTAWT	001	010
LDDSUSP	004	00C
LDDUSTTS	001	018
LDDVERS	001	005
LDDWACWT	001	008
LDDWRT	001	002
LDDWTNG	001	01A

HCPLKWRD— DEFER-LOCK "LOCKWORD"

DSECT NAME: LKWRD

DESCRIPTIVE NAME: DEFER-LOCK "LOCKWORD"

FUNCTION: THE LOCKWORD THE MEANS OF SERIALIZING DEFERRABLE REQUESTS FOR ACCESS TO A GROUP OF DATA BY DIFFERENT TASKS.

LOCATED BY:

VARIOUS LOCKWORDS TO PROTECT SPECIFIC CLASSES OF DATA EXIST INSIDE OTHER CONTROL BLOCKS AND DATA AREAS (VMDBK, SYSCM, HCPRCC, ETC.)

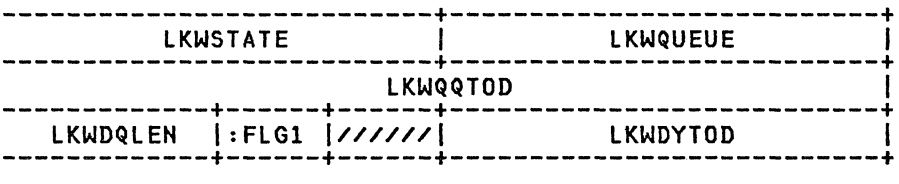
CREATED BY:

NONE (LOCKWORDS ARE STATIC, OR ARE "CREATED" WITHIN OTHER DYNAMICALLY CREATED BLOCKS E.G., THE VMDBK).

DELETED BY:

NONE (LOCKWORDS ARE STATIC, OR ARE "DELETED" WITHIN OTHER DYNAMICALLY DELETED BLOCKS.

LKWRD - DEFER-LOCK LOCKWORD BLOCK



disp	name	length	description
000	LKWCSWAP	008	DOUBLEWORD UPDATED BY COMPARE AND SWAP
000	LKWSTATE	004	CURRENT LOCK STATE. SEE MODULE PROLOGUE OF HCPLCK FOR DETAILS.
004	LKWQUEUE	004	POINTER TO CHAIN OF DEFERRED CPEBK'S
008	LKWQQTOD	008	TOD SAVED AT LAST ENQUEUE/DEQUEUE. (ONLY STAMPED IF THERE'S A QUEUE.)
010	LKWDQLEN	002	CURRENT LENGTH OF DEFER QUEUE.
012	LKWFLG1	001	MISCELLANEOUS LOCK FLAGS

BITS DEFINED IN LKWFLG1 (AT HEX DISPLACEMENT: 12)

80	LKWLTLK	NON-CRITICAL ATTRIBUTE, CRITICAL PROCESS COUNT DOES NOT GET DECREMENTED OR INCREMENTED FOR THIS LOCK.

013		X	RESERVED FOR FUTURE IBM USE
014	LKWDYTOD	004	TOD SAVED AT START OF LAST "DELAY" PERIOD. IT'S THE TIME THE LOCK WAS LAST GRANTED (IF THERE WAS A QUEUE AT THAT TIME) OR THE TIME AT WHICH THE QUEUE SIZE LAST CHANGED FROM 0 TO 1. UNITS ARE TOD WITH BITS 32-63 DISCARDED.

EQUATES

03	LKWRDSIZ	SIZE OF LOCKWORD IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
LKWCSWAP	008	000
LKWDQLEN	002	010
LKWDYTOD	004	014
LKWFLG1	001	012
LKWLTLK	001	080
LKWQQTOD	008	008
LKWQUEUE	004	004
LKWRD	001	000
LKWRDSIZ	001	003
LKWSTATE	004	000

HCPLNGBK— LANGUAGE INFORMATION BLOCK

DSECT NAME: LNGBK

DESCRIPTIVE NAME: LANGUAGE INFORMATION BLOCK

FUNCTION: CONTAINS INFORMATION ABOUT THE MESSAGE REPOSITORY.

LOCATED BY:

SYSLANG	LNGBK CHAIN ANCHOR
VMDLANG	POINTER TO THE LNGBK

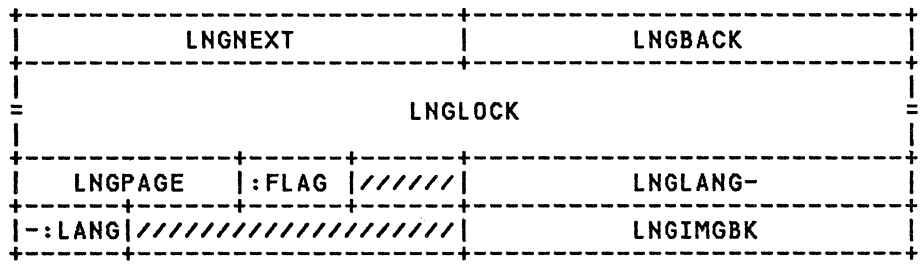
CREATED BY:

HCPNLS	AT INITIALIZATION FOR THE DEFAULT MESSAGE REPOSITORY (HCPMES).
HCPNLS	WHEN THE FIRST USER IS CONNECTED TO A MESSAGE REPOSITORY.

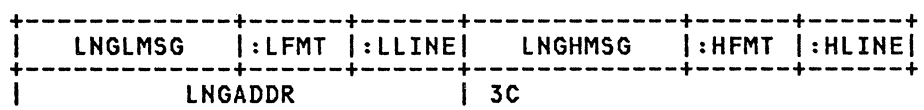
DELETED BY:

HCPNLS	WHEN THE USER COUNT OF THE MESSAGE REPOSITORY IS ZERO THE ASSOCIATED LANGBK IS DELETED.

LNGBK - LANGUAGE INFORMATION BLOCK



REDEFINITION -



disp	name	length	description
000	LNGNEXT	004	ADDRESS OF NEXT LNGBK
004	LNGBACK	004	ADDRESS OF PREVIOUS LNGBK NOTE - IF THERE IS ONLY ONE LNGBK THEN THIS FIELD WILL HAVE THE SAME ADDRESS AS "LNGNEXT" IN IT.
008	LNGLOCK	008	PURGE LNGBK LOCK
020	LNGPAGE	002	TOTAL NUMBER OF REPOSITORY PAGES
			FLAGS DEFINED IN LNGFLAG NOTE - LNGDBCS IS ORIGINALLY SET BY THE COMPILER IF THE LANGUAGE USES THE DOUBLE-BYTE CHARACTER SET.
022	LNGFLAG	001	L*1 LANGUAGE FLAG BYTE
		EQUATES	
	80 LNGDBCS		DOUBLE-BYTE CHARACTER SET
023		1X	UNUSED
024	LNGLANG	005	LANGUAGE IDENTIFIER
029		3X	RESERVED

```
02C   LNGIMGBK   004       ADDRESS OF IMGBK
030   LNGENT     012       VARIABLE NUMBER OF ENTRIES

                    EQUATES

        06    LNGSIZE     SIZE OF LNGBK IN DOUBLE WORDS

         REDEFINITION -

030   LNGNTRY    012
030   LNGLOW     004       LOWEST MESSAGE ID IN PAGE
030   LNGLMSG    002       MESSAGE NUMBER(BINARY)
032   LNGLFMT    001       FORMAT NUMBER(BINARY)
033   LNGLLINE   001       LINE NUMBER(BINARY)
034   LNGHIGH    004       HIGHEST MESSAGE ID IN PAGE
034   LNGHMSG    002       MESSAGE NUMBER(BINARY)
036   LNGHFMT    001       FORMAT NUMBER(BINARY)
037   LNGHLINE   001       LINE NUMBER(BINARY)
038   LNGADDR    004       PAGE ADDRESS OF MESSAGE RANGE

                    EQUATES

        0C    LNGNTSZ     SIZE OF LNGNTRY IN BYTES
```

CROSS REFERENCE

Name	Len	Val/Disp
LNGADDR	004	038
LNGBACK	004	004
LNGBK	001	000
LNGDBCS	001	080
LNGENT	012	030
LNGFLAG	001	022
LNGHFMT	001	036
LNGHIGH	004	034
LNGHLINE	001	037
LNGHMSG	002	034
LNGIMGBK	004	02C
LNGLANG	005	024
LNGLFMT	001	032
LNGLLINE	001	033
LNGLMSG	002	030
LNGLOCK	008	008
LNGLOW	004	030
LNGNEXT	004	000
LNGNTRY	012	030
LNGNTSZ	001	00C
LNGPAGE	002	020
LNGSIZE	001	006

HCPLOGMS— LOGON MESSAGE BLOCK

DSECT NAME: LOGMS

DESCRIPTIVE NAME: LOGON MESSAGE BLOCK

FUNCTION: CONTAINS LOG MESSAGE DATA FOR USE AT LOGON AND THE QUERY LOG COMMAND. MESSAGES ARE ADDED, CHANGED, AND DELETED BY THE SET LOG COMMAND.

LOCATED BY:

SYSLOGM FIELD OF HCPSYSCM

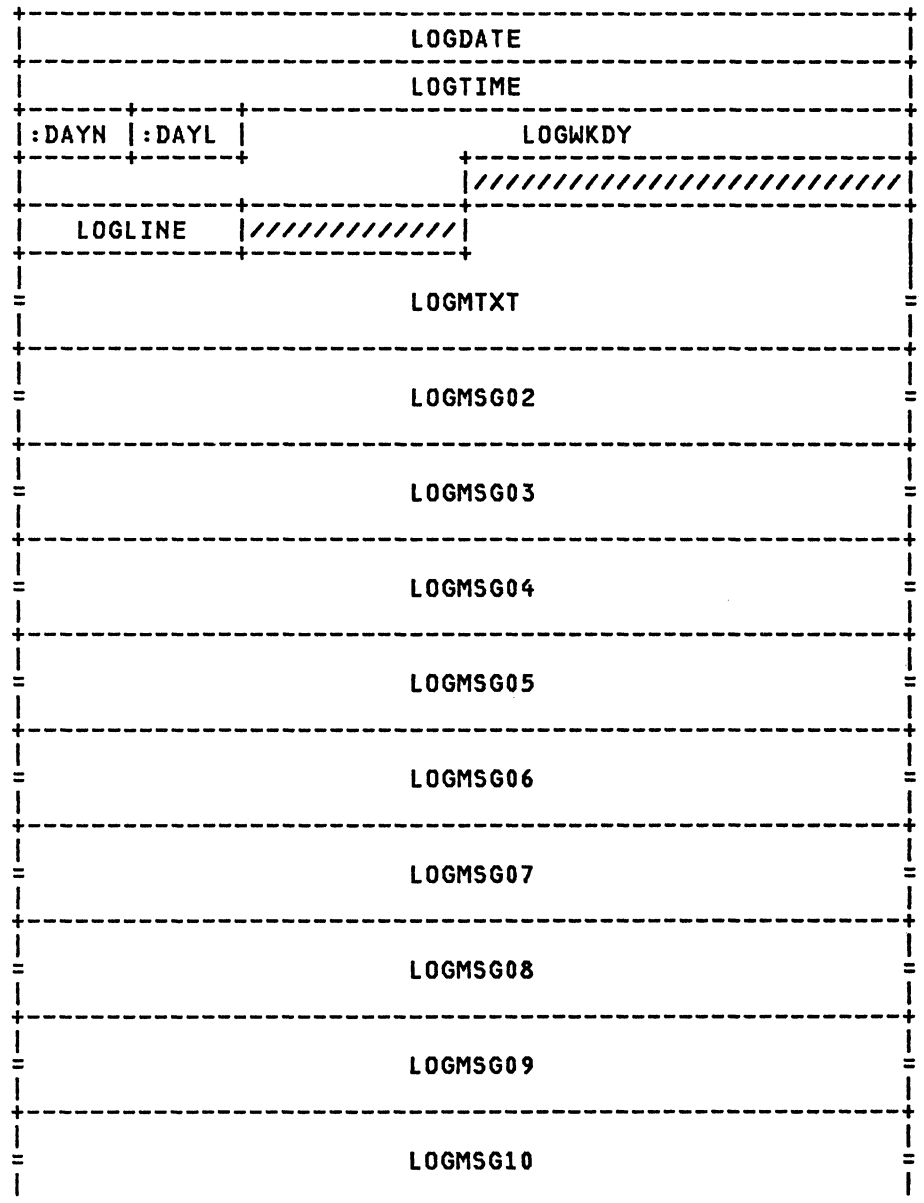
CREATED BY:

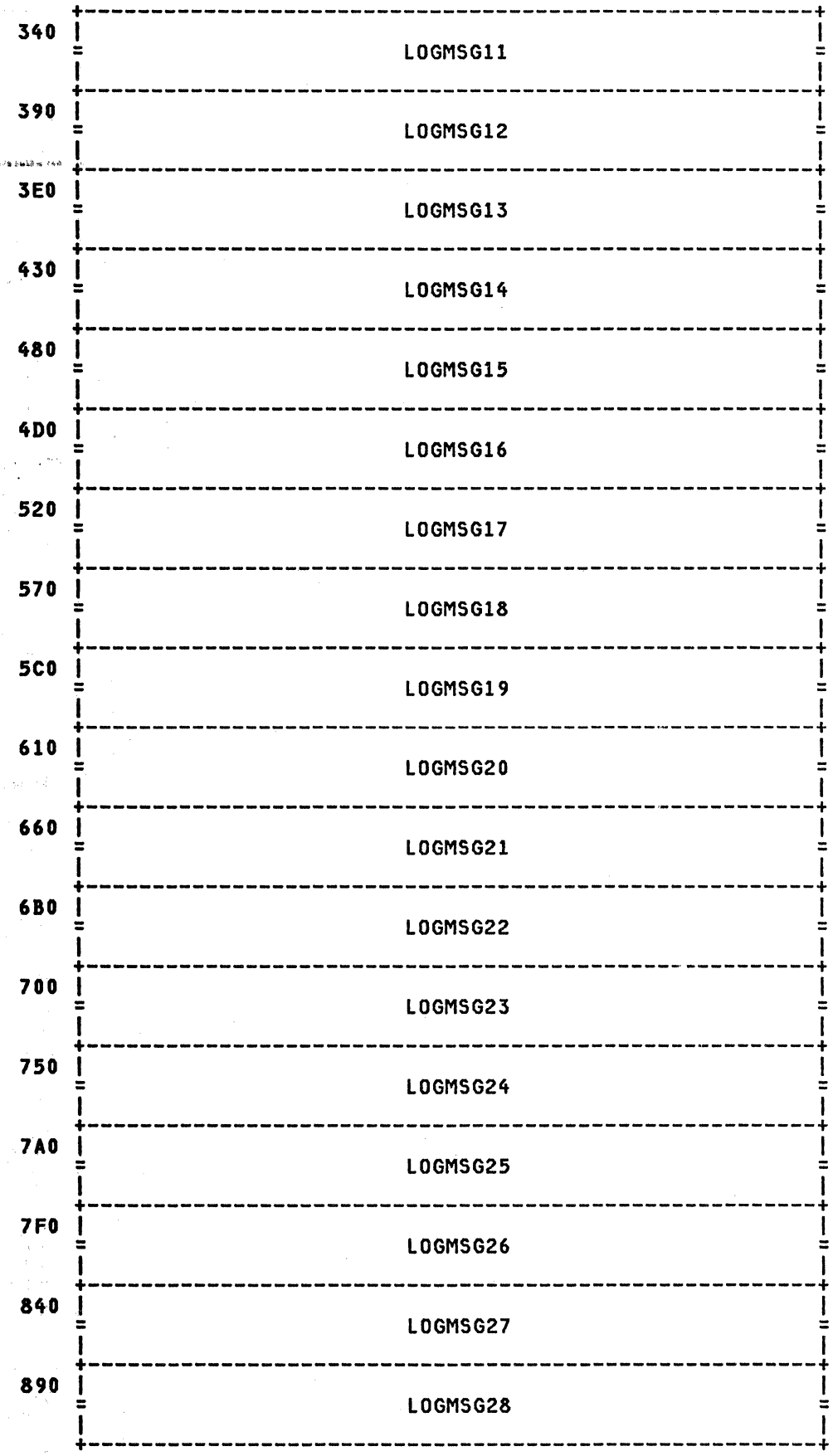
HCPSYS ASSEMBLY (SYSGEN)

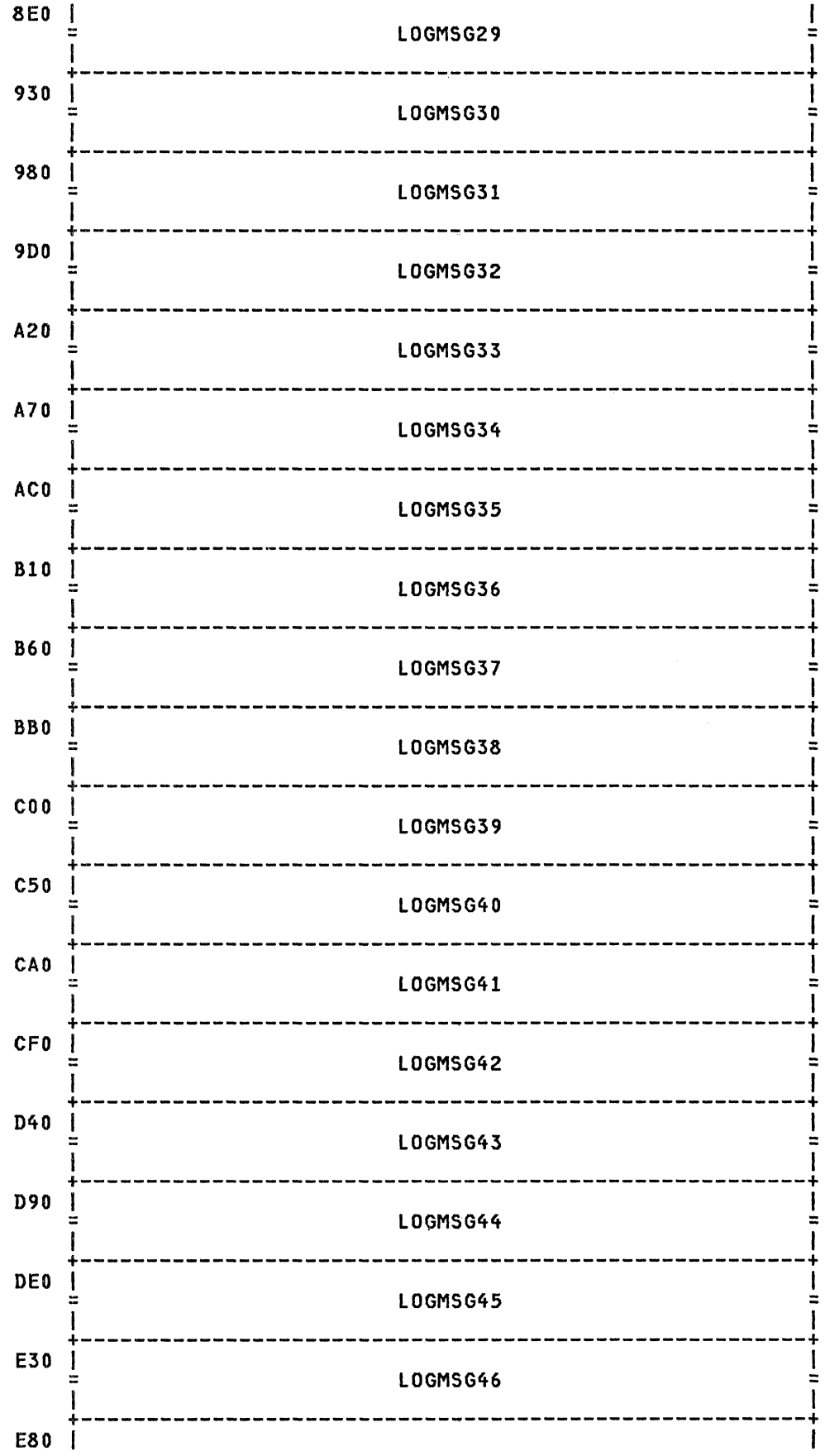
DELETED BY:

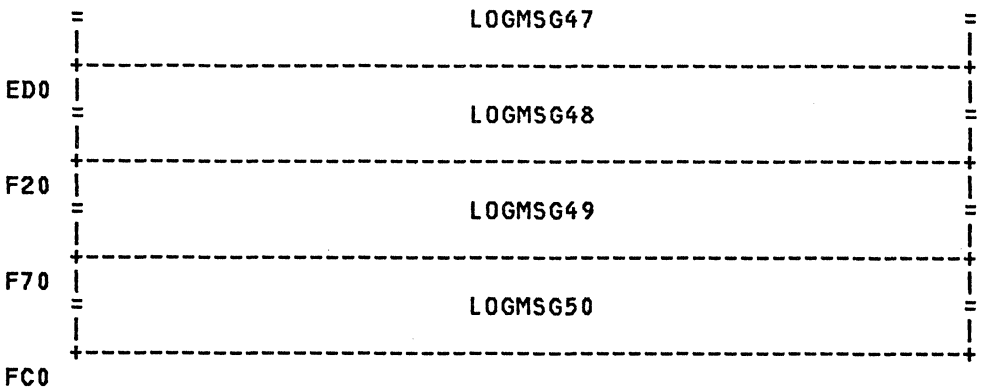
NONE

LOGMS - LOGON MESSAGE BLOCK






8E0
LOGMSG29
930
LOGMSG30
980
LOGMSG31
9D0
LOGMSG32
A20
LOGMSG33
A70
LOGMSG34
AC0
LOGMSG35
B10
LOGMSG36
B60
LOGMSG37
BB0
LOGMSG38
C00
LOGMSG39
C50
LOGMSG40
CA0
LOGMSG41
CF0
LOGMSG42
D40
LOGMSG43
D90
LOGMSG44
DE0
LOGMSG45
E30
LOGMSG46
E80



disp	name	length	description
000	LOGDATE	008	DATE OF LOG MSG SETTING
008	LOGTIME	008	TIME OF LOG MSG SETTING
010	LOGDAYN	001	DAY NUMBER OF LOG MSG SETTING
011	LOGDAYL	001	LENGTH OF WEEKDAY NAME
012	LOGWKDY	010	DAY-OF-WEEK WHEN LOG MSG SET
01C		F	RESERVED FOR FUTURE IBM USE
020	LOGMSGS	080	20 LOG MSGS WITH LINE NUMB & TEXT
020	LOGMSG01	080	LOG MESSAGE 01
020	LOGLINE	002	LOG MSG NUMBER (01 THRU 20)
022		CL2	BLANKS
024	LOGMTXT	076	LOG MESSAGE TEXT

EQUATES

50	LOGLEN		LENGTH OF EACH LOG MESSAGE
070	LOGMSG02	080	LOG MESSAGE 02
0C0	LOGMSG03	080	LOG MESSAGE 03
110	LOGMSG04	080	LOG MESSAGE 04
160	LOGMSG05	080	LOG MESSAGE 05
1B0	LOGMSG06	080	LOG MESSAGE 06
200	LOGMSG07	080	LOG MESSAGE 07
250	LOGMSG08	080	LOG MESSAGE 08
2A0	LOGMSG09	080	LOG MESSAGE 09
2F0	LOGMSG10	080	LOG MESSAGE 10
340	LOGMSG11	080	LOG MESSAGE 11
390	LOGMSG12	080	LOG MESSAGE 12
3E0	LOGMSG13	080	LOG MESSAGE 13
430	LOGMSG14	080	LOG MESSAGE 14
480	LOGMSG15	080	LOG MESSAGE 15
4D0	LOGMSG16	080	LOG MESSAGE 16
520	LOGMSG17	080	LOG MESSAGE 17
570	LOGMSG18	080	LOG MESSAGE 18
5C0	LOGMSG19	080	LOG MESSAGE 19
610	LOGMSG20	080	LOG MESSAGE 20
660	LOGMSG21	080	LOG MESSAGE 21
6B0	LOGMSG22	080	LOG MESSAGE 22
700	LOGMSG23	080	LOG MESSAGE 23
750	LOGMSG24	080	LOG MESSAGE 24
7A0	LOGMSG25	080	LOG MESSAGE 25
7F0	LOGMSG26	080	LOG MESSAGE 26
840	LOGMSG27	080	LOG MESSAGE 27
890	LOGMSG28	080	LOG MESSAGE 28
8E0	LOGMSG29	080	LOG MESSAGE 29
930	LOGMSG30	080	LOG MESSAGE 30
980	LOGMSG31	080	LOG MESSAGE 31
9D0	LOGMSG32	080	LOG MESSAGE 32
A20	LOGMSG33	080	LOG MESSAGE 33
A70	LOGMSG34	080	LOG MESSAGE 34
AC0	LOGMSG35	080	LOG MESSAGE 35
B10	LOGMSG36	080	LOG MESSAGE 36
B60	LOGMSG37	080	LOG MESSAGE 37

BB0	LOGMSG38	080	LOG MESSAGE 38
C00	LOGMSG39	080	LOG MESSAGE 39
C50	LOGMSG40	080	LOG MESSAGE 40
CA0	LOGMSG41	080	LOG MESSAGE 41
CF0	LOGMSG42	080	LOG MESSAGE 42
D40	LOGMSG43	080	LOG MESSAGE 43
D90	LOGMSG44	080	LOG MESSAGE 44
DE0	LOGMSG45	080	LOG MESSAGE 45
E30	LOGMSG46	080	LOG MESSAGE 46
E80	LOGMSG47	080	LOG MESSAGE 47
ED0	LOGMSG48	080	LOG MESSAGE 48
F20	LOGMSG49	080	LOG MESSAGE 49
F70	LOGMSG50	080	LOG MESSAGE 50

EQUATES

F8	LOGSIZE	LENGTH OF LOG MESSAGES
32	LOGCNT	TOTAL NUMBER OF LOG MESSAGE SLOTS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
LOGCNT	050	032	LOGMSG33	080	A20
LOGDATE	008	000	LOGMSG34	080	A70
LOGDAYL	001	011	LOGMSG35	080	AC0
LOGDAYN	001	010	LOGMSG36	080	B10
LOGLEN	001	050	LOGMSG37	080	B60
LOGLINE	002	020	LOGMSG38	080	BB0
LOGMS	001	000	LOGMSG39	080	C00
LOGMSGS	080	020	LOGMSG40	080	C50
LOGMSG01	080	020	LOGMSG41	080	CA0
LOGMSG02	080	070	LOGMSG42	080	CF0
LOGMSG03	080	0C0	LOGMSG43	080	D40
LOGMSG04	080	110	LOGMSG44	080	D90
LOGMSG05	080	160	LOGMSG45	080	DE0
LOGMSG06	080	1B0	LOGMSG46	080	E30
LOGMSG07	080	200	LOGMSG47	080	E80
LOGMSG08	080	250	LOGMSG48	080	ED0
LOGMSG09	080	2A0	LOGMSG49	080	F20
LOGMSG10	080	2F0	LOGMSG50	080	F70
LOGMSG11	080	340	LOGMTXT	076	024
LOGMSG12	080	390	LOGSIZE	001	1F8
LOGMSG13	080	3E0	LOGTIME	008	008
LOGMSG14	080	430	LOGWKDY	010	012
LOGMSG15	080	480			
LOGMSG16	080	4D0			
LOGMSG17	080	520			
LOGMSG18	080	570			
LOGMSG19	080	5C0			
LOGMSG20	080	610			
LOGMSG21	080	660			
LOGMSG22	080	6B0			
LOGMSG23	080	700			
LOGMSG24	080	750			
LOGMSG25	080	7A0			
LOGMSG26	080	7F0			
LOGMSG27	080	840			
LOGMSG28	080	890			
LOGMSG29	080	8E0			
LOGMSG30	080	930			
LOGMSG31	080	980			
LOGMSG32	080	9D0			

HCPLRFBK— LOCKED RELEASED FRAME BLOCK

DSECT NAME: LRFBK

DESCRIPTIVE NAME: LOCKED RELEASED FRAME BLOCK

FUNCTION: POINTS TO A FRAME THAT THE RELEASE FUNCTION FOUND TO BE LOCKED.

LOCATED BY:

RSALRFQ	ANCHOR OF A QUEUE OF LRFBKS, IF ANY EXIST
LRFNEXT	POINTER THAT CHAINS LRFBKS TOGETHER

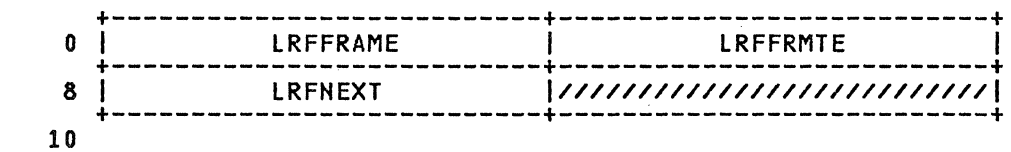
CREATED BY:

HCPRLU	CREATED WHEN A LOCKED AND RELEASED FRAME IS NOT UNLOCKED WITHIN A REASONABLE TIME.

DELETED BY:

HCPRPB	DELETED WHEN THE FRAME IS FOUND UNLOCKED.

LRFBK - LOCKED RELEASE FRAME BLOCK



disp	name	length	description
000	LRFFRAME	004	ADDRESS OF THE FRAME
004	LRFFRMTE	004	ADDRESS OF THE FRAME'S FRMTE
008	LRFNEXT	004	POINTER TO THE NEXT LRFBK. THIS FIELD IS 0 IF THERE ARE NO MORE LRFBKS.
00C		F	RESERVED FOR IBM USE

EQUATES

02	LRFSIZE	LRFBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
LRFBK	001	000
LRFFRAME	004	000
LRFFRMTE	004	004
LRFNEXT	004	008
LRFSIZE	001	002

MCHREC— MACHINE CHECK ERROR RECORD

DSECT NAME: MCHREC

DESCRIPTIVE NAME: MACHINE CHECK ERROR RECORD

FUNCTION: MCHREC PROVIDES MACHINE CHECK INFORMATION FOR ERROR RECORDING.

LOCATED BY:

PFXMCHA FIELD IN PFXPG. ALSO POINTED TO BY GPR6 IN HCPIOE, AND PASSED TO HCPREC IN GPR1.

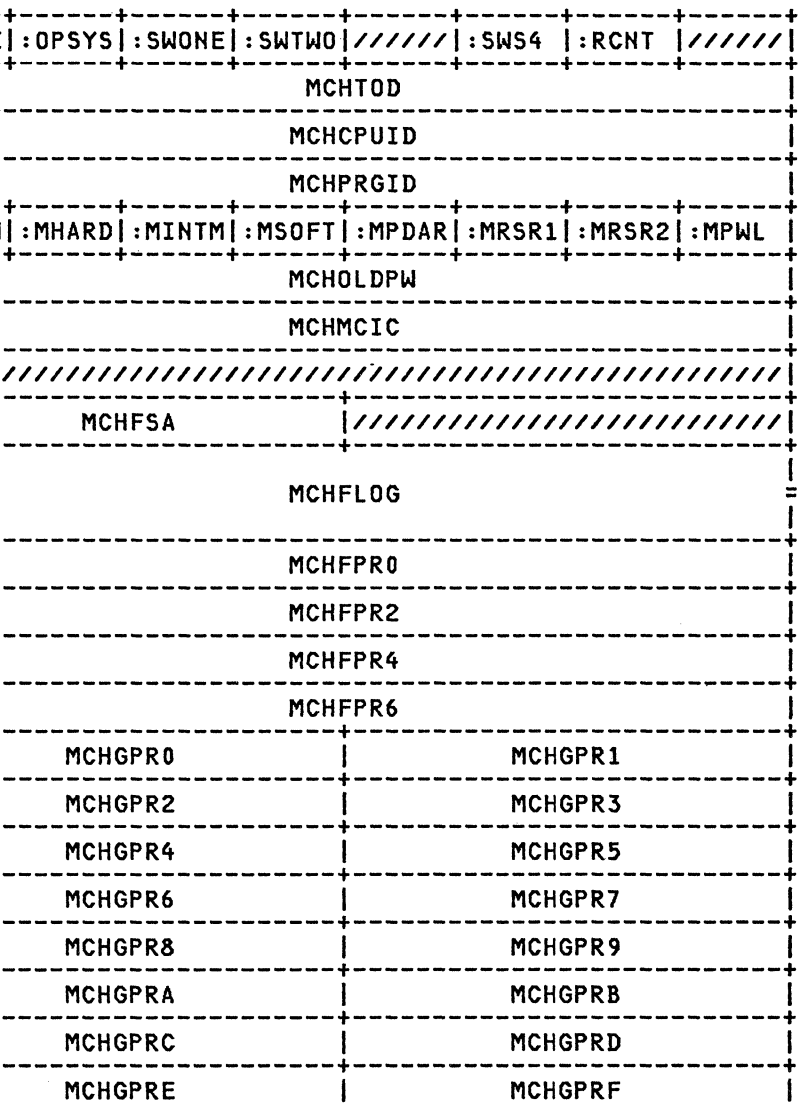
CREATED BY:

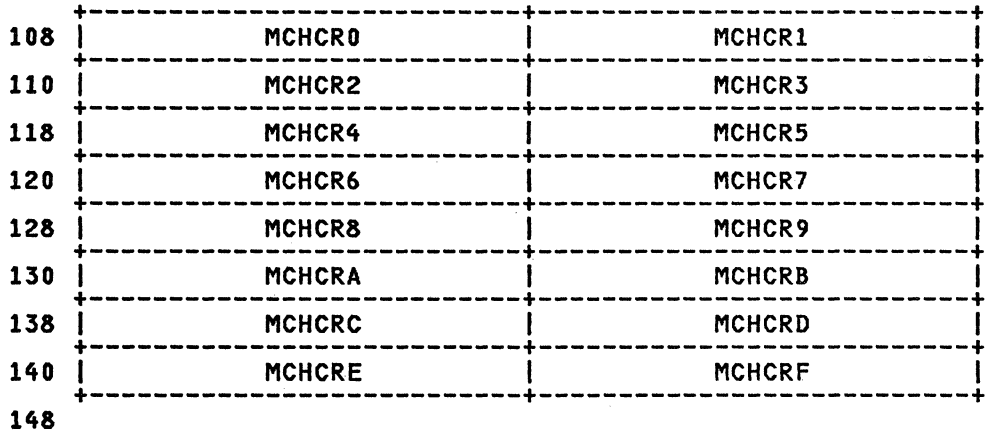
HCPMPS AT INITIALIZATION FOR EACH CPU. A COPY IS MADE BY HCPMCH FOR ERROR RECORDING.

DELETED BY:

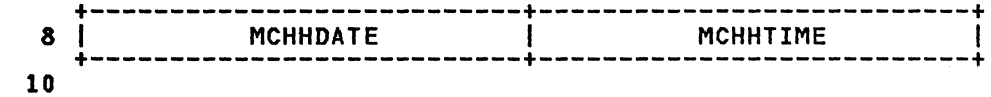
HCPIOE AFTER HCPREC HAS COPIED IT INTO GSDBK. IF A CPU IS VARIED OFF, THEN IT'S MCHREC IS DELETED BY HCPMPS.

MCHREC - MACHINE CHECK ERROR RECORD



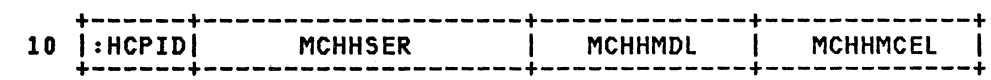


REDEFINITION - MCHTOD

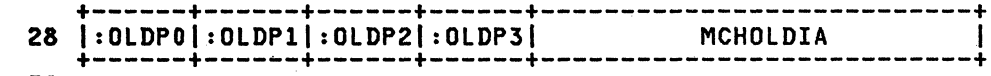


REDEFINITION - TOD OF SYSTEM FAILURE

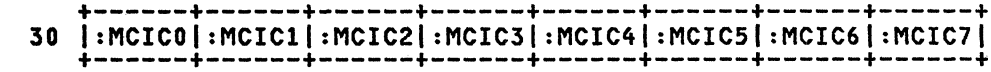
REDEFINITION - MCHCPUID



REDEFINITION - MCHOLDPW



REDEFINITION - MCHMCIC



disp	name	length	description
000	MCHRTYPE	001	MACHINE CHECK RECORD TYPE
	CODES DEFINED IN MCHRTYPE (AT HEX DISPLACEMENT: 0)		
	1B MCHRTCS0		CONVERTED MCH SER0 RECORD (NOT

```
                              FOR VS)
          1A     MCHRTCS1     CONVERTED MCH SER1 RECORD (NOT
                              FOR VS)
          19     MCHRTMS0     MCH SER0 RECORD (NOT FOR VS)
          18     MCHRTMS1     MCH SER1 RECORD (NOT FOR VS)
          13     MCHRTMVS     MCH RECORD RECORDED IN MULTIPLE
                              VIRTUAL STORAGE ENVIRONMENT
          12     MCHRTCVT     CONVERTED MCH RECORD (NOT FOR VS)
          10     MCHRTMCH     MCH RECORD

001   MCHOPSYS    001         OPERATING SYSTEM/RELEASE LEVEL

          BITS DEFINED FOR MCHOPSYS BY HDRREC HDRHSYS

002   MCHSWONE    001         RECORD INDEPENDENT SWITCH

          BITS DEFINED FOR MCHSWONE BY HDRREC HDRHSW0

003   MCHSWTWO    001         RECORD DEPENDENT SWITCH

          BITS DEFINED IN MCHSWTWO (AT HEX DISPLACEMENT: 3)

          20     MCHSYSTM     SYSTEM TERMINATED BY MCH
          10     MCHERROR     RECORD CONTAINS AN ERRORID
          04     MCHSOFTF     SOFT FAILURE
          02     MCHDEGRF     DEGRADE FAILURE
          06     MCHHARDF     HARD FAILURE

004                 XL1       RESERVED FOR FUTURE IBM USE
005   MCHSWS4       001       MCH SYS1.LOGREC REC BUFFER
                              OVERLAID WITH ANOTHER RECORD

          BITS DEFINED IN MCHSWS4  (AT HEX DISPLACEMENT: 5)

          FF     MCHLOGRC     SVC 76 DOES NOT RECORD THIS
                              RECORD ON SYS1.LOGREC

006   MCHRCNT     001         RECORD COUNT

          BITS DEFINED FOR MCHRCNT BY HDRREC HDRHCNT

007                 XL1       RESERVED FOR FUTURE IBM USE
008   MCHTOD        008       TOD OF SYSTEM FAILURE
010   MCHCPUID      008       CPU IDENTIFICATION
018   MCHPRGID      008       PROGRAM IDENTITY/USERID
020   MCHMTERM      001       TERMINAL ERROR INDICATORS

          BITS DEFINED IN MCHMTERM (AT HEX DISPLACEMENT: 20)

          20     MCHMTHRS     THRESHOLD REACHED
          10     MCHMTSEC     SECONDARY ERROR
          08     MCHMTCKS     CHECK STOP
          04     MCHMTWRN     POWER WARNING
          01     MCHMTINV     INVALID LOGOUT

021   MCHMHARD    001         HARD MACHINE ERROR SWITCHES

          BITS DEFINED IN MCHMHARD (AT HEX DISPLACEMENT: 21)

          80     MCHMHHRD     HARD ERROR ASSUMED
          10     MCHMHSD      SYSTEM DAMAGE
          08     MCHMHINV     REGISTER OR PSW INVALID
          04     MCHMHSTO     HARD STORAGE ERROR
          02     MCHMHKEY     HARD STORAGE PROTECT KEY ERROR
          01     MCHMHIPD     INSTRUCTION PROCESSING DAMAGE

022   MCHMINTM    001         INTERMEDIATE ERROR SWITCHES

          BITS DEFINED IN MCHMINTM (AT HEX DISPLACEMENT: 22)

          08     MCHMITOD     TOD CLOCK ERROR
          04     MCHMICKC     CLOCK COMPARATOR ERROR
          02     MCHMICTM     CPU TIMER ERROR
```

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        01     MCHMIL80     INTERVAL TIMER ERROR

023   MCHMSOFT    001       SOFT MACHINE ERROR SWITCHES

        BITS DEFINED IN MCHMSOFT (AT HEX DISPLACEMENT: 23)

        80     MCHMSSFT     SOFT ERROR ASSUMED
        08     MCHMSEXD     EXTERNAL DAMAGE
        04     MCHMSECC     ECC CORRECTED STORAGE ERROR
        02     MCHMSHIR     HIR CORRECTED CPU ERROR
        01     MCHMSBUF     BUFFER ERROR

024   MCHMPDAR    001       PDAR DATA SUPPLIED BY RTM

        BITS DEFINED IN MCHMPDAR (AT HEX DISPLACEMENT: 24)

        10     MCHMINVP     STOR. RECONF. - PAGE INVALID
        08     MCHMRSRC     STOR. RECONF. STAT AT MCHMRSR1&2
        04     MCHMRSRF     STOR. RECONF. NOT ATTEMPTED

025   MCHMRSR1    001       STOR. RECONF. STATUS (BYTE 0)

        BITS DEFINED IN MCHMRSR1 (AT HEX DISPLACEMENT: 25)

        02     MCHMSER      STOR. ERROR. ALREADY IN FRAME
        01     MCHMCHNG     FRAME HAD CHANGE INDIC. ON

026   MCHMRSR2    001       STOR. RECONF. STATUS (BYTE 1)

        BITS DEFINED IN MCHMRSR2 (AT HEX DISPLACEMENT: 26)

        80     MCHMOFLN     FRAME OFFLINE OR SCHED. OFFLINE
        40     MCHMINTC     INTERCEPT - FRAME SCHED. TO GO
                            OFFLINE, HAS PERM. STOR. ERROR
                            OR SCHED. FOR V=R STATUS
        20     MCHMSPER     PERM. ERROR IN FRAME
        10     MCHMNUCL     FRAME HOLDS PERM. RES. SYS. STOR.
        08     MCHMFSQA     FRAME IN USE FOR SQA
        04     MCHMLSQA     FRAME IN USE FOR LSQA
        02     MCHMPGFX     FRAME HOLDS PAGE FIXED DATA
        01     MCHMVEQR     FRAME V=R OR SCHED. V=R

027   MCHMPWL     001       LENGTH OF MACHINE CHECKING BLOCK
028   MCHOLDPW    008       MACHINE-CHECK OLD PSW
030   MCHLOST1    024       COPY OF LOW STORAGE LOC. 232-255
030   MCHMCIC     008       COPY OF MCIC (MACHINE-CHECK
                            INTERRUPTION CODE).
038               D         COPY OF STORAGE
040   MCHFSA      004       COPY OF FAILING STORAGE ADDRESS.
044               F         COPY OF STORAGE
048   MCHLOST2    256       COPY OF LOW STORAGE 256-511
048   MCHFLOG     008       COPY OF FIXED LOGOUT
0A8   MCHFPRS     008       COPY OF FLOATING POINT REGISTERS
0A8   MCHFPR0     008       COPY OF FLOATING POINT REG. 0.
0B0   MCHFPR2     008       COPY OF FLOATING POINT REG. 2.
0B8   MCHFPR4     008       COPY OF FLOATING POINT REG. 4.
0C0   MCHFPR6     008       COPY OF FLOATING POINT REG. 6.
0C8   MCHGPRS     004       COPY OF GENERAL REGISTERS
0C8   MCHGPR0     004       COPY OF GENERAL REGISTER 0.
0CC   MCHGPR1     004       COPY OF GENERAL REGISTER 1.
0D0   MCHGPR2     004       COPY OF GENERAL REGISTER 2.
0D4   MCHGPR3     004       COPY OF GENERAL REGISTER 3.
0D8   MCHGPR4     004       COPY OF GENERAL REGISTER 4.
0DC   MCHGPR5     004       COPY OF GENERAL REGISTER 5.
0E0   MCHGPR6     004       COPY OF GENERAL REGISTER 6.
0E4   MCHGPR7     004       COPY OF GENERAL REGISTER 7.
0E8   MCHGPR8     004       COPY OF GENERAL REGISTER 8.
0EC   MCHGPR9     004       COPY OF GENERAL REGISTER 9.
0F0   MCHGPRA     004       COPY OF GENERAL REGISTER 10.
0F4   MCHGPRB     004       COPY OF GENERAL REGISTER 11.
0F8   MCHGPRC     004       COPY OF GENERAL REGISTER 12.
0FC   MCHGPRD     004       COPY OF GENERAL REGISTER 13.
100   MCHGPRE     004       COPY OF GENERAL REGISTER 14.
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104   MCHGPRF    004       COPY OF GENERAL REGISTER 15.
108   MCHCRS     004       COPY OF CONTROL REGISTERS
108   MCHCR0     004       COPY OF CONTROL REGISTER 0.
10C   MCHCR1     004       COPY OF CONTROL REGISTER 1.
110   MCHCR2     004       COPY OF CONTROL REGISTER 2.
114   MCHCR3     004       COPY OF CONTROL REGISTER 3.
118   MCHCR4     004       COPY OF CONTROL REGISTER 4.
11C   MCHCR5     004       COPY OF CONTROL REGISTER 5.
120   MCHCR6     004       COPY OF CONTROL REGISTER 6.
124   MCHCR7     004       COPY OF CONTROL REGISTER 7.
128   MCHCR8     004       COPY OF CONTROL REGISTER 8.
12C   MCHCR9     004       COPY OF CONTROL REGISTER 9.
130   MCHCRA     004       COPY OF CONTROL REGISTER 10.
134   MCHCRB     004       COPY OF CONTROL REGISTER 11.
138   MCHCRC     004       COPY OF CONTROL REGISTER 12.
13C   MCHCRD     004       COPY OF CONTROL REGISTER 13.
140   MCHCRE     004       COPY OF CONTROL REGISTER 14.
144   MCHCRF     004       COPY OF CONTROL REGISTER 15.
148              0D        MUST HAVE DOUBLE WORD ALIGNMENT

                    EQUATES

        48    MCHFXLEN    LENGTH (IN BYTES) OF FIXED
                          LENGTH PORTION OF MCHREC
        29    MCHSIZE     MCHREC SIZE IN DOUBLE WORDS

                          THE MACHINE CHECK ERROR RECORD CONSISTS OF THE ABOVE BLOCK
                          WITH THE DAMAGE ASSESSMENT AREA (PART OF THE HCPMCKBK)
                          APPENDED TO IT.


          REDEFINITION - MCHTOD

008   MCHHDATE   004       SYSTEM DATE OF FAILURE
00C   MCHHTIME   004       SYSTEM TIME OF FAILURE

          REDEFINITION - TOD OF SYSTEM FAILURE

008   MCHTODHI   004       FIRST WORD OF MCHTOD
008              2X        BYTES 0 AND 1 OF MCHTOD
00A   MCHTODB2   006       BYTE 2 OF MCHTOD. BYTES 2 - 7 OF
                          MCHTOD USED TO BUILD TRACE ENTRY
                          FOR MACHINE CHECK INTERRUPTION OR
                          CHECK STOP

          REDEFINITION - MCHCPUID

010   MCHHCPID   001       MACHINE VERSION CODE
011   MCHHSER    003       CPU SERIAL NUMBER
014   MCHHMDL    002       CPU MACHINE MODEL NUMBER
016   MCHHMCEL   002       MAX LENGTH OF MACHINE-DEPENDENT
                          MACHINE CHECK EXTENDED LOGOUT

          REDEFINITION - MCHOLDPW

028   MCHOLDP0   001       MACHINE-CHECK OLD PSW BYTE 0

        BITS DEFINED FOR MCHOLDP0 BY HCPEQUAT PSW0

029   MCHOLDP1   001       MACHINE-CHECK OLD PSW BYTE 1

        BITS DEFINED FOR MCHOLDP1 BY HCPEQUAT PSW1

02A   MCHOLDP2   001       MACHINE-CHECK OLD PSW BYTE 2

        BITS DEFINED FOR MCHOLDP2 BY HCPEQUAT PSW2

02B   MCHOLDP3   001       MACHINE-CHECK OLD PSW BYTE 3
02C   MCHOLDIA   004       INSTR ADDR FIELD OF MCH-CHK OPSW.

          REDEFINITION - MCHMCIC
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```
030    MCHMCWD1    004       FIRST WORD OF MCHMCIC.
030    MCHMCIC0    001       COPY OF MCIC BYTE 0.

         BITS DEFINED FOR MCHMCIC0 BY HCPEQUAT MCIC0

031    MCHMCIC1    001       COPY OF MCIC BYTE 1.

         BITS DEFINED FOR MCHMCIC1 BY HCPEQUAT MCIC1

032    MCHMCIC2    001       COPY OF MCIC BYTE 2.

         BITS DEFINED FOR MCHMCIC2 BY HCPEQUAT MCIC2

033    MCHMCIC3    001       COPY OF MCIC BYTE 3.

         BITS DEFINED FOR MCHMCIC3 BY HCPEQUAT MCIC3

034    MCHMCIC4    001       COPY OF MCIC BYTE 4.
035    MCHMCIC5    001       COPY OF MCIC BYTE 5.

         BITS DEFINED FOR MCHMCIC5 BY HCPEQUAT MCIC5

036    MCHMCIC6    001       COPY OF MCIC BYTE 6.
037    MCHMCIC7    001       COPY OF MCIC BYTE 7.
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MCHCPUID	008	010	MCHGPR0	004	0C8	MCHMHIPD	001	001
MCHCRA	004	130	MCHGPR1	004	0CC	MCHMHKEY	001	002
MCHCRB	004	134	MCHGPR2	004	0D0	MCHMHSD	001	010
MCHCRC	004	138	MCHGPR3	004	0D4	MCHMHSTO	001	004
MCHCRD	004	13C	MCHGPR4	004	0D8	MCHMICKC	001	004
MCHCRE	004	140	MCHGPR5	004	0DC	MCHMICTM	001	002
MCHCRF	004	144	MCHGPR6	004	0E0	MCHMIL80	001	001
MCHCRS	004	108	MCHGPR7	004	0E4	MCHMINTC	001	040
MCHCR0	004	108	MCHGPR8	004	0E8	MCHMINTM	001	022
MCHCR1	004	10C	MCHGPR9	004	0EC	MCHMINVP	001	010
MCHCR2	004	110	MCHHARDF	001	006	MCHMITOD	001	008
MCHCR3	004	114	MCHHCPID	001	010	MCHMLSQA	001	004
MCHCR4	004	118	MCHHDATE	004	008	MCHMNUCL	001	010
MCHCR5	004	11C	MCHHMCEL	002	016	MCHMOFLN	001	080
MCHCR6	004	120	MCHHMDL	002	014	MCHMPDAR	001	024
MCHCR7	004	124	MCHHSER	003	011	MCHMPGFX	001	002
MCHCR8	004	128	MCHHTIME	004	00C	MCHMPWL	001	027
MCHCR9	004	12C	MCHLOGRC	001	0FF	MCHMRSRC	001	008
MCHDEGRF	001	002	MCHLOST1	024	030	MCHMRSRF	001	004
MCHERROR	001	010	MCHLOST2	256	048	MCHMRSR1	001	025
MCHFLOG	008	048	MCHMCHNG	001	001	MCHMRSR2	001	026
MCHFPRS	008	0A8	MCHMCIC	008	030	MCHMSBUF	001	001
MCHFPR0	008	0A8	MCHMCIC0	001	030	MCHMSECC	001	004
MCHFPR2	008	0B0	MCHMCIC1	001	031	MCHMSER	001	002
MCHFPR4	008	0B8	MCHMCIC2	001	032	MCHMSEXD	001	008
MCHFPR6	008	0C0	MCHMCIC3	001	033	MCHMSHIR	001	002
MCHFSA	004	040	MCHMCIC4	001	034	MCHMSOFT	001	023
MCHFXLEN	001	148	MCHMCIC5	001	035	MCHMSPER	001	020
MCHGPRA	004	0F0	MCHMCIC6	001	036	MCHMSSFT	001	080
MCHGPRB	004	0F4	MCHMCIC7	001	037	MCHMTCKS	001	008
MCHGPRC	004	0F8	MCHMCWD1	004	030	MCHMTERM	001	020
MCHGPRD	004	0FC	MCHMFSQA	001	008	MCHMTHRS	001	020
MCHGPRE	004	100	MCHMHARD	001	021	MCHMTINV	001	001
MCHGPRF	004	104	MCHMHHRD	001	080	MCHMTSEC	001	010
MCHGPRS	004	0C8	MCHMHINV	001	008	MCHMTWRN	001	004

Name	Len	Val/Disp
MCHMVEQR	001	001
MCHOLDIA	004	02C
MCHOLDPW	008	028
MCHOLDP0	001	028
MCHOLDP1	001	029
MCHOLDP2	001	02A
MCHOLDP3	001	02B
MCHOPSYS	001	001
MCHPRGID	008	018
MCHRCNT	001	006
MCHREC	001	000
MCHRTCS0	001	01B
MCHRTCS1	001	01A
MCHRTCVT	001	012
MCHRTMCH	001	010
MCHRTMS0	001	019
MCHRTMS1	001	018
MCHRTMVS	001	013
MCHRTYPE	001	000
MCHSIZE	001	029
MCHSOFTF	001	004
MCHSWONE	001	002
MCHSWS4	001	005
MCHSWTWO	001	003
MCHSYSTM	001	020
MCHTOD	008	008
MCHTODB2	006	00A
MCHTODHI	004	008

HCPMCKBK— MACHINE CHECK DESCRIPTOR BLOCK

DSECT NAME: MCKBK

DESCRIPTIVE NAME: MACHINE CHECK DESCRIPTOR BLOCK

FUNCTION: THE MCKBK IS THE MAIN WORK AREA OF THE MACHINE-CHECK AND CHECK-STOP HANDLERS. THE FIRST PART CONTAINS 'FOOTPRINT' FLAGS, AND A LOCAL TRACE TABLE FOR MACHINE CHECKS, AND OTHER STATUS FIELDS THAT MIGHT BE USEFUL IN DEBUGGING. THIS FIRST PART OF THE MCKBK IS APPENDED TO (AND RECORDED WITH) THE ERROR RECORD AND IS OCCASIONALLY REFERRED TO AS THE 'DAMAGE ASSESSMENT AREA'. THE SECOND PART OF THE MCKBK IS NOT REGARDED AS VALUABLE FOR DEBUGGING AND CONSEQUENTLY IS NOT INCLUDED IN THE RECORDED ERROR RECORD. THIS PART OF THE MCKBK IS SOMETIMES REFERRED TO AS THE 'MACHINE-CHECK WORK AREA'. DATA IS PLACED IN THE MCKBK AT THE START OF AN ERROR INCIDENT (MACHINE CHECK OR CHECK-STOP) AND, FOR THE MOST PART, IS NOT CLEARED UNTIL THE START OF THE NEXT INCIDENT.

LOCATED BY:

A CPU'S MCKBK IS ANCHORED IN THE CPU'S PREFIX PAGE, POINTED TO BY PFXMCHA.

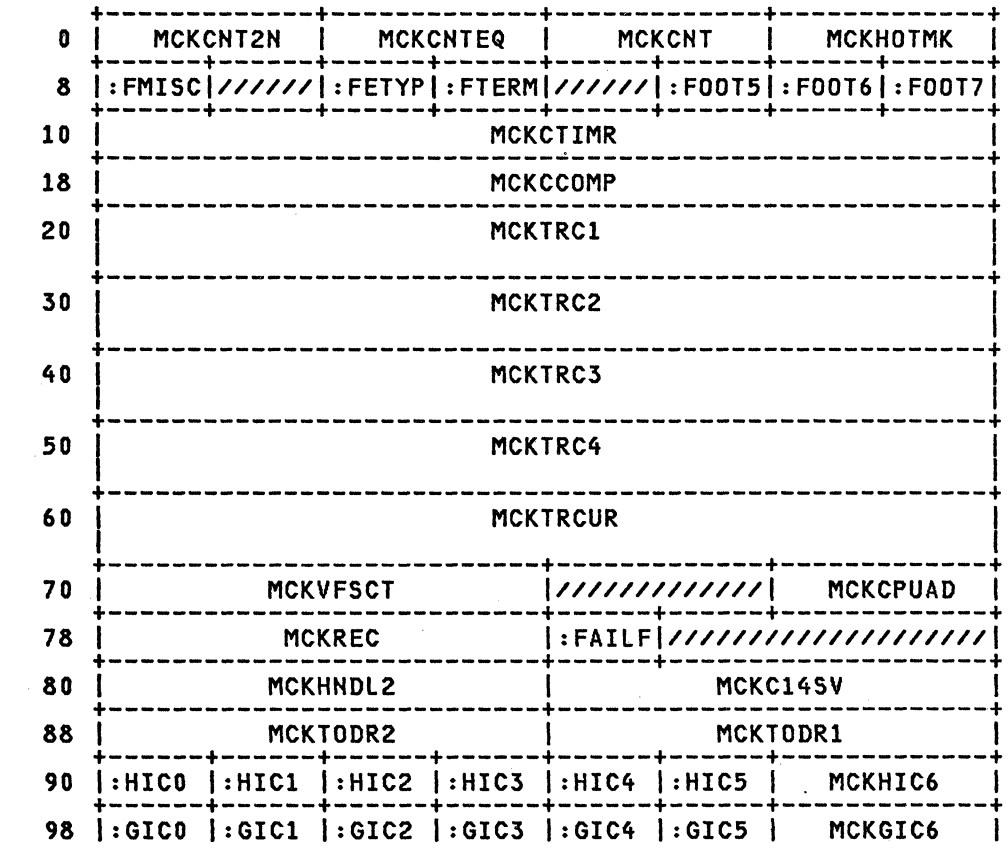
CREATED BY:

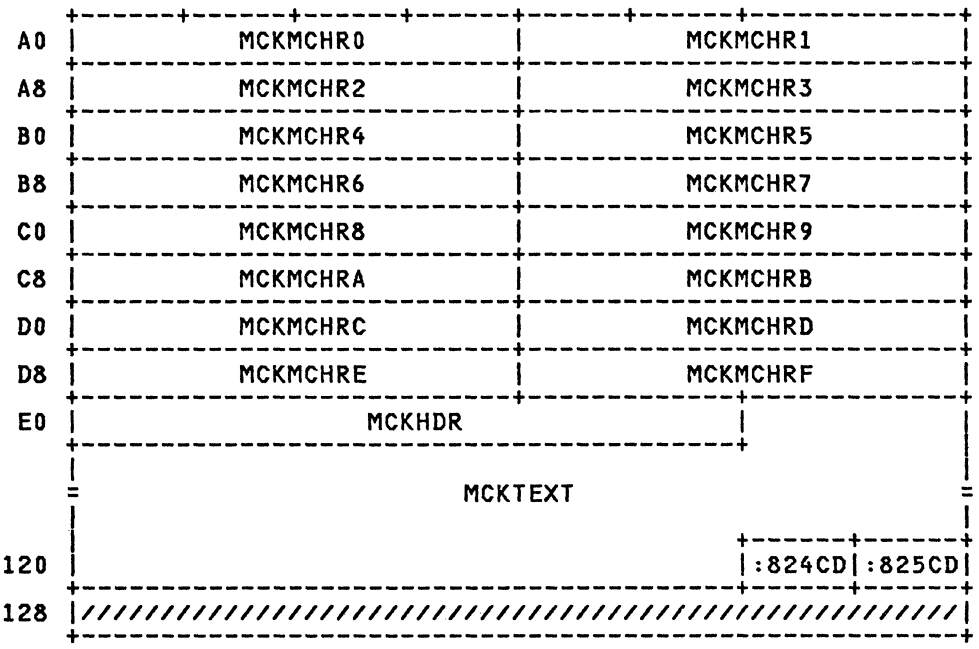
HCPMPS — WHEN A PROCESSOR IS INITIALIZED. EACH CPU HAS ONE OF THESE BLOCKS, ALLOCATED AT SYSTEM INITIALIZATION TIME OR WHEN THE CPU IS VARIED ONLINE.
NOTE: TO ACCOMODATE APPENDING THE MCKBK TO THE ERROR RECORD (MCHREC), THE MCHREC AND THE MCKBK ARE ALLOCATED FROM A SINGLE BLOCK OF STORAGE.

DELETED BY:

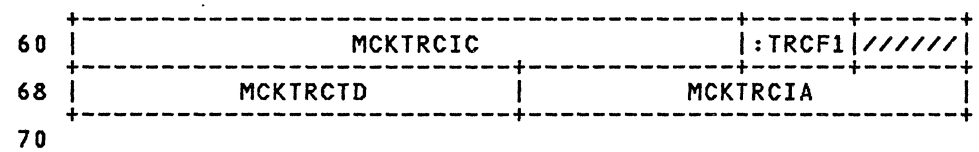
HCPMPS — TWO MINUTES AFTER A PROCESSOR IS VARIED OFFLINE.

MCKBK - MACHINE CHECK DESCRIPTOR BLOCK





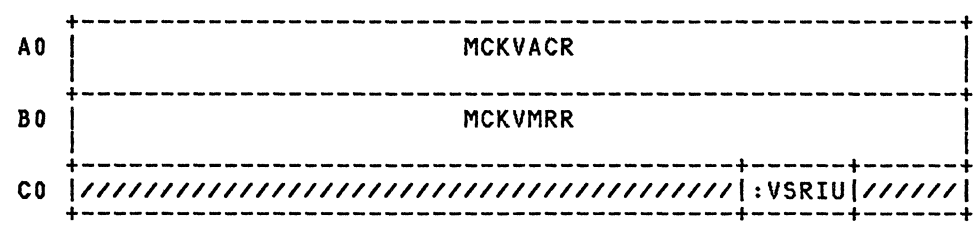
REDEFINITION - DETAIL OF LOCAL TRACE TABLE ENTRY



REDEFINITION - DETAIL OF LOCAL TRACE TABLE ENTRY

70

REDEFINITION -



REDEFINITION -

C8

REDEFINITION -

E0

disp	name	length	description
000	MCKDAMAG	008	START OF DAMAGE ASSESSMENT AREA.
000	MCKCNT2N	002	COUNT OF SECONDARY MACHINE CHECKS SUBSEQUENT TO MOST RECENT PRIMARY.
002	MCKCNTEQ	002	COUNT OF CONSECUTIVE IDENTICAL MACHINE CHECKS (MCIC'S). WHEN THIS COUNT EXCEEDS A THRESHOLD (MCKTHLD1), ERROR RECORDING IS SUSPENDED (RECORDS ARE DISCARDED) UNTIL THE COUNT IS RESET. THE COUNT IS RESET WHEN A DIFFERENT MACHINE CHECK OCCURS. BUT EVEN WHEN THIS COUNT IS NOT SET, AN ERROR IS ALLOWED TO BE RECORDED ROUGHLY EVERY (MCKTIM1) SECONDS.
			EQUATES
	09	MCKTHLD1	THRESHOLD ASSOCIATED WITH MCKCNTEQ.
	58	MCKTIM1	UNIT IS SECONDS, APPROX. (SEE MCKCNTEQ).
004	MCKCNT	002	COUNT OF RECENT MACHINE CHECKS. WHEN THIS COUNT EXCEEDS A THRESHOLD (MCKTHLD2), ERROR RECORDING IS SUSPENDED (RECORDS ARE DISCARDED) UNTIL THE COUNT IS RESET. THE COUNT IS RESET WHEN A MACHINE CHECK OCCURS AND AT LEAST (MCKTIM2) SECONDS HAVE ELAPSED SINCE THE LAST RESET.
			EQUATES
	0A	MCKTHLD2	THRESHOLD ASSOCIATED WITH MCKCNT.
	2C	MCKTIM2	UNIT IS SECONDS, APPROX. (SEE MCKCNT).
006	MCKHOTMK	002	MASK OF RECENT ERROR CONDITIONS, THE 'OR' OF RECENT MACHINE CHECKS (MCIC BITS 0-15).
008	MCKFLAGS	008	ENCOMPASSES THE FOLLOWING 8 FLAG BYTES. THIS LABEL IS USED TO RESET ALL 8 AS A GROUP.
008	MCKFMISC	001	MISCELLANEOUS STATUS FLAGS.
			BITS DEFINED IN MCKFMISC (AT HEX DISPLACEMENT: 8)
	80	MCKFIXUP	SOME PROGRESS WAS MADE TOWARD RECOVERY. (AT LEAST ONE ERROR WAS CORRECTED.) THIS FLAG IS NOT A MERE FOOTPRINT; IT MUST BE MAINTAINED VERY PRECISELY AND MUST NOT BE TURNED ON CASUALLY. IT MUST BE TURNED ON ONLY WHEN A PROBLEM HAS REALLY BEEN FIXED, OTHERWISE, IN THE CASE OF 'PROCESSING BACKUP' WE MAY END RETRYING A HOPELESS CASE ENDLESSLY.
	40	MCKFSIE	WE WERE RUNNING SIE (PFXHSIE WAS SET).
	20	MCKFHOT	INTERRUPT CLASSIFIED HOT. NOT REPORTED.
009		1X	RESERVED FOR FUTURE IBM USE.
00A	MCKFETYP	001	TYPE OF ERROR.
			BITS DEFINED IN MCKFETYP (AT HEX DISPLACEMENT: A)
	40	MCKFERCS	ERROR WAS CHECK-STOP, NOT MACHINE CHECK.
	20	MCKF2ND	A SECONDARY ERROR OCCURRED WHILE HANDLING A MACHINE CHECK.
	10	MCKF2CS	SECONDARY ERROR WAS A CHECK-STOP.
	08	MCKFMCIC	INVALID MCIC (REQUIRED BITS MISSING).
	04	MCKFABND	POSSIBLE SOFTWARE ERROR ENCOUNTERED. WHERE WE CANNOT ISSUE HCPABEND, WE SET THIS FLAG, THEN TERMINATE.
00B	MCKFTERM	001	SYSTEM TERMINATION STATUS.
			BITS DEFINED IN MCKFTERM (AT HEX DISPLACEMENT: B)

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         80     MCKFEMER     EMERGENCY HOST TERMINATION REQUIRED
                             (AND OTHER FLAGS MAY BE MEANINGLESS).
         40     MCKFNOTM     HOST TERMINATION NOT REQUIRED BY THE
                             MACHINE-CHECK FLIH.
         20     MCKFDIE1     HOST TERMINATION WAS REQUIRED BY THE
                             MACHINE-CHECK FLIH.
         10     MCKFDIE2     HOST TERMINATION WAS REQUIRED BY THE
                             MACHINE-CHECK SLIH.
         08     MCKFIPL      SOFT-RE-IPL AFTER TERMINATE DISALLOWED.
         04     MCKFIPLI     SOFT-RE-IPL DISALLOWED BY IO SUB-SYSTEM.
         02     MCKFNOVR     V=R SURVIVAL AFTER RE-IPL DISALLOWED BY
                             SOMETHING OTHER THAN THE I/O SUB-SYSTEM.
         01     MCKFIOVR     V=R SURVIVAL AFTER RE-IPL DISALLOWED BY
                             THE I/O SUB-SYSTEM.

00C                 1X       RESERVED FOR FUTURE IBM USE.
00D   MCKFOOT5      001      FOOTPRINTS: MISCELLANEOUS.

        BITS DEFINED IN MCKFOOT5 (AT HEX DISPLACEMENT: D)

         80     MCKFVFIX     VIRTUAL SIDE WAS TOLD DAMAGE WAS FIXED.
         40     MCKFZTOD     FOUND TOD CLOCK BROKEN.  TIMESTAMP IN
                             MCHTOD AND IN TRACE ENTRY IS ALL FF'S.

00E   MCKFOOT6      001      FOOTPRINTS: CORRECTIVE ACTIONS TAKEN.

        BITS DEFINED IN MCKFOOT6 (AT HEX DISPLACEMENT: E)

         80     MCKFXCTL     RE-ESTABLISHED HOST CONTROL REGISTERS.
         20     MCKFXCKC     RE-ESTABLISHED CLOCK COMP'TOR (APPROX).
         10     MCKFXPT      RE-ESTABLISHED CPU TIMER (APPROX).

00F   MCKFOOT7      001      FOOTPRINTS: CORRECTIVE ACTIONS TAKEN.

        BITS DEFINED IN MCKFOOT7 (AT HEX DISPLACEMENT: F)

         80     MCKFATSK     ATTEMPTED TO RUN INTERRUPTED SYSTEM
                             TASK TO COMPLETION.
         40     MCKFXTSK     ATTEMPT TO COMPLETE INTERRUPTED SYSTEM
                             TASK WAS SUCCESSFUL.
         20     MCKFRMOF     MARKED FRAME TO BE TAKEN OFFLINE.
         10     MCKFXKEY     RESTORED HOST STORAGE KEY.
         08     MCKFXPAG     ACTED TO REFRESH AN UNCHANGED GUEST PG.

010                 0D
010   MCKCLKS       016      LABEL FOR MOVING BOTH CLOCKS AT ONCE.
010   MCKCTIMR      008      LOGGED OUT CPU TIMER.
018   MCKCCOMP      008      LOGGED OUT CLOCK COMPARATOR.
020   MCKTRC        008      START OF LOCAL TRACE TABLE.  THE
                             ENTRIES IN THIS TABLE ARE DEFINED BY A
                             REDEFINITION (ORG) OF MCKTRCUR (BELOW).
020   MCKTRC1       016      OLDEST ENTRY IN TRACE TABLE.
030   MCKTRC2       016      2ND OLDEST ENTRY IN TRACE TABLE.
040   MCKTRC3       016      ... ETC.
050   MCKTRC4       016      ... ETC.
060   MCKTRCUR      016      CURRENT (MOST RECENT) TRACE ENTRY.

                      EQUATES

         70     MCKTRCZ      MARKS END OF TRACE TABLE.

070   MCKVFSCT      004      COUNT OF VECTOR FACILITY SOURCE MACHINE
                             CHECKS

                      EQUATES

         0C     MCKVFSMX     MAXIMUM NUMBER OF VFS MACHINE CHECKS
                             ALLOWED BEFORE TAKING THE VF OFFLINE

074                 1H       RESERVED FOR FUTURE IBM USE.
076   MCKCPUAD      002      'STAP' CPUID, FOR MSG'S ISSUED BY SLIH.
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EQUATES

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         78     MCKDLEN     LENGTH OF DAMAGE ASSESSMENT AREA.
         0F     MCKDSIZE    SIZE (DBLWDS) OF D.A. AREA.

078   MCKREC      004        ADDRESS OF RECORDING RECORD (MCHREC).
07C   MCKFAILF    001        FAILURE CLASSIFICATION CONTROL FLAGS

        BITS DEFINED IN MCKFAILF (AT HEX DISPLACEMENT: 7C)

         80     MCKSOMIN    SOME HOST VALIDITY BITS ARE INVALID
         10     MCKHARD     HARD FAILURE WAS ENCOUNTERED
         08     MCKDEGRP    DEGRADE FAILURE TO PASS TO GUEST
         04     MCKDEGRN    DEGRADE FAILURE NOT TO PASS TO GUEST
         02     MCKPASS     FAILURE TO BE PASSED TO GUEST
         01     MCKSOFT     SOFT FAILURE WAS ENCOUNTERED

07D                3X        RESERVED FOR FUTURE IBM USE.
080   MCKHNDL2    004        ADDRESS POINTING TO A SECONDARY MACHINE
                             CHECK HANDLER, OR ZERO IF THE PRIMARY
                             HANDLER IS TO HANDLE THE MACHINE CHECK.
084   MCKC14SV    004        VALUE IN CR14 PRIOR TO MACHINE CHECK.
088   MCKTODR2    004        1ST 4 BYTES OF TOD AT LAST MCKCNT RESET.
08C   MCKTODR1    004        1ST 4 OF TOD AT LAST MCKCNTEQ OVERRIDE.
090   MCKCLEAR    001        WE ZERO ALL FIELDS BETWEEN HERE AND
                             MCKEND (AND A FEW OF THE PRECEEDING FIELDS     *
                             AS WELL) WHEN WE START PROCESSING A PRIMARY    *
                             MACHINE CHECK.                                 *
090   MCKHIC      008        WORKING MCIC FOR HOST.  THIS STARTS OUT
                             AS A COPY OF THE REAL MCIC, THEN WE ALTER
                             THE VALIDITY BITS IN IT AS WE CORRECT DAMAGE
                             OR DISCOVER MORE DAMAGE.  IT'S VALIDITY BITS
                             MAINTAIN A RUNNING SCORE, AS WE GO THRU THE
                             MACHINE-CHECK HANDLER, OF WHAT ENTITIES
                             REMAIN DAMAGED.
090   MCKHIC0     001        HOST WORKING COPY, MCIC BYTE 0.

        BITS DEFINED FOR MCKHIC0 BY HCPEQUAT MCIC0

091   MCKHIC1     001        HOST WORKING COPY, MCIC BYTE 1.

        BITS DEFINED FOR MCKHIC1 BY HCPEQUAT MCIC1

092   MCKHIC2     001        HOST WORKING COPY, MCIC BYTE 2.

        BITS DEFINED FOR MCKHIC2 BY HCPEQUAT MCIC2

093   MCKHIC3     001        HOST WORKING COPY, MCIC BYTE 3.

        BITS DEFINED FOR MCKHIC3 BY HCPEQUAT MCIC3

094   MCKHIC4     001        HOST WORKING COPY, MCIC BYTE 4.
095   MCKHIC5     001        HOST WORKING COPY, MCIC BYTE 5.

        BITS DEFINED FOR MCKHIC5 BY HCPEQUAT MCIC5

096   MCKHIC6     002        HOST WORKING COPY, MCIC BYTES 6 & 7.
098   MCKGIC      008        WORKING MCIC FOR GUEST.  THIS STARTS
                             OUT AS A COPY OF THE REAL MCIC, THEN WE ALTER
                             THE VALIDITY BITS IN IT AS WE CORRECT DAMAGE
                             OR DISCOVER MORE DAMAGE.  IT'S VALIDITY BITS
                             MAINTAIN A RUNNING SCORE, AS WE GO THRU THE
                             MACHINE-CHECK HANDLER, OF WHAT ENTITIES
                             REMAIN DAMAGED.
098   MCKGIC0     001        GUEST WORKING COPY, MCIC BYTE 0.

        BITS DEFINED FOR MCKGIC0 BY HCPEQUAT MCIC0

099   MCKGIC1     001        GUEST WORKING COPY, MCIC BYTE 1.

        BITS DEFINED FOR MCKGIC1 BY HCPEQUAT MCIC1

09A   MCKGIC2     001        GUEST WORKING COPY, MCIC BYTE 2.
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        BITS DEFINED FOR MCKGIC2 BY HCPEQUAT MCIC2

09B   MCKGIC3     001       GUEST WORKING COPY, MCIC BYTE 3.

        BITS DEFINED FOR MCKGIC3 BY HCPEQUAT MCIC3

09C   MCKGIC4     001       GUEST WORKING COPY, MCIC BYTE 4.
09D   MCKGIC5     001       GUEST WORKING COPY, MCIC BYTE 5.

        BITS DEFINED FOR MCKGIC5 BY HCPEQUAT MCIC5

09E   MCKGIC6     002       GUEST WORKING COPY, MCIC BYTES 6 & 7.
0A0               0D
0A0   MCKMCHSV    064       SAVE AREA FOR HCPMCH AND HCPMCS USE ONLY
0A0   MCKMCHR0    004       SAVE REGISTER 0.
0A4   MCKMCHR1    004       SAVE REGISTER 1.
0A8   MCKMCHR2    004       SAVE REGISTER 2.
0AC   MCKMCHR3    004       SAVE REGISTER 3.
0B0   MCKMCHR4    004       SAVE REGISTER 4.
0B4   MCKMCHR5    004       SAVE REGISTER 5.
0B8   MCKMCHR6    004       SAVE REGISTER 6.
0BC   MCKMCHR7    004       SAVE REGISTER 7.
0C0   MCKMCHR8    004       SAVE REGISTER 8.
0C4   MCKMCHR9    004       SAVE REGISTER 9.
0C8   MCKMCHRA    004       SAVE REGISTER 10.
0CC   MCKMCHRB    004       SAVE REGISTER 11.
0D0   MCKMCHRC    004       SAVE REGISTER 12.
0D4   MCKMCHRD    004       SAVE REGISTER 13.
0D8   MCKMCHRE    004       SAVE REGISTER 14.
0DC   MCKMCHRF    004       SAVE REGISTER 15.
0E0   MCKMSG      004       MACHINE CHECK MESSAGE BUFFER.
0E0   MCKHDR      006       FIXED MESSAGE HEADER.
0E6   MCKTEXT     064       VARIABLE MESSAGE TEXT.
126   MCK824CD    001       IDENTIFIES TEXT FOR MSG MCH824E.
127   MCK825CD    001       IDENTIFIES TEXT FOR MSG MCH825E.
128               1D        RESERVED FOR FUTURE IBM USE.
130   MCKEND      001       END OF MCKAREA.

                    EQUATES

        30    MCKLEN      LENGTH (BYTES) OF MCKBK.
        26    MCKSIZE     SIZE (DBLWDS) OF MCKBK.


         REDEFINITION - DETAIL OF LOCAL TRACE TABLE ENTRY

060   MCKTRCIC    006       BYTES 0-5 OF MCIC.
066   MCKTRCF1    001       BIT FLAGS OF LOCAL TRACE TABLE ENTRY.

        BITS DEFINED IN MCKTRCF1 (AT HEX DISPLACEMENT: 66)

        80    MCKTRCPM    PRIMARY (NOT 2NDARY) MCH-CHK OR CHK-STP.
        40    MCKTRCCS    ERROR WAS CHECK-STOP, NOT MACHINE CHK.
        01    MCKTRCSI    PFXHSIE FLAG WAS ON (RUNNING IN SIE).

067               1X        RESERVED FOR FUTURE IBM USE.
068   MCKTRCTD    004       1ST 4 BYTES FROM TOD CLOCK.  (THIS IS
                            STORED ONLY IN PRIMARY ENTRIES, NOT SECONDARY.)
06C   MCKTRCIA    004       INSTRUCTION ADDRESS FROM MCH OLD PSW.

         REDEFINITION - DETAIL OF LOCAL TRACE TABLE ENTRY


         THIS REDEFINITION IS USED DURING THE RESTORATION OF *


         REDEFINITION -


         REDEFINITION -

0D8   MCKOPNP     008       SAVED ORIGINAL PROGRAM NEW PSW
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MCKBK	001	000	MCKHDR	006	0E0	MCKVFSMX	001	00C
MCKCCOMP	008	018	MCKHIC	008	090	MCKVMRR	008	0B0
MCKCLEAR	001	090	MCKHIC0	001	090	MCKVSRIU	001	0C6
MCKCLKS	016	010	MCKHIC1	001	091	MCKVSRR	008	0C0
MCKCNT	002	004	MCKHIC2	001	092	MCK824CD	001	126
MCKCNTEQ	002	002	MCKHIC3	001	093	MCK825CD	001	127
MCKCNT2N	002	000	MCKHIC4	001	094			
MCKCPUAD	002	076	MCKHIC5	001	095			
MCKCTIMR	008	010	MCKHIC6	002	096			
MCKC14SV	004	084	MCKHNDL2	004	080			
MCKDAMAG	008	000	MCKHOTMK	002	006			
MCKDEGRN	001	004	MCKLEN	001	130			
MCKDEGRP	001	008	MCKMCHRA	004	0C8			
MCKDLEN	001	078	MCKMCHRB	004	0CC			
MCKDSIZE	001	00F	MCKMCHRC	004	0D0			
MCKEND	001	130	MCKMCHRD	004	0D4			
MCKFABND	001	004	MCKMCHRE	004	0D8			
MCKFAILF	001	07C	MCKMCHRF	004	0DC			
MCKFATSK	001	080	MCKMCHR0	004	0A0			
MCKFDIE1	001	020	MCKMCHR1	004	0A4			
MCKFDIE2	001	010	MCKMCHR2	004	0A8			
MCKFEMER	001	080	MCKMCHR3	004	0AC			
MCKFERCS	001	040	MCKMCHR4	004	0B0			
MCKFETYP	001	00A	MCKMCHR5	004	0B4			
MCKFHOT	001	020	MCKMCHR6	004	0B8			
MCKFIOVR	001	001	MCKMCHR7	004	0BC			
MCKFIPL	001	008	MCKMCHR8	004	0C0			
MCKFIPLI	001	004	MCKMCHR9	004	0C4			
MCKFIXUP	001	080	MCKMCHSV	064	0A0			
MCKFLAGS	008	008	MCKMSG	004	0E0			
MCKFMCIC	001	008	MCKOPNP	008	0D8			
MCKFMISC	001	008	MCKPASS	001	002			
MCKFNOTM	001	040	MCKREC	004	078			
MCKFNOVR	001	002	MCKSIZE	001	026			
MCKFOOT5	001	00D	MCKSOFT	001	001			
MCKFOOT6	001	00E	MCKSOMIN	001	080			
MCKFOOT7	001	00F	MCKTEXT	064	0E6			
MCKFRMOF	001	020	MCKTHLD1	001	009			
MCKFSIE	001	040	MCKTHLD2	001	00A			
MCKFTERM	001	00B	MCKTIM1	001	258			
MCKFVFIX	001	080	MCKTIM2	001	12C			
MCKFXCKC	001	020	MCKTODR1	004	08C			
MCKFXCTL	001	080	MCKTODR2	004	088			
MCKFXKEY	001	010	MCKTRC	008	020			
MCKFXPAG	001	008	MCKTRCCS	001	040			
MCKFXPT	001	010	MCKTRCF1	001	066			
MCKFXTSK	001	040	MCKTRCIA	004	06C			
MCKFZTOD	001	040	MCKTRCIC	006	060			
MCKF2CS	001	010	MCKTRCPM	001	080			
MCKF2ND	001	020	MCKTRCSI	001	001			
MCKGIC	008	098	MCKTRCTD	004	068			
MCKGIC0	001	098	MCKTRCUR	016	060			
MCKGIC1	001	099	MCKTRCZ	001	070			
MCKGIC2	001	09A	MCKTRC1	016	020			
MCKGIC3	001	09B	MCKTRC2	016	030			
MCKGIC4	001	09C	MCKTRC3	016	040			
MCKGIC5	001	09D	MCKTRC4	016	050			
MCKGIC6	002	09E	MCKVACR	008	0A0			
MCKHARD	001	010	MCKVFSCT	004	070			

HCPMCVBK— VIRTUAL MACHINE CHECK BLOCK

DSECT NAME: MCVBK

DESCRIPTIVE NAME: VIRTUAL MACHINE CHECK BLOCK

FUNCTION: HCPMCVBK MAINTAINS THE DESCRIPTION OF A MACHINE CHECK INCIDENT BEFORE THE INTERRUPT IS REFLECTED TO THE GUEST. THERE ARE THREE TYPES OF MCVBKS MAINTAINED IN THE SYSTEM. MCVBK (DYNAMICALLY ALLOCATED MCVBK) STORAGE IS OBTAINED FOR A DYNAMICALLY ALLOCATED MCVBK WHEN REQUIRED. IT HAS TWO USES. THE CONTROL PROGRAM BUILDS MCVBKS WHEN SOME SYSTEM INCIDENT, THAT IS NOT A REAL MACHINE CHECK, IS TO BE REFLECTED TO THE GUEST AS A MACHINE CHECK. IT IS ALSO USED TO MAKE COPIES OF MCVBKS TO ALLOW THE REFLECTION OF MACHINE CHECKS TO A GUEST TO OCURR ASYNCHRONOUSLY WITH OTHER CP FUNCTION. MCVBK (CPU MCVBK) WE REFER TO THIS MCVBK AS THE 'CPU MCVBK' BECAUSE EACH CPU OWNS ONE, AND ALSO TO DISTINGUISH IT FROM THE 'SYSTEM TERMINATION MCVBK' DESCRIBED BELOW. THE CPU MCVBK CONTAINS A DESCRIPTION OF A REAL ERROR INCIDENT (IF ANY) CURRENTLY IN PROGRESS ON THIS CPU. IT IS NEEDED MAINLY FOR THE BENEFIT OF THE VIRTUAL SIDE OF THE SYSTEM (HCPGMCMC) SO THAT MACHINE CHECKS CAN BE REFLECTED TO GUESTS. HCPMCH CALLS HCPGMCMC AND PASSES THE CPU MCVBK CONTAINING THE DESCRIPTION OF THE INCIDENT. THE CPU MCVBK IS ANCHORED IN THE PREFIX PAGE BY 'PFXMCVBK'. DATA IS PLACED IN THE MCVBK AT THE START OF AN INCIDENT AND IS CLEARED AT THE END OF THE INCIDENT SO THAT THE BLOCK REMAINS EMPTY UNTIL THE NEXT INCIDENT. MCVBK (SYSTEM TERMINATION MCVBK) THERE ARE ALSO 'SYSTEM TERMINATION' MCVBKS (THERE ARE 32 IN THE SYSTEM). THEY ARE PERMANENTLY ALLO- BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

LOCATED BY:

HCPWRKMC	(ANCHOR) SYSTEM TERMINATION PERMANENT MCVBKS
VMDMCV	FIELD OF HCPVMDBK
PFXMCVBK	FIELD OF HCPPFXBK (PERMANENTLY ALLOCATED)
MCVNEXT	FORWARD CHAIN
CHCMCV	FIELD OF HCPCHCBK

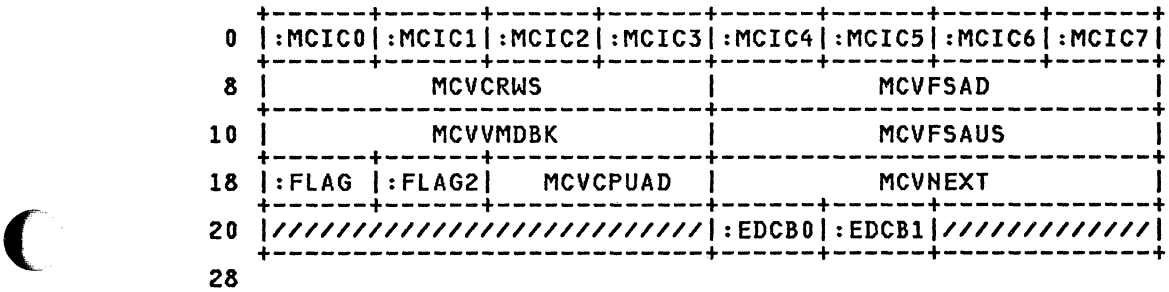
CREATED BY:

HCPGMC	TO SEPARATE MCVBKS RECEIVED INTO ELEMENTARY MACHINE CHECKS AND TO GENERATE MCVBKS FOR MACHINE CHECK REFLECTION TO A GUEST.
HCPMCH	TO COPY PERMANENTLY ALLOCATED MCVBK.
HCPMCW	WHEN GUEST WAS RUNNING ON A PROCESSOR THAT IS RESET. TO COPY MCVBK RECEIVED FROM HCPALL.
HCPMPS	ACQUIRES PERMANENTLY ALLOCATED MCVBK FOR EACH PROCESSOR.
HCPRFC	CREATES A CRW MCVBK.
HCPVDB	CREATES A CRW MCVBK.
HCPVOF	CREATES A CRW MCVBK.
HCPVSC	CREATES A CRW MCVBK.

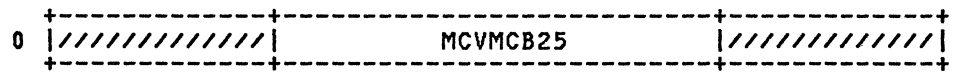
DELETED BY:

HCPMCH	DELETES MCVBKS CREATED BY HCPMCH
HCPMCW	DELETES MCVBKS CREATED BY HCPMCW
HCPMCV	DELETES MCVBK AFTER REFLECTING MACHINE CHECK TO THE GUEST
HCPMPS	RETURNS PERMANENTLY ALLOCATED MCVBK FOR EACH PROCESSOR.

MCVBK - VIRTUAL MACHINE-CHECK BLOCK



REDEFINITION - MACHINE CHECK INTERRUPTION CODE



disp	name	length	description
000	MCVMCIC	008	MACHINE CHECK INTERRUPTION CODE (FOR PURPOSES OF HCPGMC, THIS APPLIES TO THE MCVVMDBK GUEST, EXCEPT FOR THE STORAGE ERROR BITS WHICH APPLY TO MCVFSAUS.)
000	MCVMCWD0	004	FIRST WORD OF MCVMCIC
000	MCVMCB01	002	BYTES 0 AND 1 OF MCVMCIC
000	MCVMCIC0	001	MACHINE CHECK IRPT CODE BYTE 0
	BITS DEFINED FOR MCVMCIC0 BY HCPEQUAT MCIC0		
001	MCVMCIC1	001	MACHINE CHECK IRPT CODE BYTE 1
	BITS DEFINED FOR MCVMCIC1 BY HCPEQUAT MCIC1		
002	MCVMCIC2	001	MACHINE CHECK IRPT CODE BYTE 2
	BITS DEFINED FOR MCVMCIC2 BY HCPEQUAT MCIC2		
003	MCVMCIC3	001	MACHINE CHECK IRPT CODE BYTE 3
	BITS DEFINED FOR MCVMCIC3 BY HCPEQUAT MCIC3		
004	MCVMCWD1	004	SECOND WORD OF MCVMCIC
004	MCVMCIC4	001	MACHINE CHECK IRPT CODE BYTE 4
	BITS DEFINED FOR MCVMCIC4 BY HCPEQUAT MCIC4		
005	MCVMCIC5	001	MACHINE CHECK IRPT CODE BYTE 5
	BITS DEFINED FOR MCVMCIC5 BY HCPEQUAT MCIC5		
006	MCVMCIC6	001	MACHINE CHECK IRPT CODE BYTE 6
007	MCVMCIC7	001	MACHINE CHECK IRPT CODE BYTE 7
008	MCVCRWS	004	CHANNEL REPORT WORD ANCHOR
00C	MCVFSAD	004	GUEST ABSOLUTE FAILING STORAGE ADDRESS. (APPLIES TO THE MCVFSAUS GUEST FOR HCPGMC.)
010	MCVVMDBK	004	ADDR OF VMDBK RUNNING ON A REAL CPU AT THE TIME THE REAL CPU STATE WAS RECORDED IN THIS MCVBK. (FROM PFXRNUSR)
014	MCVFSAUS	004	ADDR OF VMDBK OWNING THE BAD FRAME IF HOST SEES A STORAGE ERROR AND VALID FSA. OTHERWISE ADDR IS ZERO.
018	MCVFLAG	001	MCVBK BIT FLAGS.
	BITS DEFINED IN MCVFLAG (AT HEX DISPLACEMENT: 18)		
	80 MCVABEND		FAILURE IS AN ABEND, NOT A MACHINE CHECK. (APPLIES TO THE MCVVMDBK GUEST FOR HCPGMC.)
	40 MCVCKSTP		FAILURE IS A CHECK-STOP, NOT A MACHINE CHECK. OR FAILURE IS TIME-OUT + CHECK-STOP. MCVMCIC AND MCVFSAD ARE PROBABLY 0. (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.)
	20 MCVTMOUT		FAILURE IS TIMEOUT, NOT A

			MACHINE CHECK. MCVCKSTP WILL ALSO BE SET IF 'SIGP SENSE' SHOWS CHECK-STOP AS CAUSE. MCVMCIC & MCVFSAD ARE PROBABLY ZERO. (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.)
	10	MCVCUTOF	GUEST WAS TERMINATED ABRUPTLY. IF RUNNING SIE AT THE TIME, THE GUEST HAS NOT BEEN 'UN-RUN'. THE ONLY EXAMPLE AT PRESENT: GUEST WAS STOPPED BY SIGP RESET. (APPLIES TO R11 GUEST FOR HCPGMC.)
	08	MCVCMPLT	ANY DAMAGE TO THE TASK THAT WAS RUNNING WAS REPAIRED BY THE MACHINE-CHECK FLIH. EITHER: (1) A HOST TASK INTERRUPTED BY MACHINE CHECK WAS LATER RESUMED AND COMPLETED SUCCESSFULLY, OR (2) ALL DAMAGE TO AN INTERRUPTED GUEST HAS BEEN CORRECTED. (APPLIES TO THE MCVVMDBK GUEST FOR HCPGMC.)
	04	MCVQWRK	AT THE TIME OF THE INCIDENT THERE WAS QUEUED WORK FOR THE GUEST, BUT IT HAS BEEN LOST (NEVER COMPLETED). (APPLIES TO R11 GUEST FOR HCPGMC.)
	02	MCVSTGFX	THE STORAGE ERROR OR STORAGE KEY ERROR IDENTIFIED BY THE FAILING STORAGE ADDRESS IN MCVFSAD HAS BEEN CORRECTED BY THE MACHINE-CHECK FLIH. THIS FLAG IS MEANINGFUL ONLY IF THERE WAS A STORAGE ERROR AND A VALID FSA. (APPLIES TO THE MCVFSAUS GUEST FOR HCPGMC.)
019	MCVFLAG2	001	MCVBK BIT FLAGS.

BITS DEFINED IN MCVFLAG2 (AT HEX DISPLACEMENT: 19)

80	MCVFSIE	IF SET, CP WAS IN THE 'SIE' STATE AT THE TIME OF THE ERROR. (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.) SEE HCPMCH FOR HOW THIS WAS DETERMINED.
40	MCVHRUN	THIS IS A COPY OF PFXHRUN, TAKEN AT THE TIME OF THE ERROR. IF SET, THE VMDBK WAS IN THE 'RUN' STATE AT THE TIME OF THE ERROR. (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.)
20	MCVUNRUN	THE MACHINE-CHECK HANDLER HAS SUCCESSFULLY UN-RUN THE GUEST. (THIS FLAG HAS MEANING ONLY IF MCVHRUN IS SET.) (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.)
10	MCVSCS	THE VIRTUAL CONFIGURATION MUST ENTER SYSTEM CHECK-STOP.

01A	MCVCPUAD	002	THE CPU ADDRESS OF THE CPU IN THE REAL HARDWARE CONFIGURATION WHOSE ERROR IS BEING REPORTED THROUGH THIS MCVBK.
01C	MCVNEXT	004	NEXT MCVBK IF ANY (APPLIES TO MCVVMDBK GUEST FOR HCPGMC.)
020		F	RESERVED FOR IBM USE
024	MCVEDMDC	004	MACHINE CHECK EXTERNAL-DAMAGE CODE.
024	MCVEDCB0	001	FIRST BYTE OF EXTERNAL-DAMAGE CODE. (S/370 ONLY)
025	MCVEDCB1	001	SECOND BYTE OF EXTERNAL-DAMAGE

```
                        CODE.

        BITS DEFINED FOR MCVEDCB1 BY HCPEQUAT MCEXTDMC

026                H        RESERVED FOR FUTURE IBM USE

                      EQUATES

        40     MCVZCRWA     *****.....????? TEMPORARY/OBSOLETE BIT
        20     MCVZCRWB     *****.....????? TEMPORARY/OBSOLETE BIT
        10     MCVZCRWC     *****.....????? TEMPORARY/OBSOLETE BIT
        04     MCVZCRWV     *****.....????? TEMPORARY/OBSOLETE BIT
                            FOLLOWING ARITHMETIC USED TO PRODUCE MCVZNM1.
        00     MCVZNMZ1
                            THE FOLLOWING ARE MASK VALUES WHICH DEFINE VALIDITY
                            BITS WITHIN THE MACHINE CHECK INTERRUPTION CODE
                            WHICH ARE NORMALLY ON (VALID).

                            MCVZNM1 IS FOR MCIC BITS 0-31.
                            MCVZNM2 IS FOR MCIC BITS 32-63.

                            THESE MASK VALUES ALSO DEFINE THE BITS WHICH ARE
                            AND-ED TOGETHER WHEN MERGING TWO MACHINE CHECK
                            INTERRUPTION CODES.  BITS NOT CALLED OUT BY
                            THE MASK VALUES ARE OR-ED TOGETHER.
        1D     MCVZNM1
        00     MCVZNM2
        28     MCVLEN       LENGTH OF AN MCVBK.
        05     MCVSIZE      MCVBK SIZE IN DOUBLE WORDS

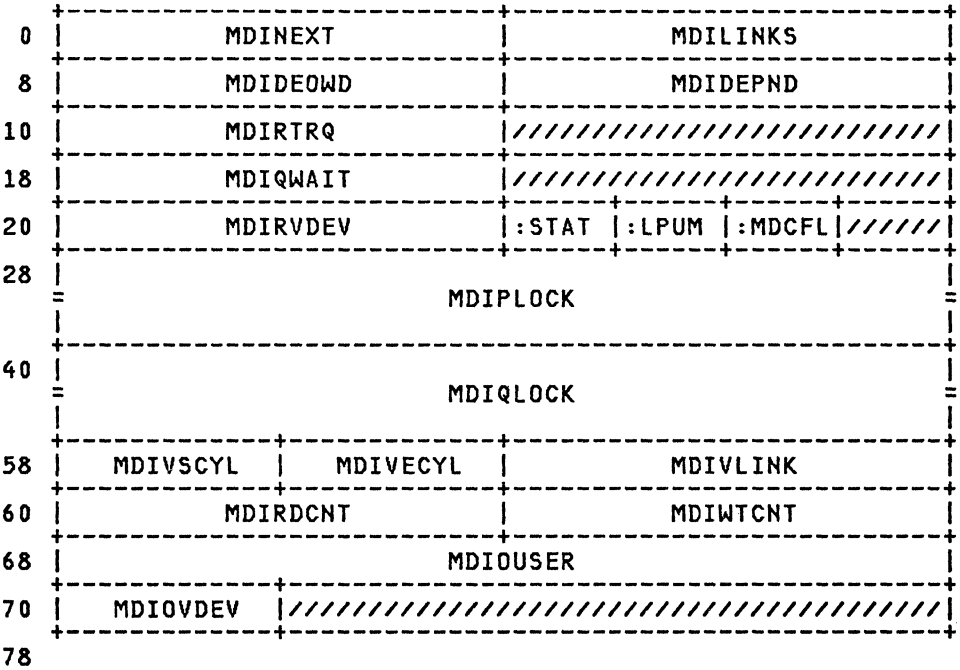
         REDEFINITION - MACHINE CHECK INTERRUPTION CODE

000                   XL2       BYTES 0 AND 1 OF MCVMCIC
002    MCVMCB25       004       BYTES 2 - 5   OF MCVMCIC
006                   XL2       BYTES 6 AND 7 OF MCVMCIC
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
MCVABEND	001	080	MCVMCIC3	001	003
MCVBK	001	000	MCVMCIC4	001	004
MCVCKSTP	001	040	MCVMCIC5	001	005
MCVCMPLT	001	008	MCVMCIC6	001	006
MCVCPUAD	002	01A	MCVMCIC7	001	007
MCVCRWS	004	008	MCVMCWD0	004	000
MCVCUTOF	001	010	MCVMCWD1	004	004
MCVEDCB0	001	024	MCVNEXT	004	01C
MCVEDCB1	001	025	MCVQWRK	001	004
MCVEDMDC	004	024	MCVSCS	001	010
MCVFLAG	001	018	MCVSIZE	001	005
MCVFLAG2	001	019	MCVSTGFX	001	002
MCVFSAD	004	00C	MCVTMOUT	001	020
MCVFSAUS	004	014	MCVUNRUN	001	020
MCVFSIE	001	080	MCVVMDBK	004	010
MCVHRUN	001	040	MCVZCRWA	001	040
MCVLEN	001	028	MCVZCRWB	001	020
MCVMCB01	002	000	MCVZCRWC	001	010
MCVMCB25	004	002	MCVZCRWV	001	004
MCVMCIC	008	000	MCVZNMZ1	001	F00
MCVMCIC0	001	000	MCVZNM1	001	F1D
MCVMCIC1	001	001	MCVZNM2	001	000
MCVMCIC2	001	002			

MDISK - MINIDISK CONTROL BLOCK



disp	name	length	description
000	MDINEXT	004	NEXT MDISK ON THIS REAL DEVICE
004	MDILINKS	004	NUMBER OF LINKS TO THIS EXTENT
008	MDISIOQS	008	NORMAL START REQUEST QUEUES
008	MDIDEOWD	004	ANCHOR FOR QUEUE OF UNSOLICITED IORBKS OWED TO DEVICES
00C	MDIDEPND	004	ANCHOR FOR QUEUE OF PENDING UNSOLICITED IORBKS
010	MDIRTRQ	004	ADDRESS OF TIMER REQUEST BLOCK
014		A	RESERVED FOR FUTURE IBM USE
018	MDIDIAQS	008	DIAGNOSE I/O QUEUES
018	MDIQWAIT	004	ANCHOR FOR QUEUE OF IORBKS WAITING FOR RELEASE TO RETRY DIAGNOSE I/O
01C		A	RESERVED FOR FUTURE IBM USE
020	MDILLOCK	008	LOGICAL LOCK --- DEVICE RESERVED
020	MDIRSVD	004	VDEVBK HOLDING DEVICE RESERVED
020	MDIRVDEV	004	ADDRESS OF VDEV RESERVING MINI-DISK (BASE VDEV IF MULTIPLE EXPOSURE DEVICE)
024	MDISTAT	001	STATUS FLAGS

BITS DEFINED IN MDISTAT (AT HEX DISPLACEMENT: 24)

80	MDIRESVD	INDICATES ACTIVE RESERVE
40	MDIRRSVP	REAL RESERVE IS PENDING
20	MDIRELPD	REAL RELEASE IS PENDING

025	MDILPUM	001	MASK FOR LOGICAL PATH ON WHICH RESERVE WAS MADE
026	MDIMDCFL	001	FLAG BYTE FOR MINIDISK CACHING
027		1X	RESERVED FOR FUTURE IBM USE
028	MDILOCK	008	LOCKWORD FOR RESERVE/RELEASE STATUS
028	MDIPLOCK	008	PHYSICAL LOCK --- EXTENT IN USE
040	MDIQLOCK	008	LOCKWORD FOR QUEUE MANIPULATION
058	MDIVEXTN	004	VIRTUAL DASD CYL EXTENTS
058	MDIVSCYL	002	VIRTUAL DASD START CYLINDER
05A	MDIVECYL	002	VIRTUAL DASD END CYLINDER

```
05C   MDIVLINK   004      POINTER TO NEXT LINKED VDEV
060   MDIRDCNT   004      READ LINK COUNT FOR MINIDISK
064   MDIWTCNT   004      WRITE LINK COUNT TO MINIDISK
068   MDIOUSER   008      MINI-DISK OWNER USERID
070   MDIOVDEV   002      MINI-DISK OWNER VDEV NUMBER
072              CL6      RESERVED FOR IBM USE
```

EQUATES

```
 0F    MDISIZE     SIZE IN DWS FOR FREE/FRET
```

MORE EQUATES

```
 080   MDINOMDC    MINI-DISK CACHING NOT ALLOWED
 040   MDIBL4K     MINI-DISK HAS CACHED A 4K BLOCK
 020   MDIOVLAP    MINI-DISK OVERLAPPED - PURGE CACHE
```

CROSS REFERENCE

Name	Len	Val/Disp
MDIBL4K	001	040
MDIDEOWD	004	008
MDIDEPND	004	00C
MDIDIAQS	008	018
MDILINKS	004	004
MDILLOCK	008	020
MDILOCK	008	028
MDILPUM	001	025
MDIMDCFL	001	026
MDINEXT	004	000
MDINOMDC	001	080
MDIOUSER	008	068
MDIOVDEV	002	070
MDIOVLAP	001	020
MDIPLOCK	008	028
MDIQLOCK	008	040
MDIQWAIT	004	018
MDIRDCNT	004	060
MDIRELPD	001	020
MDIRESVD	001	080
MDIRRSVP	001	040
MDIRSVD	004	020
MDIRTRQ	004	010
MDIRVDEV	004	020
MDISIOQS	008	008
MDISIZE	001	00F
MDISK	001	000
MDISTAT	001	024
MDIVECYL	002	05A
MDIVEXTN	004	058
MDIVLINK	004	05C
MDIVSCYL	002	058
MDIWTCNT	004	064

MDRREC— MISCELLANEOUS DATA RECORD

DSECT NAME: MDRREC

DESCRIPTIVE NAME: MISCELLANEOUS DATA RECORD

FUNCTION: PROVIDES DATA NEEDED FOR ERROR RECORDING

LOCATED BY:

N/A

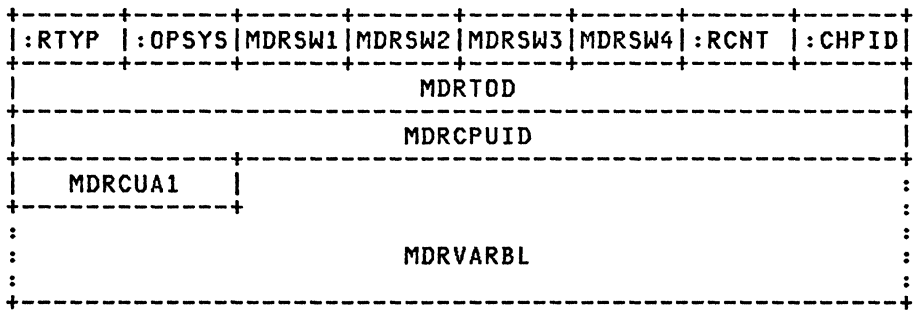
CREATED BY:

HCPIOE, HCPPEN, HCPDRN, OR A GUEST. COPIED TO FREE STORAGE BY HCPVER.

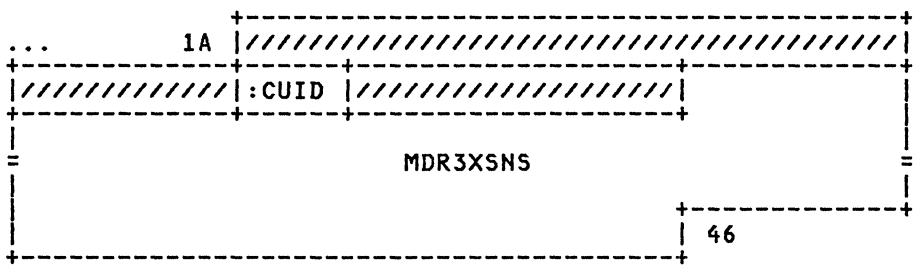
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

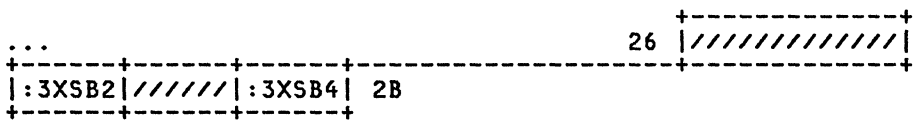
MDRREC - MISCELLANEOUS DATA RECORDING RECORD



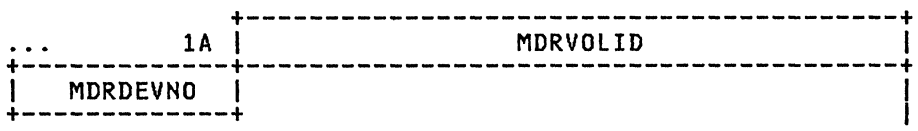
REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 12

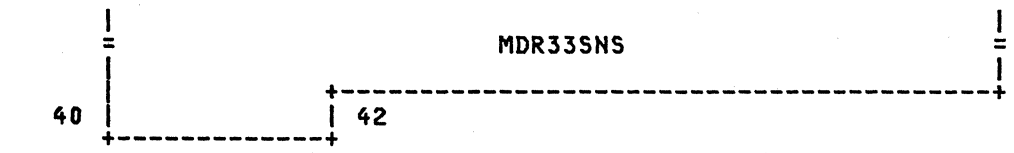


REDEFINITION - SENSE DATA BYTES

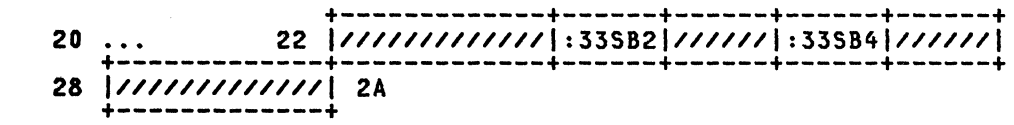


REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 8

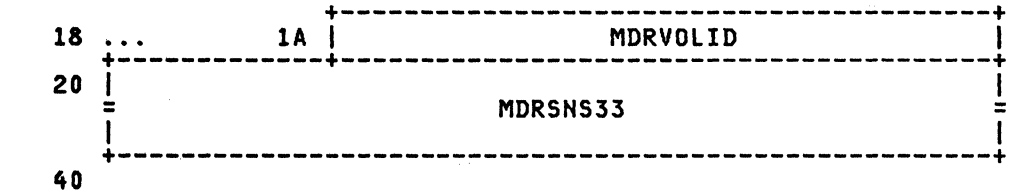




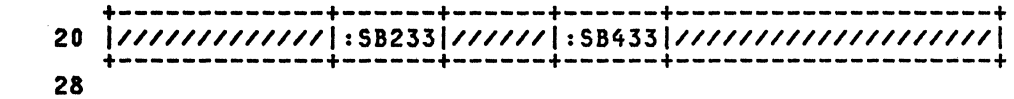
REDEFINITION - SENSE DATA BYTES



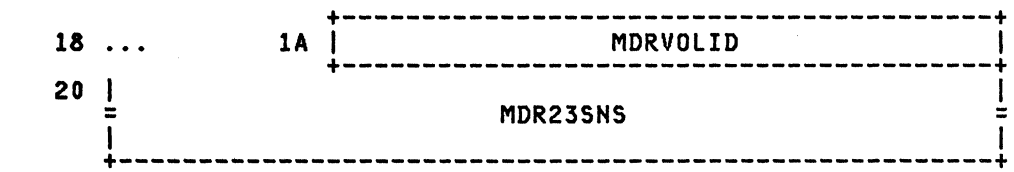
REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 6 OLD



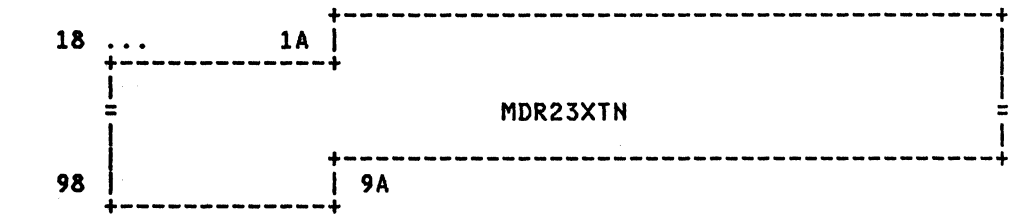
REDEFINITION - SENSE DATA BYTES



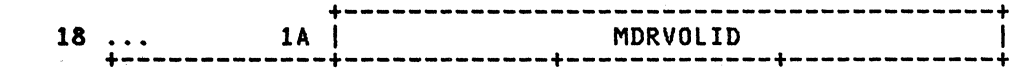
REDEFINITION - 2305 DASD DEVICES

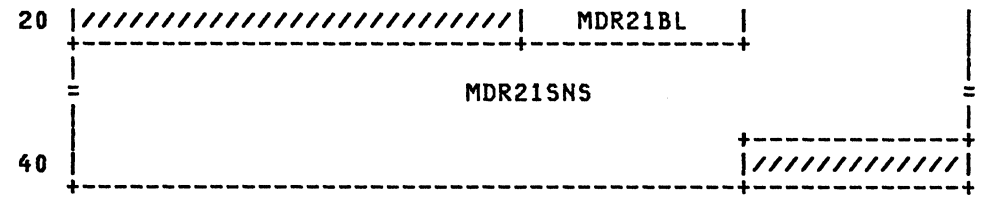


REDEFINITION - 2305 DASD - BUFFERED LOG

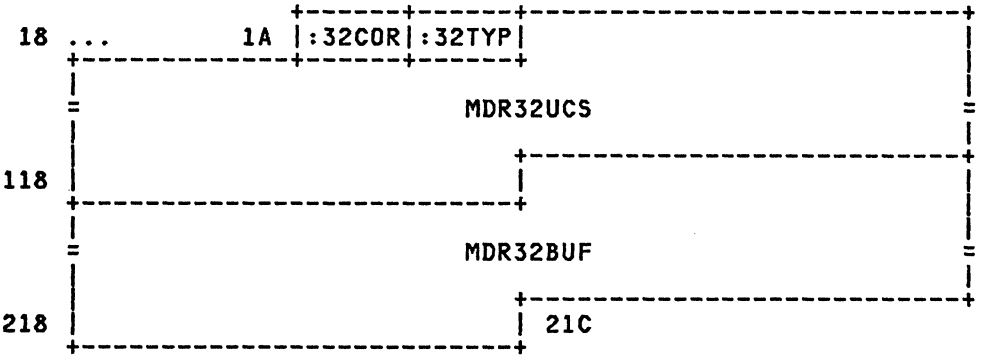


REDEFINITION - 3480 TAPE

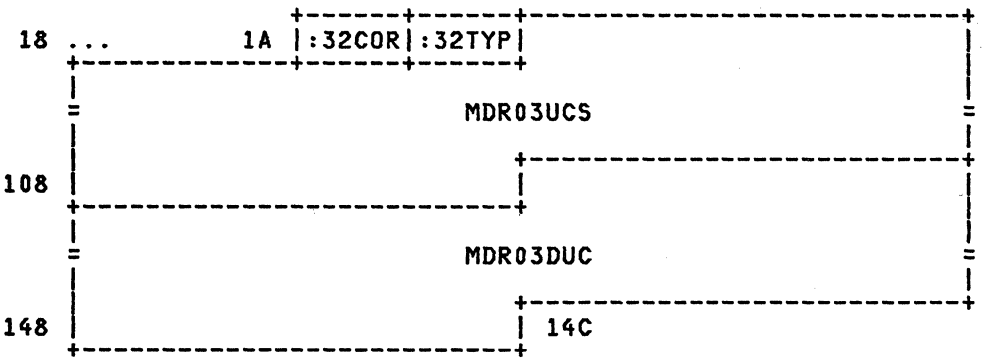




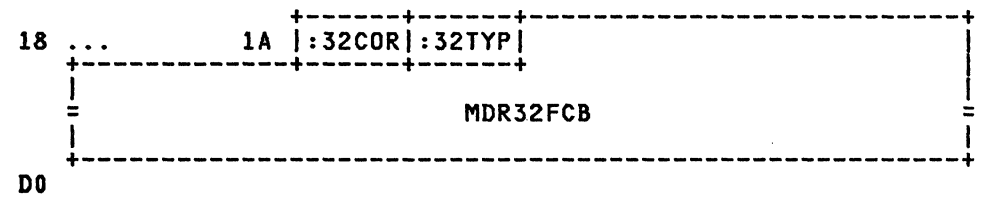
REDEFINITION - 3211 PRINTERS - TYPE 1



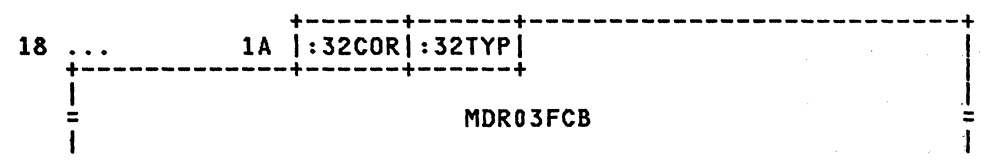
REDEFINITION - 3203 PRINTERS - TYPE 1

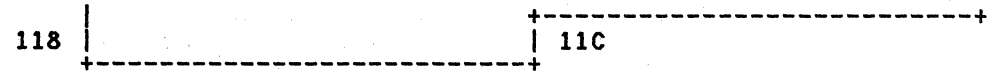


REDEFINITION - 3211 PRINTERS - TYPE 2

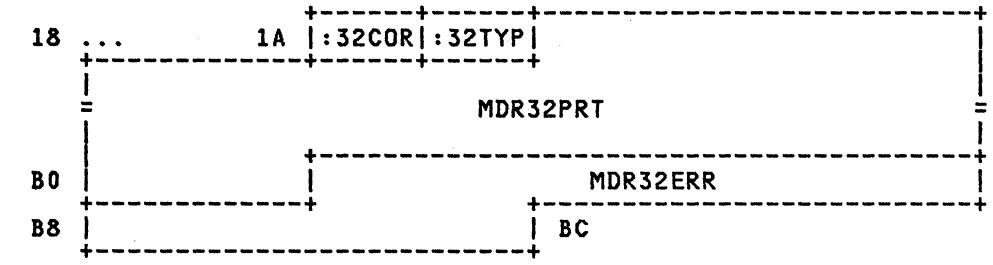


REDEFINITION - 3203 PRINTERS - TYPE 2

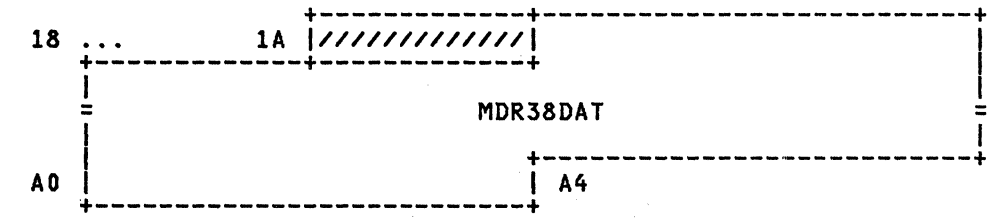




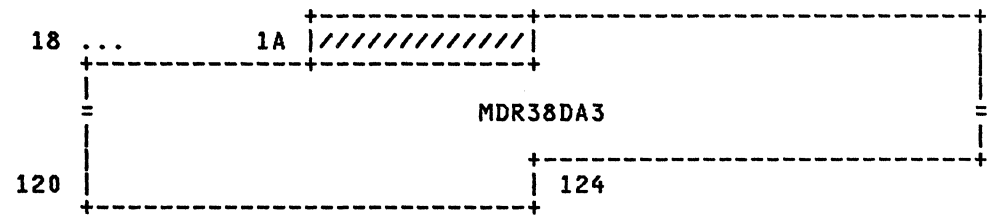
REDEFINITION - 3211/3203 PRINTERS - TYPE 3



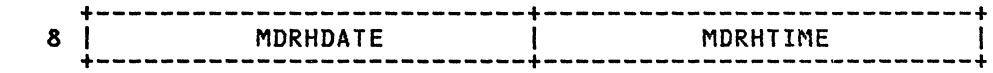
REDEFINITION - 3800 MODEL 1 PRINTER



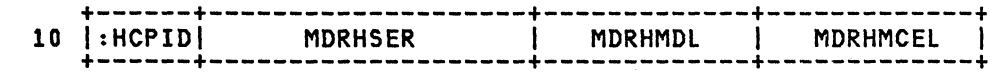
REDEFINITION - 3800 MODEL 3 PRINTER



REDEFINITION - MDRTOD



REDEFINITION - MDRCPUID



REDEFINITION - MDRCUA1 - PRIMARY UNIT ADDRESS

+------+------+

disp	name	length	description
000	MDRRTYP	001	RECORD TYPE
	CODES DEFINED IN MDRRTYP (AT HEX DISPLACEMENT: 0)		
	93	MDRRTCVT	CONVERTED MDR RECORD (NOT FOR VS)
	91	MDRRTMDR	MDR RECORD
	90	MDRRTSVC	MDR RECORD FORMATTED BY SVC 91
001	MDROPSYS	001	OPERATING SYSTEM
	BITS DEFINED FOR MDROPSYS BY HDRREC HDRHSYS		
002	MDRSW1	001	SWITCH BYTE 1
	BITS DEFINED FOR MDRSW1 BY HDRREC HDRHSW0		
003	MDRSW2	001	SWITCH BYTE 2
	BITS DEFINED IN MDRSW2 (AT HEX DISPLACEMENT: 3)		
	40	MDRINCOM	RECORD INCOMPLETE
004	MDRSW3	001	SWITCH BYTE 3
	CODES DEFINED IN MDRSW3 (AT HEX DISPLACEMENT: 4)		
	41	MDR3480	IBM 3480
	40	MDR8809	IBM 8809
	20	MDR3800S	IBM 3800 MODEL 3 / 8
	18	MDR3375	IBM 3375
	17	MDR3370	IBM 3370
	16	MDR3310	IBM 3310
	15	MDR3705N	IBM 3705 (NCP MODE)
	14	MDR3380	IBM 3380
	1C	MDR3380D	IBM 3380 MODEL D
	1B	MDR3380E	IBM 3380 MODEL E
	21	MDR3380J	IBM 3380 MODEL J
	23	MDR3380K	IBM 3380 MODEL K
	13	MDR3277N	IBM 3277 (NCP MODE)
	12	MDR23051	IBM 2305 MOD I
	11	MDR3350	IBM 3350
	10	MDR32XX	IBM 3203, 3262, 3289
	0F	MDRIGAR	IBM IGAR DISKETTE
	0E	MDR3850	IBM 3850
	0D	MDR3895	IBM 3895
	0C	MDR3800	IBM 3800 MOD I
	0B	MDR3277	IBM 3277
	0A	MDR33302	IBM 3330 MOD II
	09	MDR3340S	IBM 3340 AND 3344
	08	MDR2715	IBM 2715
	07	MDR3168	IBM 3168
	06	MDR3670	IBM 3670
	05	MDR3705	IBM 3705 (NON NCP-MODE)
	04	MDR3211	IBM 3211
	03	MDR32XXS	IBM 3277, 3286, 3284(NON NCP-MODE)
	02	MDR23052	IBM 2305 MOD 2
	01	MDR3330	IBM 3330
005	MDRSW4	001	SWITCH BYTE 4
	BITS DEFINED IN MDRSW4 (AT HEX DISPLACEMENT: 5)		
	80	MDRSUBID	VARIABLE LENGTH SUB-ID FIELD USED
	0F	MDRSBLNM	SUB-ID FIELD LENGTH MASK
006	MDRRCNT	001	RECORD COUNT

```
        BITS DEFINED FOR MDRRCNT BY HDRREC HDRHCNT

007    MDRCHPID    001       CHANNEL PATH ID
008    MDRTOD      008       TOD OF SYSTEM FAILURE
010    MDRCPUID    008       CPU ID
018    MDRCUA1     002       PRIMARY CUA ADDRESS

                     EQUATES

         1A     MDRLEN       LENGTH OF FIXED LENGTH PORTION

01A    MDRVARBL    001       START OF VARIABLE LENGTH DATA

          REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 12

01A                CL6       VOLUME SERIAL ID
020                CL2       DEVICE ADDRESS
022    MDRCUID     001       CONTROL UNIT ID
023                CL3       RESERVED

                     EQUATES

         0C     MDR5BL3X     LENGTH OF SUB-ID FIELD

026    MDR3XSNS    032       SENSE DATA

                     EQUATES

         46     MDR3XLEN     SIZE IN BYTES
         09     MDR3XSIZ     SIZE IN DOUBLE WORDS


          REDEFINITION - SENSE DATA BYTES

026                2XL1      SENSE BYTES 0-1
028    MDR3XSB2    001       SENSE BYTE 2

        BITS DEFINED FOR MDR3XSB2 BY HCPSNSEQ SNSB2DA

029                XL1       SENSE BYTE 3
02A    MDR3XSB4    001       SENSE BYTE 4

        BITS DEFINED FOR MDR3XSB4 BY HCPSNSEQ SNSB4DA


          REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 8

01A    MDRVOLID    006       VOLUME SERIAL ID

                     EQUATES

         20     MDRVOLML
                              MINIMUM LENGTH OF DASD MDR RECORD
                              TO INCLUDE THE VOL ID FOR HCPVFR

020    MDRDEVNO    002       DEVICE ADDRESS

                     EQUATES

         08     MDR33SBL     LENGTH OF SUB-ID FIELD

022    MDR33SNS    032       SENSE DATA

                     EQUATES

         42     MDR33LEN     SIZE IN BYTES
         09     MDR33SIZ     SIZE IN DOUBLE WORDS


          REDEFINITION - SENSE DATA BYTES
```

```
022                 2XL1      SENSE BYTES 0-1
024    MDR33SB2     001       SENSE BYTE 2

         BITS DEFINED FOR MDR33SB2 BY HCPSNSEQ SNSB2DA

025                 XL1       SENSE BYTE 3
026    MDR33SB4     001       SENSE BYTE 4

         BITS DEFINED FOR MDR33SB4 BY HCPSNSEQ SNSB4DA

027                 3XL1      SENSE BYTES 5-7

          REDEFINITION - 3375/3380/3330/3340/3350 - LENGTH = 6 0

01A                 CL6       VOLUME SERIAL ID

                       EQUATES

         06      MDRSBL33     LENGTH OF SUB-ID FIELD

020    MDRSNS33     032       SENSE DATA

                       EQUATES

         40      MDRLEN33     SIZE IN BYTES
         08      MDRSIZ33     SIZE IN DOUBLE WORDS


          REDEFINITION - SENSE DATA BYTES

020                 2XL1      SENSE BYTES 0-1
022    MDRSB233     001       SENSE BYTE 2

         BITS DEFINED FOR MDRSB233 BY HCPSNSEQ SNSB2DA

023                 XL1       SENSE BYTE 3
024    MDRSB433     001       SENSE BYTE 4

         BITS DEFINED FOR MDRSB433 BY HCPSNSEQ SNSB4DA

025                 3XL1      SENSE BYTES 5-7

          REDEFINITION - 2305 DASD DEVICES

01A                 CL6       VOLUME SERIAL ID

                       EQUATES

         06      MDR23SBL     LENGTH OF SUB-ID FIELD

020    MDR23SNS     024       SENSE DATA

                       EQUATES

         38      MDR23LEN     SIZE IN BYTES
         07      MDR23SIZ     SIZE IN DOUBLE WORDS


          REDEFINITION - 2305 DASD - BUFFERED LOG

01A    MDR23XTN     128       BUFFERED LOG SENSE DATA

                       EQUATES

         9A      MDRBLLEN     SIZE IN BYTES
         14      MDRBLSIZ     SIZE IN DOUBLE WORDS


          REDEFINITION - 3480 TAPE

01A                 CL6       VOLUME SERIAL ID
020                 F         IBM RESERVED
024    MDR21BL      002       BLOCK LENGTH
```

```
                    EQUATES

        0C    MDR21SBL    LENGTH OF SUB-ID FIELD

026   MDR21SNS   032       FORMAT 21 SENSE BYTES
046              XL2

                    EQUATES

        48    MDR21LEN    SIZE IN BYTES
        09    MDR21SIZ    SIZE IN DOUBLE WORDS


         REDEFINITION - 3211 PRINTERS - TYPE 1

01A   MDR32COR   001       CORRELATION COUNT
01B   MDR32TYP   001       TYPE OF 3211/3203 RECORD

        CODES DEFINED IN MDR32TYP (AT HEX DISPLACEMENT: 1B)

        01    MDR32TP1    UNIVERSAL CHARACTER SET
        02    MDR32TP2    FORMS CONTROL BUFFER
        03    MDR32TP3    PRINT LINE
        02    MDR32SBL    LENGTH OF SUB-ID FIELD

01C   MDR32UCS   256       UNIVERSAL CHARACTER SET
11C   MDR32BUF   256       BUFFER

                    EQUATES

        1C    MDR32LN1    SIZE IN BYTES
        44    MDR32SZ1    SIZE IN DOUBLE WORDS


         REDEFINITION - 3203 PRINTERS - TYPE 1

01A              XL1       CORRELATION COUNT
01B              XL1       TYPE OF 3211/3203 RECORD
01C   MDR03UCS   240       UNIVERSAL CHARACTER SET
10C   MDR03DUC   064       DUALING & UNCOMPARABLE CHAR TABLE

                    EQUATES

        4C    MDR03LN1    SIZE IN BYTES
        2A    MDR03SZ1    SIZE IN DOUBLE WORDS


         REDEFINITION - 3211 PRINTERS - TYPE 2

01A              XL1       CORRELATION COUNT
01B              XL1       TYPE OF 3211/3203 RECORD
01C   MDR32FCB   180       FORMS CONTROL BUFFER

                    EQUATES

        D0    MDR32LN2    SIZE IN BYTES
        1A    MDR32SZ2    SIZE IN DOUBLE WORDS


         REDEFINITION - 3203 PRINTERS - TYPE 2

01A              XL1       CORRELATION COUNT
01B              XL1       TYPE OF 3211/3203 RECORD
01C   MDR03FCB   256       FORMS CONTROL BUFFER

                    EQUATES

        1C    MDR03LN2    SIZE IN BYTES
        24    MDR03SZ2    SIZE IN DOUBLE WORDS


         REDEFINITION - 3211/3203 PRINTERS - TYPE 3
```



```
01A                 XL1       CORRELATION COUNT
01B                 XL1       TYPE OF 3211/3203 RECORD
01C    MDR32PRT     150       PRINT LINE BUFFER
0B2    MDR32ERR     010       FIRST 10 ERROR CHARACTERS

                       EQUATES

          BC     MDR32LN3     SIZE IN BYTES
          18     MDR32SZ3     SIZE IN DOUBLE WORDS


           REDEFINITION - 3800 MODEL 1 PRINTER

01A                 XL2       RESERVED FOR FUTURE IBM USE

                       EQUATES

          02     MDR38SBL     LENGTH OF SUB-ID FIELD

01C    MDR38DAT     136       3800 MODEL 1 DATA

                       EQUATES

          A4     MDR38LEN     SIZE IN BYTES
          15     MDR38SIZ     SIZE IN DOUBLE WORDS


           REDEFINITION - 3800 MODEL 3 PRINTER

01A                 XL2       RESERVED FOR FUTURE IBM USE

                       EQUATES

          02     MDR38SB3     LENGTH OF SUB-ID FIELD

01C    MDR38DA3     264       3800 MODEL 3 DATA

                       EQUATES

          24     MDR38LE3     SIZE IN BYTES
          25     MDR38SI3     SIZE IN DOUBLE WORDS


           REDEFINITION - MDRTOD

008    MDRHDATE     004       SYSTEM DATE OF FAILURE
00C    MDRHTIME     004       SYSTEM TIME OF FAILURE

           REDEFINITION - MDRCPUID

010    MDRHCPID     001       MACHINE VERSION CODE
011    MDRHSER      003       CPU SERIAL NUMBER
014    MDRHMDL      002       CPU MACHINE MODEL NUMBER
016    MDRHMCEL     002       MAX LENGTH OF MACHINE-DEPENDENT
                               MACHINE CHECK EXTENDED LOGOUT

           REDEFINITION - MDRCUA1 - PRIMARY UNIT ADDRESS

018                 XL1       UNCHANGED PORTION OF MDRCUA1

                       EQUATES

          02     MDR44CTL     NUMBER OF BITS TO SHIFT RIGHT
                               THE BITS DEFINED BY SNSCNTLR FROM
                               MDR33SB4 OR MDRSB433 FOR 3344
                               UNIT ADDRESS MODIFICATION

019    MDRPRIUA     001       BYTE THAT GETS MODIFIED

          BITS DEFINED IN MDRPRIUA (AT HEX DISPLACEMENT: 19)

          F8     MDR30UAM     UNIT ADDRESS UNCHANGED BITS MASK
```

		FOR 3330
DF	MDR5030M	UNCHANGED BITS MASK FOR 3350 IN 3330-1 COMPATIBILITY MODE
C0	MDR44NCM	UNCHANGED BITS MASK FOR 3344

MORE EQUATES

000	MDRBLSBL	LENGTH OF SUB-ID FIELD

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MDRBLLEN	001	09A	MDR21LEN	001	048	MDR3340S	001	009
MDRBLSBL	001	000	MDR21SBL	001	00C	MDR3350	001	011
MDRBLSIZ	001	014	MDR21SIZ	001	009	MDR3370	001	017
MDRCHPID	001	007	MDR21SNS	032	026	MDR3375	001	018
MDRCPUID	008	010	MDR23LEN	001	038	MDR3380	001	014
MDRCUA1	002	018	MDR23SBL	001	006	MDR3380D	001	01C
MDRCUID	001	022	MDR23SIZ	001	007	MDR3380E	001	01B
MDRDEVNO	002	020	MDR23SNS	024	020	MDR3380J	001	021
MDRHCPID	001	010	MDR23XTN	128	01A	MDR3380K	001	023
MDRHDATE	004	008	MDR23051	001	012	MDR3480	001	041
MDRHMCEL	002	016	MDR23052	001	002	MDR3670	001	006
MDRHMDL	002	014	MDR2715	001	008	MDR3705	001	005
MDRHSER	003	011	MDR3XLEN	001	046	MDR3705N	001	015
MDRHTIME	004	00C	MDR3XSB2	001	028	MDR38DAT	136	01C
MDRIGAR	001	00F	MDR3XSB4	001	02A	MDR38DA3	264	01C
MDRINCOM	001	040	MDR3XSIZ	001	009	MDR38LEN	001	0A4
MDRLEN	001	01A	MDR3XSNS	032	026	MDR38LE3	001	124
MDRLEN33	001	040	MDR30UAM	001	0F8	MDR38SBL	001	002
MDROPSYS	001	001	MDR3168	001	007	MDR38SB3	001	002
MDRPRIUA	001	019	MDR32BUF	256	11C	MDR38SIZ	001	015
MDRRCNT	001	006	MDR32COR	001	01A	MDR38SI3	001	025
MDRREC	001	000	MDR32ERR	010	0B2	MDR3800	001	00C
MDRRTCVT	001	093	MDR32FCB	180	01C	MDR3800S	001	020
MDRRTMDR	001	091	MDR32LN1	001	21C	MDR3850	001	00E
MDRRTSVC	001	090	MDR32LN2	001	0D0	MDR3895	001	00D
MDRRTYP	001	000	MDR32LN3	001	0BC	MDR44CTL	001	002
MDRSBLNM	001	00F	MDR32PRT	150	01C	MDR44NCM	001	0C0
MDRSBL3X	001	00C	MDR32SBL	001	002	MDR5030M	001	0DF
MDRSBL33	001	006	MDR32SZ1	001	044	MDR8809	001	040
MDRSB233	001	022	MDR32SZ2	001	01A			
MDRSB433	001	024	MDR32SZ3	001	018			
MDRSIZ33	001	008	MDR32TP1	001	001			
MDRSNS33	032	020	MDR32TP2	001	002			
MDRSUBID	001	080	MDR32TP3	001	003			
MDRSW1	001	002	MDR32TYP	001	01B			
MDRSW2	001	003	MDR32UCS	256	01C			
MDRSW3	001	004	MDR32XX	001	010			
MDRSW4	001	005	MDR32XXS	001	003			
MDRTOD	008	003	MDR3211	001	004			
MDRVARBL	001	01A	MDR3277	001	00B			
MDRVOLID	006	01A	MDR3277N	001	013			
MDRVOLML	006	020	MDR33LEN	001	042			
MDR03DUC	064	10C	MDR33SBL	001	008			
MDR03FCB	256	01C	MDR33SB2	001	024			
MDR03LN1	001	14C	MDR33SB4	001	026			
MDR03LN2	001	11C	MDR33SIZ	001	009			
MDR03SZ1	001	02A	MDR33SNS	032	022			
MDR03SZ2	001	024	MDR3310	001	016			
MDR03UCS	240	01C	MDR3330	001	001			
MDR21BL	002	024	MDR33302	001	00A			

HCPMIHBK— MISSING INTERRUPT HANDLER INFO BLOCK

DSECT NAME: MIHBK

DESCRIPTIVE NAME: MISSING INTERRUPT HANDLER INFO BLOCK

FUNCTION: THE MIHBK IS USED TO REPRESENT TIME LIMITS TO BE CHECKED FOR DEVICES, DEVICE RANGES, OR DEVICE CLASSES WHEN CHECKING FOR MISSING INTERRUPTS

LOCATED BY:

BASEMIHS ANCHOR IN HCPMIH

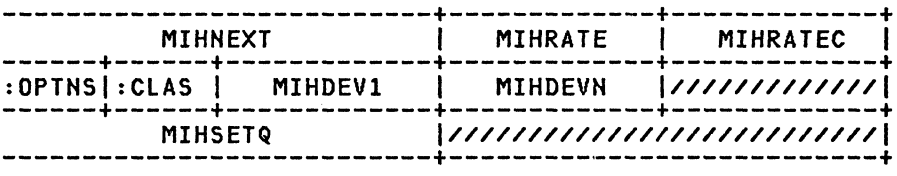
CREATED BY:

MIHBK'S ARE DYNAMICALLY CREATED BY HCPMDT VIA THE "SET MITIME" COMMAND

DELETED BY:

MIHBK'S ARE DELETED BY HCPMIH VIA THE "SET MITIME" COMMAND

MIHBK - MISSING INTERRUPT CONTROL BLOCK



disp	name	length	description
000	MIHNEXT	004	NEXT MIHBK ON THE CHAIN
004	MIHRATE	002	MULTIPLE OF BASE RATE
006	MIHRATEC	002	CURRENT RATE COUNTER
008	MIHOPTNS	001	OPTIONS FLAG

BITS DEFINED IN MIHOPTNS (AT HEX DISPLACEMENT: 8)

80	MIHON	ON SPECIFIED ON COMMAND
40	MIHOFF	OFF SPECIFIED ON COMMAND
20	MIHREADY	READY FOR ACTION

009	MIHCLAS	001	CLASS SPECIFIED ON COMMAND LINE

CODES DEFINED IN MIHCLAS (AT HEX DISPLACEMENT: 9)

FF	MIHALL	ALL DEVICE CLASSES
00	MIHRANGE	DEVICE (RANGE) SPECIFIED
64	MIHMISC	MISCELLANEOUS DEVICE CLASS - CONSISTS OF DASD, GRAF AND SPOOL

00A	MIHDEV1	002	FIRST DEVICE NUMBER IN RANGE
00C	MIHDEVN	002	LAST DEVICE NUMBER IN RANGE
00E		1H	RESERVED FOR FUTURE IBM USE
010	MIHSETQ	004	ADDRESS OF NEXT MIHBK FOR USE BY 'SET MITIME' COMMAND PROCESSING MODULE ONLY
014		1F	RESERVED FOR FUTURE IBM USE

EQUATES

03	MIHSIZE	MIHBK SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
MIHALL	001	0FF
MIHBK	001	000
MIHCLAS	001	009
MIHDEVN	002	00C
MIHDEV1	002	00A
MIHMISC	001	064
MIHNEXT	004	000
MIHOFF	001	040
MIHON	001	080
MIHOPTNS	001	008
MIHRANGE	001	000
MIHRATE	002	004
MIHRATEC	002	006
MIHREADY	001	020
MIHSETQ	004	010
MIHSIZE	001	003

HCPMIHDR— MISSING INTERRUPT HANDLER HEADER BLOCK

DSECT NAME: MIHDR

DESCRIPTIVE NAME: MISSING INTERRUPT HANDLER HEADER BLOCK

FUNCTION: THE MIHDR CONTAINS THE GENERAL INFORMATION THAT PERTAINS TO THE HANDLING OF MISSING INTERRUPT CONDITIONS. IN ADDITION, IT ACTS AS THE ANCHOR FOR THE CHAIN OF HCPMIOBJS.

LOCATED BY:

IORMIPTR FIELD OF IORBK - BLOCKS USED FOR HANDLING MISSING INTERRUPT CONDITIONS

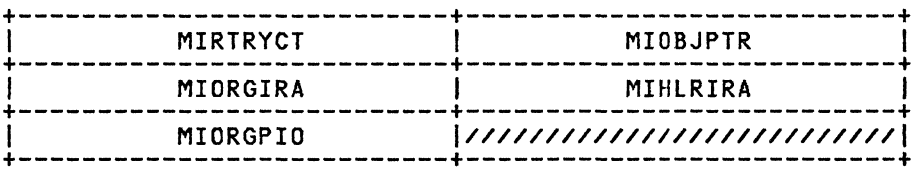
CREATED BY:

MIHDR'S ARE DYNAMICALLY CREATED BY HCPMHLAT.

DELETED BY:

MIHDR'S ARE DELETED BY HCPMHLDT WHEN THERE ARE NO MORE MIOBJ'S ASSOCIATED WITH THE MIHDR.

MIHDR - MISSING INTERRUPT HEADER BLOCK



disp	name	length	description
000	MIRTRYCT	004	RETRY COUNT
004	MIOBJPTR	004	ADDRESS OF FIRST MIOBJ IN CHAIN
008	MIORGIRA	004	THE ORIGINAL IRA VALUE
00C	MIHLRIRA	004	IRA USED DURING MISSING INTERRUPT PROCESSING
010	MIORGPIO	004	ORIGINAL IORPIOR VALUE
014		1F	RESERVED FOR FUTURE IBM USE

EQUATES

03	MIHDSIZE	MIHDR SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
MIHDR	001	000
MIHDSIZE	001	003
MIHLRIRA	004	00C

HCPMIOBJ— MISSING INTERRUPT OBJECT

DSECT NAME: MIOBJ

DESCRIPTIVE NAME: MISSING INTERRUPT OBJECT

FUNCTION: THE MIOBJ CONTAINS INFORMATION ABOUT WHAT SHOULD BE DONE FOR A SPECIFIC MISSING INTERRUPT CONDITION.

LOCATED BY:

MIOBJPTR FIELD OF MIHDR - POINTER TO THE FIRST MIOBJ IN CHAIN
MINXTPTR FIELD OF MIOBJ - POINTER TO NEXT MIOBJ IN CHAIN

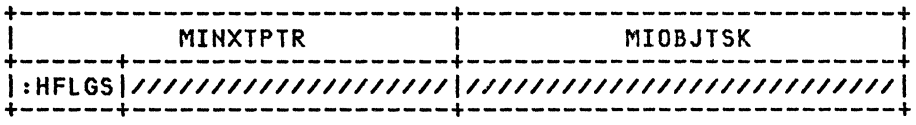
CREATED BY:

MIOBJ'S ARE DYNAMICALLY CREATED BY HCPMHLAT.

DELETED BY:

MIOBJ'S ARE DELETED BY HCPMHLDT.

MIOBJ - MISSING INTERRUPT OBJECT



disp	name	length	description
000	MINXTPTR	004	POINTER TO NEXT MIOBJ IN CHAIN
004	MIOBJTSK	004	ADDRESS OF THE NOTIFICATION TASK THAT IS TO GET CONTROL WHEN A MISSING INTERRUPT CONDITION IS DETECTED
008	MIHFLGS	001	MISSING INTERRUPT HANDLER FLAGS

BITS DEFINED IN MIHFLGS (AT HEX DISPLACEMENT: 8)

80	MIHINTVL	COMPLETE MISSING INTERRUPT DETECTION INTERVAL HAS ELAPSED
40	MIHIPND	HSCH INTERRUPT IS STILL PENDING
009	3X	RESERVED FOR FUTURE IBM USE
00C	1F	RESERVED FOR FUTURE IBM USE

EQUATES

02	MIOSIZE	MIOBJ SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
MIOBJ	001	000
MIOBJTSK	004	004
MIOSIZE	001	002

MIRREC— 370 MODE MISSING INTERRUPT RECORD

DSECT NAME: MIRREC

DESCRIPTIVE NAME: 370 MODE MISSING INTERRUPT RECORD

FUNCTION: MIRREC IS USED IN THE SVC 76 INITIATED ERROR RECORDING PROCESS OF TYPE 70 MIH (MISSING INTERRUPT HANDLER) RECORDS FOR 370 GUESTS.

LOCATED BY:

GPR9 IN HCPVER. THE ADDRESS IS PASSED TO HCPIOE AND HCPREC IN GPR1.

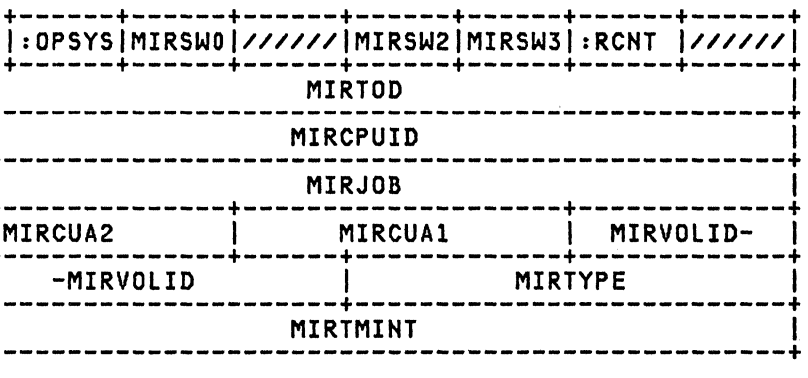
CREATED BY:

370 GUEST; COPIED TO FREE STORAGE BY HCPVER.

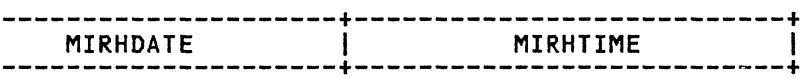
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

MIRREC - MISSING INTERRUPT RECORDING BLOCK



REDEFINITION - MIRHTOD



REDEFINITION - MIRCPUID

disp	name	length	description
000	MIRRTYP	001	RECORD TYPE
	CODES DEFINED IN MIRRTYP (AT HEX DISPLACEMENT: 0)		
	70 MIRRTMIR		MIR RECORD
001	MIROPSYS	001	OPERATING SYSTEM
	BITS DEFINED FOR MIROPSYS BY HDRREC HDRHSYS		

```
002   MIRSW0     001      RECORD INDEPENDENT SWITCH

        BITS DEFINED FOR MIRSW0 BY HDRREC HDRHSW0

003              XL1      RESERVED FOR FUTURE IBM USE
004   MIRSW2     001      SWITCH BYTE 2

        BITS DEFINED IN MIRSW2   (AT HEX DISPLACEMENT: 4)

        80    MIRSWCHE    CHANNEL END INTERRUPTION PENDING
        40    MIRSWDVE    DEVICE END INTERRUPTION PENDING

005   MIRSW3     001      CHANNEL SET ID FOR MVS
006   MIRRCNT    001      RECORD COUNT

        BITS DEFINED FOR MIRRCNT BY HDRREC HDRHCNT

007              XL1      RESERVED FOR FUTURE IBM USE
008   MIRTOD     008      TOD OF SYSTEM FAILURE
010   MIRCPUID   008      CPU ID
018   MIRJOB     008      JOB ID/USERID
020   MIRCUA2    003      SECONDARY CUA ADDRESS
023   MIRCUA1    003      PRIMARY CUA ADDRESS
026   MIRVOLID   006      VOLUME SERIAL ID
02C   MIRTYPE    004      DEVICE TYPE
030   MIRTMINT   008      TIME INTERVAL FOR INT CHECK

                  EQUATES

        38    MIRLEN      SIZE IN BYTES
        07    MIRSIZE     MIRREC SIZE IN DOUBLE WORDS


         REDEFINITION - MIRHTOD

008   MIRHDATE   004      SYSTEM DATE OF FAILURE
00C   MIRHTIME   004      SYSTEM TIME OF FAILURE

         REDEFINITION - MIRCPUID

010   MIRHCPID   001      MACHINE VERSION CODE
011   MIRHSER    003      CPU SERIAL NUMBER
014   MIRHMDL    002      CPU MACHINE MODEL NUMBER
016   MIRHMCEL   002      MAX LENGTH OF MACHINE-DEPENDENT
                          MACHINE CHECK EXTENDED LOGOUT
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
MIRCPUID	008	010	MIRREC	001	000
MIRCUA1	003	023	MIRRTMIR	001	070
MIRCUA2	003	020	MIRRTYP	001	000
MIRHCPID	001	010	MIRSIZE	001	007
MIRHDATE	004	008	MIRSWCHE	001	080
MIRHMCEL	002	016	MIRSWDVE	001	040
MIRHMDL	002	014	MIRSW0	001	002
MIRHSER	003	011	MIRSW2	001	004
MIRHTIME	004	00C	MIRSW3	001	005
MIRJOB	008	018	MIRTMINT	008	030
MIRLEN	001	038	MIRTOD	008	008
MIROPSYS	001	001	MIRTYPE	004	02C
MIRRCNT	001	006	MIRVOLID	006	026

MITREC— 370/XA MODE MISSING INTERRUPT RECORD

DSECT NAME: MITREC

DESCRIPTIVE NAME: 370/XA MODE MISSING INTERRUPT RECORD

FUNCTION: MITREC IS USED IN THE SVC 76 INITIATED ERROR RECORDING PROCESS OF TYPE 71 MIH (MISSING INTERRUPT HANDLER) RECORDS FOR XA GUESTS.

LOCATED BY:

GPR9 IN HCPVER. THE ADDRESS IS PASSED TO HCPIOE AND HCPREC IN GPR1.

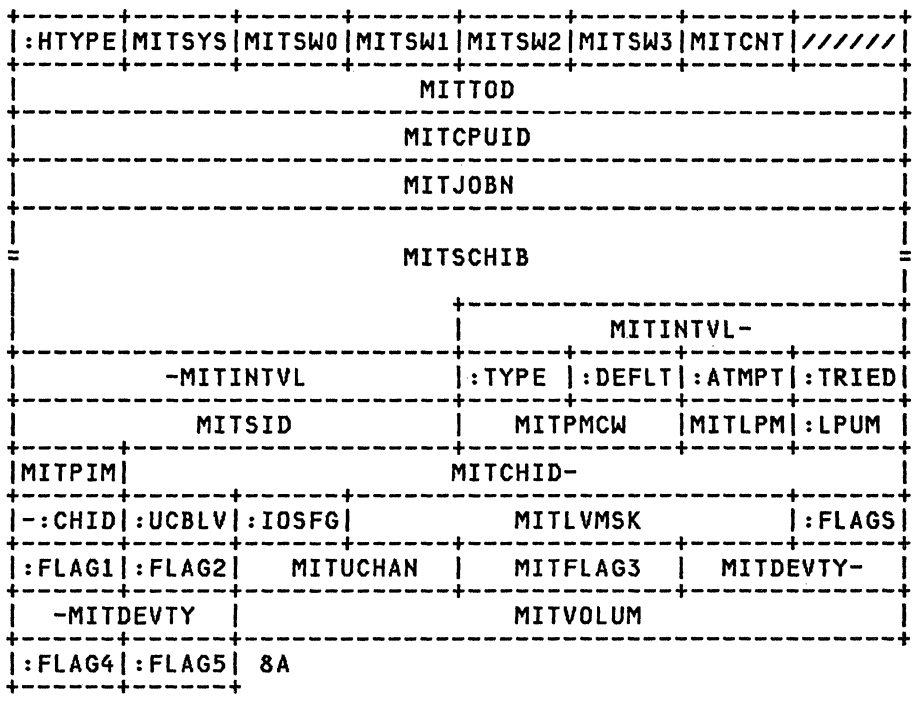
CREATED BY:

XA GUEST; COPIED TO FREE STORAGE BY HCPVER.

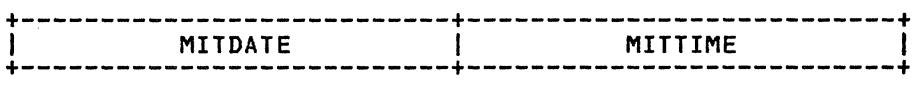
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

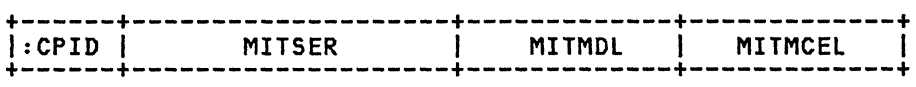
MITREC - 370/XA MODE MISSING INTERRUPT ERROR RECORD



REDEFINITION - MITTOD



REDEFINITION - MITCPUID



disp	name	length	description
000	MITHTYPE	001	CLASS/SOURCE
	CODES DEFINED IN MITHTYPE (AT HEX DISPLACEMENT: 0)		
	71 MITRTYMI		MIT RECORD TYPE-MISSING INTERRUPT
001	MITSYS	001	SYSTEM/RELEASE LEVEL
	BITS DEFINED FOR MITSYS BY HDRREC HDRHSYS		
002	MITSW0	001	RECORD INDEPENDENT SWITCHES
	BITS DEFINED FOR MITSW0 BY HDRREC HDRHSW0		
003	MITSW1	001	RESERVED REC DEPENDENT SWITCH 1
004	MITSW2	001	RESERVED REC DEPENDENT SWITCH 2
005	MITSW3	001	RESERVED REC DEPENDENT SWITCH 3
006	MITCNT	001	RECORD COUNT
	BITS DEFINED FOR MITCNT BY HDRREC HDRHCNT		
007		XL1	RESERVED FOR FUTURE IBM USE
008	MITTOD	008	TOD OF SYSTEM FAILURE
010	MITCPUID	008	CPU ID
018	MITJOBN	008	JOBNAME FROM ASID OR USERID
020	MITSCHIB	052	SUBCHANNEL INFORMATION BLOCK
054	MITINTVL	008	INTERVAL USED FOR DETECTION
05C	MITTYPE	001	TYPE OF MISSING INTERRUPT
	BITS DEFINED IN MITTYPE (AT HEX DISPLACEMENT: 5C)		
	80 MITTMCSI		MISSING CSCH INTERRUPT
	40 MITTMHCI		MISSING HSCH INTERRUPT
	20 MITTIDDV		IDLE DEVICE WITH WORK QUEUED
	10 MITTSPSC		START PENDING IN SUBCHANNEL
	04 MITTMP		MOUNT PENDING
	02 MITTMPS		MISSING PRIMARY STATUS
	01 MITTMSS		MISSING SECONDARY STATUS
05D	MITDEFLT	001	DEFAULT ACTIONS TO ATTEMPT
05E	MITATMPT	001	ACTIONS TO BE ATTEMPTED
05F	MITTRIED	001	ACTION ACTUALLY TRIED
	BITS DEFINED IN MITTRIED (AT HEX DISPLACEME Y: 5F)		
	80 MITTRHCS		HALT OR CLEAR SUBCHANNEL
	40 MITTRSIN		SIMULATED INTERRUPT
	20 MITTRRDD		REDRIVE DEVICE
	10 MITTRRIO		REQUEUE I/O REQUEST
	08 MITTRIM		ISSUE MESSAGE
	04 MITTRLC		LOG THE CONDITION
060	MITSID	004	SUBCHANNEL ID NUMBER
064	MITPMCW	002	PATH MNGMENT CTRL WORD
066	MITLPM	001	LOGICAL PATH MASK
067	MITLPUM	001	LAST PATH USED MASK
068	MITPIM	001	PATH INSTALL MASK
069	MITCHID	001	CHANNEL PATH ID
071	MITUCBLV	001	UCB LEVEL BYTE (NOT USED BY VM)
072	MITIOSFG	001	IOS FLAGS (NOT USED BY VM)
073	MITLVMSK	004	LEVEL MASK FROM UCBLVMSK (NOT USED BY VM)
077	MITFLAGS	001	MIT FLAG PROC. (UCBMITTI) (NOT USED BY VM)
078	MITFLAG1	001	FLAG BYTE (NOT USED BY VM)
	BITS DEFINED IN MITFLAG1 (AT HEX DISPLACEMENT: 78)		

	80	MITF1UCB	UCBALTCU
079	MITFLAG2	001	FLAG BYTE FROM UCBFLC (NOT USED BY VM)
07A	MITUCHAN	002	DEVICE NUMBER
07C	MITFLAG3	002	FLAG BYTES FROM UCBSFLS (NOT USED BY VM)
07E	MITDEVTY	004	DEVICE CLASS AND TYPE
082	MITVOLUM	006	VOLUME SERIAL, IF AVAILABLE
088	MITFLAG4	001	FLAG BYTE (NOT USED BY VM)

BITS DEFINED IN MITFLAG4 (AT HEX DISPLACEMENT: 88)

	80	MITF4UCB	UCBMOUNT
089	MITFLAG5	001	FLAG BYTE FROM UCBFL4 (NOT USED BY VM)

EQUATES

8A	MITLEN	LENGTH OF MITREC
12	MITSIZE	NUMBER OF WORDS IN MITREC

REDEFINITION - MITTOD

008	MITDATE	004	SYSTEM DATE OF FAILURE
00C	MITTIME	004	SYSTEM TIME OF FAILURE

REDEFINITION - MITCPUID

010	MITCPID	001	MACHINE VERSION CODE
011	MITSER	003	CPU SERIAL NUMBER
014	MITMDL	002	CPU MACHINE MODEL NUMBER
016	MITMCEL	002	RESERVED FOR FUTURE IBM USE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MITATMPT	001	05E	MITMCEL	002	016	MITTRIED	001	05F
MITCHID	001	069	MITMDL	002	014	MITTRIM	001	008
MITCNT	001	006	MITPIM	001	068	MITTRLC	001	004
MITCPID	001	010	MITPMCW	002	064	MITTRRDD	001	020
MITCPUID	008	010	MITREC	001	000	MITTRRIO	001	010
MITDATE	004	008	MITRTYMI	001	071	MITTRSIN	001	040
MITDEFLT	001	05D	MITSCHIB	052	020	MITTSPSC	001	010
MITDEVTY	004	07E	MITSER	003	011	MITTYPE	001	05C
MITFLAGS	001	077	MITSID	004	060	MITUCBLV	001	071
MITFLAG1	001	078	MITSIZE	001	012	MITUCHAN	002	07A
MITFLAG2	001	079	MITSW0	001	002	MITVOLUM	006	082
MITFLAG3	002	07C	MITSW1	001	003			
MITFLAG4	001	088	MITSW2	001	004			
MITFLAG5	001	089	MITSW3	001	005			
MITF1UCB	001	080	MITSYS	001	001			
MITF4UCB	001	080	MITTIDDV	001	020			
MITHTYPE	001	000	MITTIME	004	00C			
MITINTVL	008	054	MITTMCSI	001	080			
MITIOSFG	001	072	MITTMHCI	001	040			
MITJOBN	008	018	MITTMP	001	004			
MITLEN	001	08A	MITTMPS	001	002			
MITLPM	001	066	MITTMSS	001	001			
MITLPUM	001	067	MITTOD	008	008			
MITLVMSK	004	073	MITTRHCS	001	080			

HCPMONEQ— MONITOR EQUATE SYMBOLS

DSECT NAME: MONEQ

DESCRIPTIVE NAME: MONITOR EQUATE SYMBOLS

FUNCTION: PROVIDE STANDARDIZED EQUATE SYMBOLS FOR DOMAIN AND RECORD NUMBERS FOR MONITOR RECORDS. THESE EQUATES SHOULD ALSO BE USED TO CODE THE MONITOR CALL INSTRUCTION (MC) FOR EVENT PROCESSING

LOCATED BY:

NONE

CREATED BY:

THIS FILE CONTAINS ONLY CONSTANTS 0
AND DEFINITIONS TO BE USED ELSEWHERE
THEREFORE, IT TAKES UP NO SPACE
AND REQUIRES NO STORAGE.

DELETED BY:

NONE

MONEQ - MONITOR EQUATE SYMBOLS

0

disp	name	length	description
		MORE EQUATES	
000	MONSYTCL		DOMAIN NUMBER FOR SYSTEM EVENTS
001	MONYSYPC		SAMPLE RECORD - SYSTEM DATA PER PROCESSOR
002	MONYPRPC		SAMPLE RECORD - PROCESSOR DATA PER PROCESSOR
003	MONYRSGC		SAMPLE RECORD - REAL STORAGE DATA, GLOBAL
004	MONYRSPC		SAMPLE RECORD - REAL STORAGE DATA, PER PROCESSOR
005	MONYXSPC		SAMPLE RECORD - EXPANDED STORAGE DAT PER PROCESSOR
006	MONYASGC		SAMPLE RECORD - AUXILIARY STORAGE DA GLOBAL
007	MONYSHSC		SAMPLE RECORD - SHARED STORAGE DATA
008	MONYUSRC		SAMPLE RECORD - USER DATA
009	MONYCPCC		SAMPLE RECORD - CHANNEL PATH CONTENT
00A	MONYSCGC		SAMPLE RECORD - SCHEDULER ACTIVITY
00B	MONYCOMC		SAMPLE RECORD - COMMUNICATIONS ACTIV
00C	MONYUWTC		SAMPLE RECORD - USER WAIT STATES
00D	MONYSCPC		SAMPLE RECORD - SCHEDULER ACTIVITY D PER PROCESSOR
00E	MONYXSGC		SAMPLE RECORD - EXPANDED STORAGE DATA (GLOBAL)
001	MONMTRCL		DOMAIN NUMBER FOR MONITOR EVENTS
001	MONMEPRC		EVENT RECORD - EVENT PROFILE DATA
002	MONMECMC		EVENT RECORD - EVENT ALTERATION COMM
003	MONMSUSC		EVENT RECORD - SUSPENSION RECORD
004	MONMSYSC		SAMPLE RECORD - SYSTEM CONFIGURATION
005	MONMPRPC		SAMPLE RECORD - PROCESSOR CONFIGURAT DATA
006	MONMDEVC		SAMPLE RECORD - DEVICE CONFIGURATION
007	MONMMEMC		SAMPLE RECORD - MEMORY CONFIGURATION
008	MONMPAGC		SAMPLE RECORD - PAGING CONFIGURATION
009	MONMSPRC		SAMPLE RECORD - SAMPLE PROFILE DATA
00A	MONMSCMC		SAMPLE RECORD - SAMPLE ALTERATION CO
00B	MONMENDC		SAMPLE RECORD - INTERVAL END
00C	MONMSOSC		EVENT RECORD - START OF EVENT SUSPE

00D	MONMEOFC	EVENT AND SAMPLE RECORD - END OF FRA
00E	MONMDDRC	EVENT AND SAMPLE RECORD - DOMAIN DET
00F	MONMUSRC	SAMPLE RECORD - LOGGED ON USERS
010	MONMSCHC	SAMPLE RECORD - SCHEDULER SETTINGS
011	MONMXSGC	SAMPLE RECORD - EXPANDED STORAGE DATA
002	MONSCLCL	DOMAIN NUMBER FOR SCHEDULER EVENTS
001	MONCRDBC	EVENT RECORD - BEGIN READ
002	MONCRDCC	EVENT RECORD - READ COMPLETE
003	MONCWRRC	EVENT RECORD - WRITE RESPONSE
004	MONCADLC	EVENT RECORD - ADD USER TO DISPATCH DISPATCH LIST
005	MONCDDLC	EVENT RECORD - DROP USER FROM DISPAT LIST
006	MONCAELC	EVENT RECORD - ADD USER TO ELIGIBLE LIST
007	MONCSRMC	EVENT RECORD - SET SRM CHANGES
008	MONCSTPC	EVENT RECORD - SYSTEM TIMER POP
009	MONCSHRC	EVENT RECORD - SET SHARE CHANGES
00A	MONCSQDC	EVENT RECORD - SET QUICKDISP CHANGES
003	MONSTOCL	DOMAIN NUMBER FOR STORAGE EVENTS
001	MONTRSGC	SAMPLE RECORD - REAL STORAGE MANAGEM GLOBAL DATA
002	MONTRSPC	SAMPLE RECORD - REAL STORAGE ACTIVIT PER PROCESSOR
003	MONTSHRC	SAMPLE RECORD - SHARED STORAGE MANAG
004	MONTASPC	SAMPLE RECORD - AUXILIARY STORAGE MA
005	MONTSHSC	EVENT RECORD - NSS/DCSS SAVED
006	MONTSHPC	EVENT RECORD - NSS/DCSS SUCCESSFULLY PURGED
007	MONTATCC	EVENT RECORD - ATTACH CP VOLUME
008	MONTBPGC	SAMPLE RECORD - BLOCK PAGING DATA
009	MONTXSGC	SAMPLE RECORD - EXPANDED STORAGE DATA (GLOBAL)
00A	MONTXSUC	SAMPLE RECORD - EXPANDED STORAGE DATA (PER USER)
004	MONUSECL	DOMAIN NUMBER FOR USER EVENTS
001	MONULONC	EVENT RECORD - USER LOG ON
002	MONULOFC	EVENT RECORD - USER LOG OFF
003	MONUACTC	SAMPLE RECORD - USER ACTIVITY
004	MONUINTC	SAMPLE RECORD - USER INTERACTION
005	MONUDFCC	EVENT RECORD - DEFINE CPU
006	MONUDTCC	EVENT RECORD - DETACH CPU
007	MONURDCC	EVENT RECORD - DEFINE CPU N AS M
008	MONUTREC	EVENT RECORD - TRANSACTION END
009	MONUATEC	EVENT RECORD - ACTITITY AT TRANSACTI
00A	MONUITEC	EVENT RECORD - INTERACTION AT TRANSA END
005	MONPRCCL	DOMAIN NUMBER FOR PROCESSOR EVENTS
001	MONPVONC	EVENT RECORD - VARY ON PROCESSOR
002	MONPVOFC	EVENT RECORD - VARY OFF PROCESSOR
003	MONPPRPC	SAMPLE RECORD - PROCESSOR ACTIVITY, PROCESSOR
004	MONPVFNC	EVENT RECORD - VARY ON VECTOR FACILI
005	MONPVFFC	EVENT RECORD - VARY OFF VECTOR FACIL
006	MONIODCL	DOMAIN NUMBER FOR IO DOMAIN EVENTS
001	MONOVONC	EVENT RECORD - VARY ON DEVICE
002	MONOVOFC	EVENT RECORD - VARY OFF DEVICE
003	MONODEVC	SAMPLE RECORD - DEVICE ACTIVITY DATA
004	MONOCADC	SAMPLE RECORD - CACHE ACTIVITY DATA
005	MONOATDC	EVENT RECORD - ATTACH DEVICE
006	MONODTDC	EVENT RECORD - DETACH DEVICE
007	MONOENBC	EVENT RECORD - ENABLE TERMINAL
008	MONODSBC	EVENT RECORD - DISABLE TERMINAL
007	MONSEKCL	DOMAIN NUMBER FOR SEEK EVENTS
001	MONKSK1C	EVENT RECORD - SEEK EVENT: DIAG X'A4 AND VIRTUAL DEVICE SIMULATION INTERFACE
002	MONKSK2C	EVENT RECORD - SEEK EVENT: HCPPAG... ...INTERFACE
003	MONKSK3C	EVENT RECORD - SEEK EVENT: DIAG X'18 ...INTERFACE
000	MONMINDM	MINIMUM DOMAIN NUMBER
00F	MONMAXDM	MAXIMUM DOMAIN NUMBER

CROSS REFERENCE

Name	Len	Val/Disp
MONCADLC	001	004
MONCAELC	001	006
MONCDDLC	001	005
MONCRDBC	001	001
MONCRDCC	001	002
MONCSHRC	001	009
MONCSQDC	001	00A
MONCSRMC	001	007
MONCSTPC	001	008
MONCWRRC	001	003
MONEQ	001	000
MONIODCL	001	006
MONKSK1C	001	001
MONKSK2C	001	002
MONKSK3C	001	003
MONMAXDM	001	00F
MONMDDRC	001	00E
MONMDEVC	001	006
MONMECMC	001	002
MONMENDC	001	00B
MONMEOFC	001	00D
MONMEPRC	001	001
MONMINDM	001	000
MONMMEMC	001	007
MONMPAGC	001	008
MONMPRPC	001	005
MONMSCHC	001	010
MONMSCMC	001	00A
MONMSOSC	001	00C
MONMSPRC	001	009
MONMSUSC	001	003
MONMSYSC	001	004
MONMTRCL	001	001
MONMUSRC	001	00F
MONMXSGC	001	011
MONOATDC	001	005
MONOCADC	001	004
MONODEVC	001	003
MONODSBC	001	008
MONODTDC	001	006
MONOENBC	001	007
MONOVOFC	001	002
MONOVONC	001	001
MONPPRPC	001	003
MONPRCCL	001	005
MONPVFFC	001	005
MONPVFNC	001	004
MONPVOFC	001	002
MONPVONC	001	001
MONSCLCL	001	002
MONSEKCL	001	007
MONSTOCL	001	003
MONSYTCL	001	000
MONTASPC	001	004
MONTATCC	001	007
MONTBPGC	001	008
MONTRSGC	001	001
MONTRSPC	001	002
MONTSHPC	001	006
MONTSHRC	001	003
MONTSHSC	001	005
MONTXSGC	001	009
MONTXSUC	001	00A
MONUACTC	001	003
MONUATEC	001	009
MONUDFCC	001	005
MONUDTCC	001	006
MONUINTC	001	004
MONUITEC	001	00A
MONULOFC	001	002
MONULONC	001	001
MONURDCC	001	007
MONUSECL	001	004
MONUTREC	001	008
MONYASGC	001	006
MONYCOMC	001	00B
MONYCPCC	001	009
MONYPRPC	001	002
MONYRSGC	001	003
MONYRSPC	001	004
MONYSCGC	001	00A
MONYSCPC	001	00D
MONYSHSC	001	007
MONYSYPC	001	001
MONYUSRC	001	008
MONYUWTC	001	00C
MONYXSGC	001	00E
MONYXSPC	001	005

HCPMSGBK— MESSAGE BLOCK MAPPING MACRO

DSECT NAME: MSGBK

DESCRIPTIVE NAME: MESSAGE BLOCK MAPPING MACRO

FUNCTION: TO HOLD IUCV MESSAGE INFORMATION THROUGH THE COMPLETE MESSAGE CYCLE.

LOCATED BY:

THE FOLLOWING FIELDS IN HCPCCTBK:
CCTSNDHD - WHEN ON SEND QUEUE
CCTRCVHD - WHEN ON RECEIVE QUEUE
CCTRPYHD - WHEN ON REPLY QUEUE

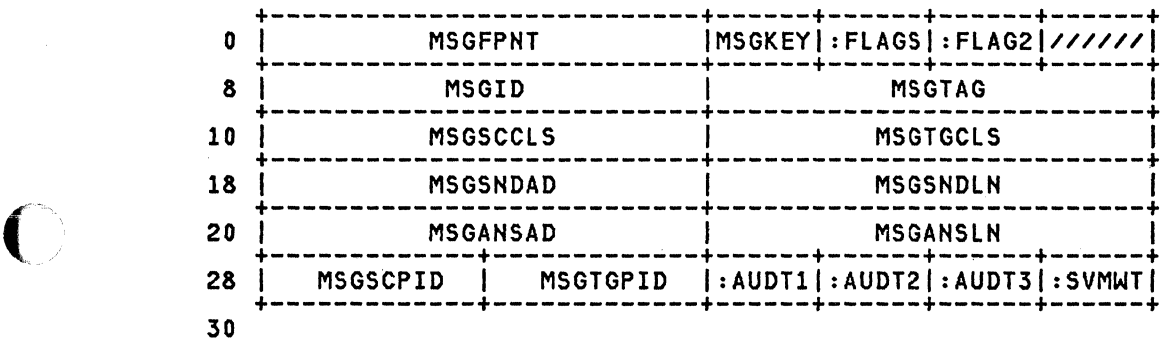
CREATED BY:

IUCV SEND FUNCTION (HCPIUDSE)

DELETED BY:

IUCV RECEIVE, REPLY OR TEST COMPLETION FUNCTION
(HCPIUDRC, HCPIUDRP, OR HCPIUCTC)

MSGBK - MESSAGE BLOCK MAPPING MACRO



disp	name	length	description
000	MSGFPNT	004	POINTER TO NEXT MESSAGE BLOCK
004	MSGKEY	001	STORAGE PROTECT KEY FOR BUFFERS
005	MSGFLAGS	001	STATUS

BITS DEFINED IN MSGFLAGS (AT HEX DISPLACEMENT: 5)

80	MSGPRMD	MESSAGE IN THE PARAMETER LIST
40	MSGPARTL	MESSAGE PARTIALLY RECEIVED
20	MSGPRTY	PRIORITY MESSAGE OR REPLY
10	MSGNORPY	ONE WAY PROTOCOL
08	MSGPURGE	MESSAGE HAS BEEN PURGED
02	MSGDESC	MESSAGE HAS BEEN DESCRIBED

006	MSGFLAG2	001	

BITS DEFINED IN MSGFLAG2 (AT HEX DISPLACEMENT: 6)

40	MSGBLIST	INDICATES BUFFER LIST OPTION
08	MSGALIST	INDICATES ANSWER LIST OPTION
04	MSGCTLS	MESSAGE SENT ON CONTROL PATH
02	MSGCTLT	MESSAGE SENT TO CONTROL PATH

007		XL1	RESERVED
008	MSGID	004	UNIQUE MESSAGE ID
00C	MSGTAG	004	MESSAGE TAG

```
010   MSGSCCLS   004      SOURCE MESSAGE CLASS
014   MSGTGCLS   004      TARGET MESSAGE CLASS
018   MSGPRM     008      PARAMETER LIST DATA
018   MSGSNDAD   004      SEND BUFFER ADDRESS
01C   MSGSNDLN   004      SEND BUFFER LENGTH
020   MSGANSAD   004      ANSWER BUFFER ADDRESS
024   MSGANSLN   004      ANSWER BUFFER LENGTH
028   MSGSCPID   002      SOURCE PATH ID
02A   MSGTGPID   002      TARGET PATH ID

02C   MSGAUDIT   003      AUDIT TRAIL FOR THIS MESSAGE

02C   MSGAUDT1   001      AUDIT TRAIL BYTE 1

        BITS DEFINED IN MSGAUDT1 (AT HEX DISPLACEMENT: 2C)

        80    MSGARPLE    REPLY TOO LONG FOR BUFFER
        40    MSGASNPX    PROTECTION EXCEPTION ON SEND BUFF
        20    MSGASNAX    ADDRESSING EXCEPTION ON SEND BUFF
        10    MSGAANPX    PROTECTION EXCEPT ON ANSWER BUFF
        08    MSGAANAX    ADDRESSING EXCEPT ON ANSWER BUFF
        04    MSGARJCT    MESSAGE WAS REJECTED
        02    MSGAPRMD    REPLY SENT IN PARAMETER LIST


02D   MSGAUDT2   001      AUDIT TRAIL BYTE 2

        BITS DEFINED IN MSGAUDT2 (AT HEX DISPLACEMENT: 2D)

        80    MSGARCPX    PROTECTION EXCEPT ON RECEIVE BUFF
        40    MSGARCAX    ADDRESSING EXCEPT ON RECEIVE BUFF
        20    MSGARPPX    PROTECTION EXCEPT ON REPLY BUFF
        10    MSGARPAX    ADDRESSING EXCEPT ON REPLY BUFF
        08    MSGASVRD    PATH WAS SEVERED
        04    MSGARLST    INVALID RECEIVE/REPLY LIST


02E   MSGAUDT3   001      AUDIT TRAIL BYTE 3

        BITS DEFINED IN MSGAUDT3 (AT HEX DISPLACEMENT: 2E)

        80    MSGABLEN    BAD LENGTH IN SEND BUFFER LIST
        40    MSGAALEN    BAD LENGTH IN SEND ANSWER LIST
        20    MSGABTOT    RESERVED:  VM/SP USES THIS TO FLAG:

02F   MSGSVMWT   001      SERVICE VIRTUAL MACHINE WAIT FLAG

                    EQUATES

        80    MSGEND      SVM TRANSACTION END

        06    MSGSIZE     MSGBK SIZE IN DOUBLEWORDS


                  MORE EQUATES

       010    MSGAATOT    RESERVED:  VM/SP USES THIS TO FLA
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MSGAALEN	001	040	MSGAANPX	001	010	MSGABLEN	001	080
MSGAANAX	001	008	MSGAATOT	001	010	MSGABTOT	001	020

Name	Len	Val/Disp
MSGALIST	001	008
MSGANSAD	004	020
MSGANSLN	004	024
MSGAPRMD	001	002
MSGARCAX	001	040
MSGARCPX	001	080
MSGARJCT	001	004
MSGARLST	001	004
MSGARPAX	001	010
MSGARPLE	001	080
MSGARPPX	001	020
MSGASNAX	001	020
MSGASNPX	001	040
MSGASVRD	001	008
MSGAUDIT	003	02C
MSGAUDT1	001	02C
MSGAUDT2	001	02D
MSGAUDT3	001	02E
MSGBK	001	000
MSGBLIST	001	040
MSGCPIO	001	003
MSGCTLS	001	004
MSGCTLT	001	002
MSGDESC	001	002
MSGEMSG	001	006
MSGEND	001	080
MSGFLAGS	001	005
MSGFLAG2	001	006
MSGFPNT	004	000
MSGID	004	008
MSGIMSG	001	007
MSGKEY	001	004
MSGMALL	001	001
MSGMSG	001	001
MSGMSS	001	000
MSGNORPY	001	010
MSGPARTL	001	040
MSGPRM	008	018
MSGPRMD	001	080
MSGPRTY	001	020
MSGPURGE	001	008
MSGSCCLS	004	010
MSGSCIF	001	008
MSGSCPID	002	028
MSGSIZE	001	006
MSGSMSG	001	004
MSGSNDAD	004	018
MSGSNDLN	004	01C
MSGSVMWT	001	02F
MSGTAG	004	00C
MSGTGCLS	004	014
MSGTGPID	002	02A
MSGVMIO	001	005
MSGWNG	001	002

HCPMSTBK— MESSAGE TEXT DATA BLOCK

DSECT NAME: MSTBK

DESCRIPTIVE NAME: MESSAGE TEXT DATA BLOCK

FUNCTION: THE MSTBK CONTAINS COMPLETE MESSAGE TEXT AND PARAMETERS REQUIRED TO PASS THE MESSAGE TO HCPQCNWT.

LOCATED BY:

PROMSPTR FIELD IN USER"S PROBK

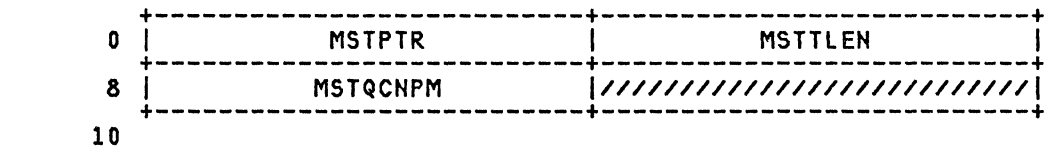
CREATED BY:

HCPERMSF , HCPREIPQ

DELETED BY:

HCPCNCRL, HCPREICB

MSTBK - MESSAGE TEXT DATA BLOCK



disp	name	length	description
000	MSTPTR	004	POINTER TO NEXT MESSAGE BLOCK
004	MSTTLEN	004	LENGTH OF MESSAGE TEXT
008	MSTQCNPM	004	HCPQCNWT PARAMETERS
00C		F	RESERVED FOR IBM USE
010	MSTTEXT	001	MESSAGE TEXT (VARIABLE LENGTH)

EQUATES

02	MSTSIZE	SIZE OF MSTBK

CROSS REFERENCE

Name	Len	Val/Disp
MSTBK	001	000
MSTPTR	004	000
MSTQCNPM	004	008
MSTSIZE	001	002
MSTTEXT	001	010
MSTTLEN	004	004

HCPMTEBK— MONITOR TRANSACTION-END DATA BLOCK

DSECT NAME: MTEBK

DESCRIPTIVE NAME: MONITOR TRANSACTION-END DATA BLOCK

FUNCTION: MAP THE AREA FOR DATA ACCUMULATED AT TRANSACTION END

LOCATED BY:

HCPMNDTE FIELD OF HCPMND (MONITOR DATA MODULE)

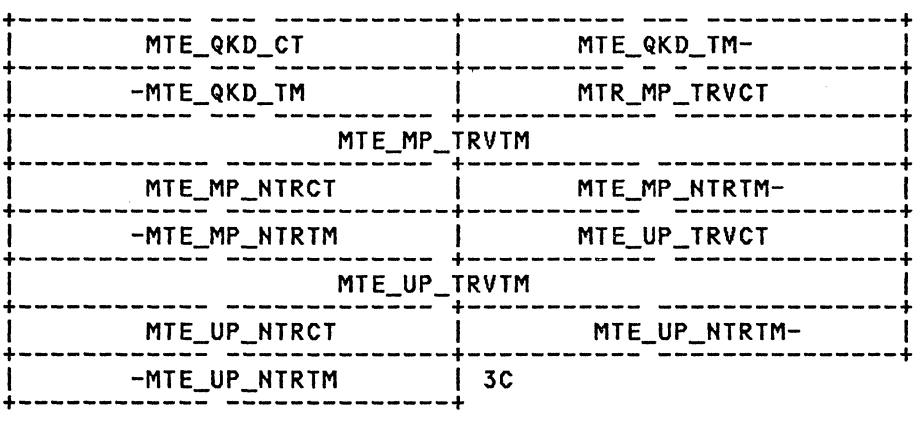
CREATED BY:

HCPMND DURING COMPILATION

DELETED BY:

NONE

MTEBK - MONITOR TRANSACTION-END DATA BLOCK



disp	name	length	description
000	MTE_TRANSACTION_END	060	
000	MTE_QKD	012	"QUICK DISPATCH" TRANSACTION DATA
000	MTE_QKD_CT	004	NUMBER OF TRANSACTIONS
004	MTE_QKD_TM	008	ACCUMULATED TIME FOR TRANSACTIONS
00C	MTE_MP	024	MULTI-PROCESSOR TRANSACTION DATA
00C	MTE_MP_TRV	012	DATA FOR MP TRIVIAL TRANSACTIONS
00C	MTE_MP_TRVCT	004	NUMBER OF TRANSACTIONS
010	MTE_MP_TRVTM	008	ACCUMULATED TIME FOR TRANSACTIONS
018	MTE_MP_NTR	012	DATA FOR MP NON-TRIVIAL TRANSACTIONS
018	MTE_MP_NTRCT	004	NUMBER OF TRANSACTIONS
01C	MTE_MP_NTRTM	008	ACCUMULATED TIME FOR TRANSACTIONS
024	MTE_UP	024	UNI-PROCESSOR TRANSACTION DATA
024	MTE_UP_TRV	012	DATA FOR UP TRIVIAL TRANSACTIONS
024	MTE_UP_TRVCT	004	NUMBER OF TRANSACTIONS
028	MTE_UP_TRVTM	008	ACCUMULATED TIME FOR TRANSACTIONS
030	MTE_UP_NTR	012	DATA FOR UP NON-TRIVIAL TRANSACTIONS
030	MTE_UP_NTRCT	004	NUMBER OF TRANSACTIONS
034	MTE_UP_NTRTM	008	ACCUMULATED TIME FOR TRANSACTIONS

CROSS REFERENCE

Name	Len	Val/Disp
MTE_MP	024	00C
MTE_MP_NTR	012	018
MTE_MP_NTRCT	004	018
MTE_MP_NTRTM	008	01C
MTE_MP_TRV	012	00C
MTE_MP_TRVCT	004	00C
MTE_MP_TRVTM	008	010
MTE_QKD	012	000
MTE_QKD_CT	004	000
MTE_QKD_TM	008	004
MTE_TRANSACTION_END	060	000
MTE_UP	024	024
MTE_UP_NTR	012	030
MTE_UP_NTRCT	004	030
MTE_UP_NTRTM	008	034
MTE_UP_TRV	004	024
MTE_UP_TRVCT	004	024
MTE_UP_TRVTM	008	028
MTEBK	001	000

HCPMWTBK— MONITOR WRITER CONTROL RECORD BLOCK

DSECT NAME: MWTBK

DESCRIPTIVE NAME: MONITOR WRITER CONTROL RECORD BLOCK

FUNCTION: THE MONITOR WRITER CONTROL RECORD IS THE RECORD THAT DESCRIBES THE MONITOR DATA STORED IMMEDIATELY AFTER THIS RECORD IN THE OUTPUT FILE CREATED BY THE MONITOR WRITER.

LOCATED BY:

NONE.

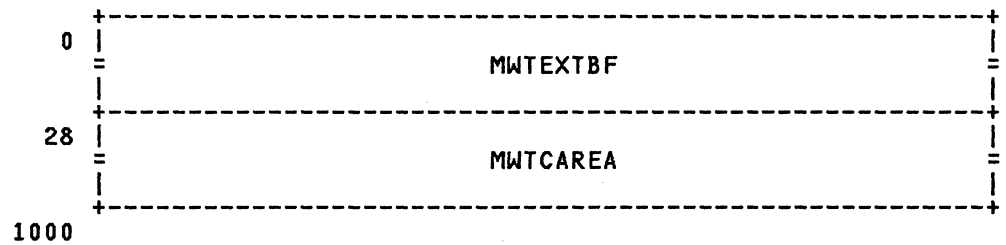
CREATED BY:

HCPMOWTR, MONITOR WRITER FUNCTION (MONWRITE)

DELETED BY:

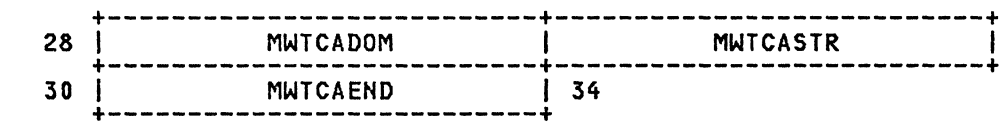
NONE.

MWTBK - MONITOR WRITER CONTROL RECORD BLOCK

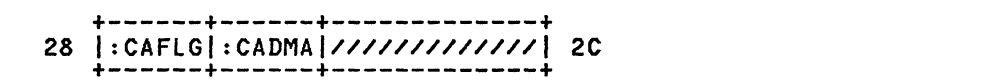


REDEFINITION -

REDEFINITION -



REDEFINITION -



disp	name	length	description
000	MWTEXTBF	040	MESSAGE PENDING EXTERNAL INTERRUPT BUFFER. THIS IS MAPPED BY THE IPARML CONTROL BLOCK.
028	MWTCAREA	056	CONTROL AREA FOR MONITOR DATA THAT FOLLOWS THIS RECORD.

REDEFINITION -

028	MWTCAENT	004	CONTROL AREA ENTRY

REDEFINITION -

028	MWTCADOM	004	DOMAIN INFORMATION
02C	MWTCASTR	004	START ADDRESS FOR THE MONITOR RECORDS ASSOCIATED WITH THIS CONTROL AREA ENTRY.
030	MWTCAEND	004	END ADDRESS FOR THE MONITOR RECORDS ASSOCIATED WITH THIS CONTROL AREA ENTRY.

EQUATES

0C	MWTCALEN	LENGTH OF EACH CONTROL AREA ENTRY

REDEFINITION -

028	MWTCAFLG	001	TYPE OF MONITOR DATA

CODES DEFINED IN MWTCAFLG (AT HEX DISPLACEMENT: 28)

E2	MWTCASMP	SAMPLE DATA
C5	MWTCAEVT	EVENT DATA

029	MWTCADMA	001	DOMAINS WHOSE DATA IS GIVEN IN THIS CONTREL AREA ENTRY

BITS DEFINED IN MWTCADMA (AT HEX DISPLACEMENT: 29)

80	MWTSYSTM	SYSTEM DOMAIN
40	MWTMONTR	MONITOR DOMAIN
20	MWTSCHED	SCHEDULER DOMAIN
10	MWTSTORE	STORAGE DOMAIN
08	MWTUSER	USER DOMAIN
04	MWTPROC	PROCESSOR DOMAIN
02	MWTIO	I/O DOMAIN
01	MWTSEEKS	SEEKS DOMAIN

02A		2X	RESERVED FOR IBM USE

MORE EQUATES

000	MWTLENTH	THE MWTBK IS ALWAYS 4K LONG BUT MAY HAVE UNUSED AREAS DEPENDING ON THE NUMBER OF CONTROL AREA ENTRIES WITHIN A GIVEN RECORD.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
MWTBK	001	000	MWTCAEVT	001	0C5	MWTCASTR	004	02C
MWTCADMA	001	029	MWTCAFLG	001	028	MWTEXTBF	040	000
MWTCADOM	004	028	MWTCALEN	001	00C	MWTIO	001	002
MWTCAEND	004	030	MWTCAREA	056	028	MWTLENTH	001	000
MWTCAENT	004	028	MWTCASMP	001	0E2	MWTMONTR	001	040

Name	Len	Val/Disp
MWTPROC	001	004
MWTSCHED	001	020
MWTSEEKS	001	001
MWTSTORE	001	010
MWTSYSTM	001	080
MWTUSER	001	008

HCPMXRBK— MESSAGE NUMBER CROSS-REFERENCE BLOCK

DSECT NAME: MXRBK

DESCRIPTIVE NAME: MESSAGE NUMBER CROSS-REFERENCE BLOCK

FUNCTION: PROVIDE A WAY OF SPECIFYING AN ERROR MESSAGE NUMBER WHICH WILL CAUSE THE SPECIFYING MODULE TO APPEAR IN THE CROSS-REFERENCE.

CREATED BY:

NOT APPLICABLE

DELETED BY:

NOT APPLICABLE

MXRBK -

0

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00820401    MS820401
00820501    MS820501
00825001    MS825001
00825101    MS825101
00825201    MS825201
00825301    MS825301
00825401    MS825401
00825501    MS825501
00825601    MS825601
00825701    MS825701
00825801    MS825801
00825901    MS825901
00826001    MS826001
00826101    MS826101
00826201    MS826201
00826301    MS826301
00826401    MS826401
00826402    MS826402
00826501    MS826501
00826502    MS826502
00826503    MS826503
00826601    MS826601
00826701    MS826701
00826801    MS826801
00826901    MS826901
00827001    MS827001
00827101    MS827101
00827102    MS827102
00827201    MS827201
00827301    MS827301
00827401    MS827401
00827501    MS827501
00827601    MS827601
00827602    MS827602
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00900001	MS900001
00900002	MS900002
00900102	MS900102
00900201	MS900201
00900301	MS900301
00900401	MS900401
00900501	MS900501
00901001	MS901001
00901401	MS901401
00901501	MS901501
00901601	MS901601
00901701	MS901701
00901801	MS901801
00901901	MS901901
00902001	MS902001
00902101	MS902101
00902201	MS902201
00902301	MS902301
00902401	MS902401
00902501	MS902501
00902601	MS902601
00910001	MS910001
00910101	MS910101
00910201	MS910201
00910301	MS910301
00910401	MS910401
00910501	MS910501
00910601	MS910601
00910701	MS910701
00910801	MS910801
00910901	MS910901
00911001	MS911001
00911101	MS911101
00915000	MS915000
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00915002	MS915002
00915100	MS915100
00915101	MS915101
00915102	MS915102
00915201	MS915201
00915301	MS915301
00915401	MS915401
00920001	MS920001
00920101	MS920101
00920201	MS920201
00920301	MS920301
00920401	MS920401
00922501	MS922501
00922502	MS922502
00925001	MS925001
00925101	MS925101
00925201	MS925201
00925301	MS925301
00927501	MS927501
00927601	MS927601
00927701	MS927701
00930000	MS930000
00930001	MS930001
00930002	MS930002
00930101	MS930101
00930201	MS930201
00930301	MS930301
00930401	MS930401
00930501	MS930501
00930601	MS930601
00930701	MS930701
00930801	MS930801
00930901	MS930901
00931001	MS931001
00940001	MS940001
00940102	MS940102
00940201	MS940201
00940301	MS940301

00940401	MS940401
00940501	MS940501
00940601	MS940601
00940701	MS940701
00940801	MS940801
00940901	MS940901
00941001	MS941001
00941201	MS941201
00941301	MS941301
00941401	MS941401
00941501	MS941501
00941701	MS941701
00941801	MS941801
00941901	MS941901
00950001	MS950001
00950101	MS950101

HCPNAMBK— TRSOURCE NAME TABLE

DSECT NAME: NAMBK

DESCRIPTIVE NAME: TRSOURCE NAME TABLE

FUNCTION: A TABLE OF COMMAND LINE OPTIONS FOR TRSOURCE COMMAND PARSING

LOCATED BY:

N/A

CREATED BY:

HCPTXP

DELETED BY:

HCPTXP

NAMBK - TRSOURCE NAME TABLE

disp	name	length	description
000	NAME	008	OPERAND NAME
008	NAMEROUT	002	ROUTINE DISPLACEMENT FROM DMKTXP
00A	NAMEMIN	001	MINIMUM OPERAND NAME LENGTH
00B		XL1	RESERVED

EQUATES

0C	NAMESIZE	SIZE OF ENTRY

CROSS REFERENCE

Name	Len	Val/Disp
NAMBK	001	000
NAME	008	000
NAMEMIN	001	00A
NAMEROUT	002	008
NAMESIZE	001	00C

HCPNSABK— NSS/DCSS AUTHORIZATION BLOCK

DSECT NAME: NSABK

DESCRIPTIVE NAME: NSS/DCSS AUTHORIZATION BLOCK

FUNCTION: USED TO DETERMINE IF A USER IS AUTHORIZED TO ACCESS A PROTECTED NSS/DCSS AND TO OBTAIN THE PARMREGS SPECIFICATION FOR THE NSS

LOCATED BY:

GPR1 IN ENTRY POINT HCPCLSIP
GPR1 IN ENTRY POINT HCPNSLSY
GPR1 IN ENTRY POINT HCPUDRNS

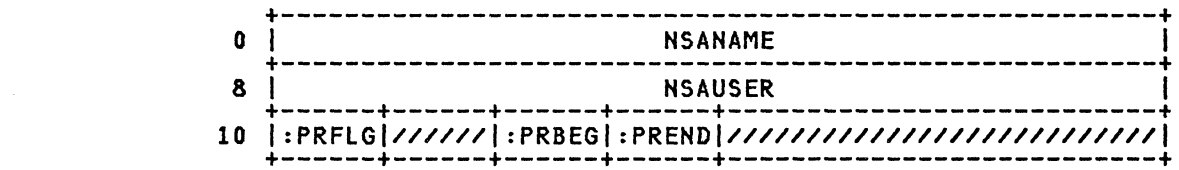
CREATED BY:

HCPCLSIP

DELETED BY:

HCPCLSIP

NSABK - NSS/DCSS AUTHORIZATION BLOCK



disp	name	length	description
000	NSANAME	008	NAMED SAVED SYSTEM TO BE IPL'ED
008	NSAUSER	008	NAMED SAVED SYSTEM USER
010	NSAPRFLG	001	PARMREGS INDICATOR FLAGS
011		X	RESERVED FOR IBM USE
012	NSAPREGS	002	NAMED SAVED SYSTEM PARMREGS
012	NSAPRBEG	001	BEGINNING OF PARMREGS RANGE
013	NSAPREND	001	END OF PARMREGS RANGE
014		F	RESERVED FOR IBM USE

EQUATES

03	NSASIZE	NSA BLOCK SIZE IN DW'S
18	NSALEN	NSA BLOCK SIZE IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
NSABK	001	000	NSASIZE	001	003
NSALEN	001	018	NSAUSER	008	008
NSANAME	008	000			
NSAPRBEG	001	012			
NSAPREGS	002	012			
NSAPREND	001	013			
NSAPRFLG	001	010			

HCPNSGBK— GENERAL INTERFACE CONTROL BLOCK TO HCPNSG

DSECT NAME: NSGBK

DESCRIPTIVE NAME: GENERAL INTERFACE CONTROL BLOCK TO HCPNSG

FUNCTION: THIS BLOCK IS USED AS A GENERAL INTERFACE TO CREATE AND SAVE A SYSTEM DATA FILE(SDF).

LOCATED BY:

HCPNSG

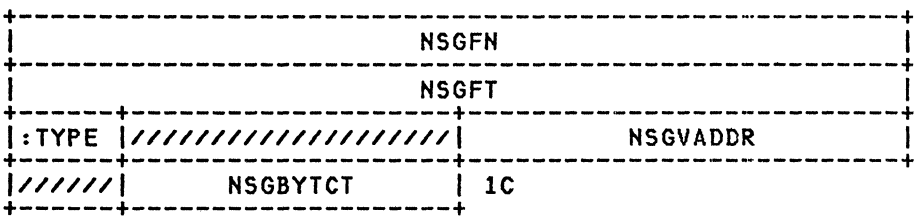
CREATED BY:

ANY MODULE CALLING HCPNSG TO CREATE
AND SAVE A SYSTEM DATA FILE(SDF).

DELETED BY:

THE MODULE THAT CREATED IT.

NSGBK - GENERAL INTERFACE CONTROL BLOCK TO HCPNSG



disp	name	length	description
000	NSGFN	008	FILE NAME OF THE FILE TO BE READ
008	NSGFT	008	FILE TYPE OF THE FILE TO BE READ
010	NSGTYPE	001	TYPE OF SYSTEM DATA FILE TO BE SAVED
	BITS DEFINED FOR NSGTYPE BY HCPEQUAT NSGTYPE		
011		3X	RESERVED
014	NSGVADDR	004	STARTING VIRTUAL ADDRESS OF DATA TO BE SAVED
018		X	RESERVED
019	NSGBYTCT	003	NUMBER OF BYTES TO BE SAVED

EQUATES

1C	NSGBYTSZ	SIZE IN BYTES
04	NSGSIZE	HEADER SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
NSGBK	001	000	NSGDCSS	001	001	NSGIMG	001	002
NSGBYTCT	003	019	NSGFN	008	000	NSGNLS	001	008
NSGBYTSZ	001	01C	NSGFT	008	008	NSGNSS	001	004

Name	Len	Val/Disp
NSGSIZE	001	004
NSGTYPE	001	010
NSGVADDR	004	014

HCPNSUBK— AUXILLARY STORAGE MANAGEMENT UTILITY DATA

DSECT NAME: NSUBK

DESCRIPTIVE NAME: AUXILLARY STORAGE MANAGEMENT UTILITY DATA

FUNCTION: THIS BLOCK WILL MAP THE ASM DATA MODULE HCPNSUDA.

LOCATED BY:

THIS BLOCK IS LOCATED IN HCPNSUDA.

disp	name	length	description
000	NSUNSGAN	008	ANCHORS TO QUEUE OF DCSS SNTBKS.
000	NSUNSGFW	004	FOWARD POINTER OF DCSS SNTBKS.
004	NSUNSGBK	004	BACKWARD POINTER OF DCSS SNTBKS.
008		3D'0'	RESERVED FOR IBM USE
020	NSUNSYAN	008	ANCHORS TO QUEUE OF NSS SNTBKS.
020	NSUNSYFW	004	FOWARD POINTER OF NSS SNTBKS.
024	NSUNSYBK	004	BACKWARD POINTER OF NSS SNTBKS.
028	NSUNSYLK	008	LOCKWORD FOR NSS SNTBK QUEUE LOCK.
040	NSUIMGAN	008	ANCHORS TO IMAGE HCPSNTBK QUEUE.
040	NSUIMGFW	004	FOWARD POINTER OF HCPSNTBK IMAGE QUEUE.
044	NSUIMGBK	004	BACKWARD POINTER OF HCPSNTBK IMAGE QUEUE.
048	NSUIMGLK	008	LOCKWORD FOR IMAGE SNTBK QUEUE 000050 0000000000000000
060	NSUNLSAN	008	ANCHORS TO QUEUE OF NLS SNTBKS.
060	NSUNLSFW	004	FOWARD POINTER OF NLS SNTBKS.
064	NSUNLSBK	004	BACKWARD POINTER OF NLS SNTBKS.
068	NSUNLSLK	008	LOCKWORD FOR NLS SNTBK QUEUE 000070 0000000000000000
080		16D'0'	RESERVE FOR IBM USE
100	NSUSYMAN	008	SYMBOLIC QUEUE LOCK ANCHOR FOR SYSTEM DATA FILES EXCEPT THOSE CORRESPONDING TO DCSS'S.
108	NSUNSGLK	008	LOCKWORD FOR DCSS FUNCTION LOCK THIS LOCK ALSO SERIALIZES FUNC-TIONS THAT HAVE THE ABILITY TO ACQUIRE TWO OR MORE SYMBOLIC LOCKS AT ANY GIVEN TIME. THIS LOCK IS MANAGED BY MODULE HCPLCK.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
NSUBK	001	000	NSUNSYAN	008	020
NSUIMGAN	008	040	NSUNSYBK	004	024
NSUIMGBK	004	044	NSUNSYFW	004	020
NSUIMGFW	004	040	NSUNSYLK	008	028
NSUIMGLK	008	048	NSUSYMAN	008	100
NSUNLSAN	008	060			
NSUNLSBK	004	064			
NSUNLSFW	004	060			
NSUNLSLK	008	068			
NSUNSGAN	008	000			
NSUNSGBK	004	004			
NSUNSGFW	004	000			
NSUNSGLK	008	108			

OBRREC— OUTBOARD RECORDING RECORD

DSECT NAME: OBRREC

DESCRIPTIVE NAME: OUTBOARD RECORDING RECORD

FUNCTION: OBRREC PROVIDES ERROR, SENSE, AND OTHER STATISTICAL DATA NEEDED FOR ERROR RECORDING ON A SPECIFIED CHANNEL-ATTACHED I/O DEVICE.

LOCATED BY:

N/A

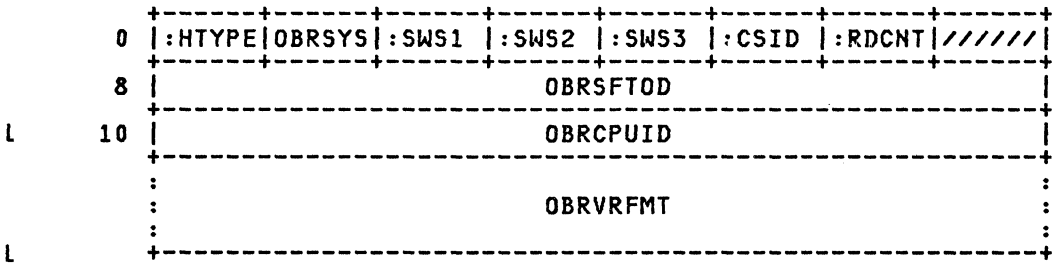
CREATED BY:

HCPIOE, HCPDUC, HCPPUC, OR A GUEST. COPIED TO FREE STORAGE BY HCPVER.

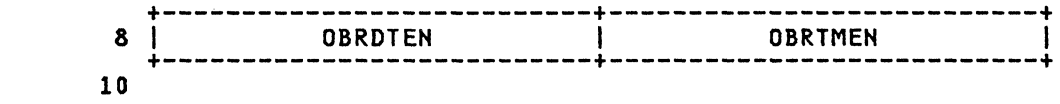
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

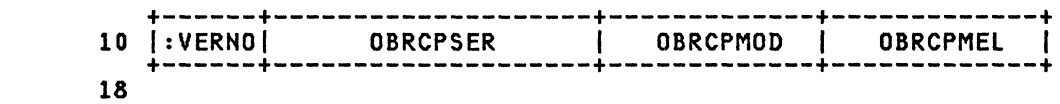
OBRREC - OUTBOARD RECORDING RECORD



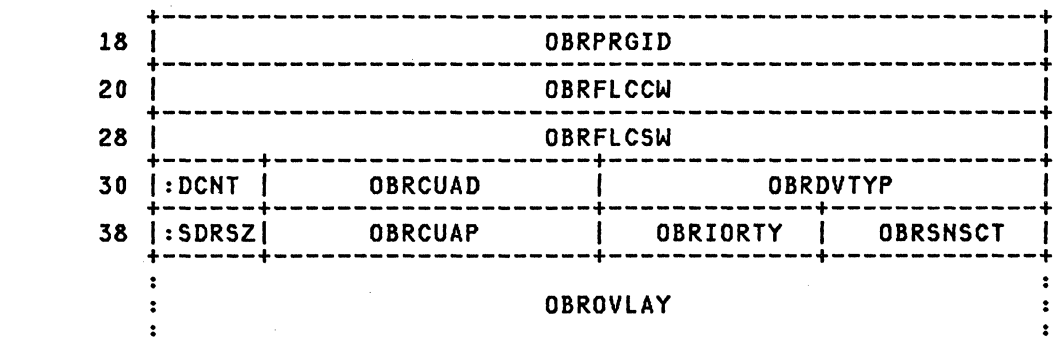
REDEFINITION - OBRSFTOD



REDEFINITION - OBRCPUID



REDEFINITION - LONG OBR RECORD FORMAT



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   +-------------------------------------------------------+

      REDEFINITION - OBRCUAP - 2 BYTE DEFINITION

           +------+-------------+
38 ...     |//////|   OBRDVNO   | 3C
           +------+-------------+

      REDEFINITION - OBRCUAD - 370/XA ONLY

           +------+-------------+
30 ...     |:CHPID|   OBRDEVNO  | 34
           +------+-------------+

      REDEFINITION - 3375/3380/3350/3340/3330/2305 DASD

   +-----------------------------------------+-------------+
40 |                 OBRVOLN                 |/////////////|
   +-----------------------------------------+-------------+
48 |                         OBRLSKN                       |
   +-------------------------+-----------------------------+
50 |          OBRHAN         |/////////////////////////////|
   +-------------------------+-----------------------------+
   :                         OBR33SNS                      :
   +-------------------------------------------------------+

      REDEFINITION - OBRCUAP - PRIMARY UNIT ADDRESS

           +-------------+------+
38 ...     |/////////////|:PRIUA| 3C
           +-------------+------+

      REDEFINITION - LAST SEEK ADDRESS

   +------+-------------+-------------+-------------+------+
48 |:LSKM |   OBRLSKB   |   OBRLSKC   |   OBRLSKH   |:LSKR |
   +------+-------------+-------------+-------------+------+
50

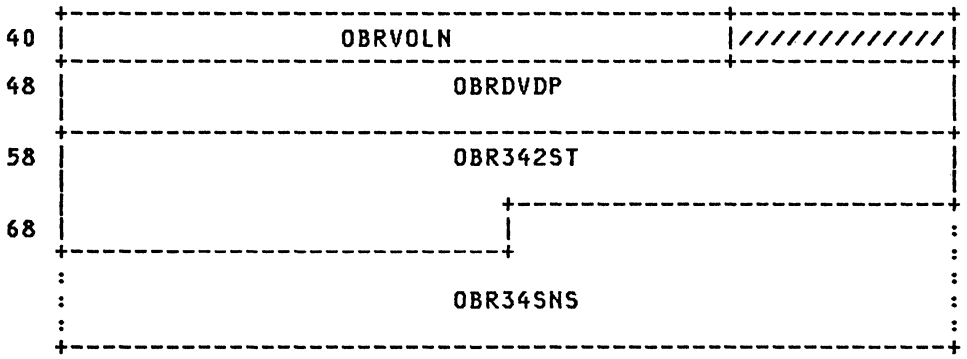
      REDEFINITION - HOME ADDRESS

   +-------------+-------------+
50 |   OBRHACYL  |   OBRHAHD   | 54
   +-------------+-------------+

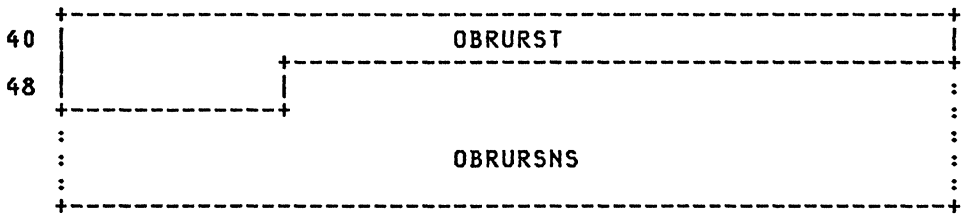
      REDEFINITION - SENSE DATA BYTES

   +-------------+------+------+------+------+------+------+
58 |/////////////|:33SB2|//////|:33SB4|:33SB5|:33SB6|:33SB7|
   +-------------+------+------+------+------+------+------+
60 |   OBR33SB8  | 62
   +-------------+

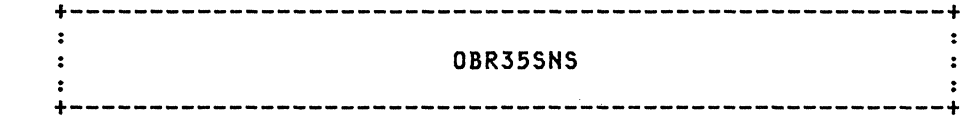
      REDEFINITION - 34XX TAPE DEVICES
```



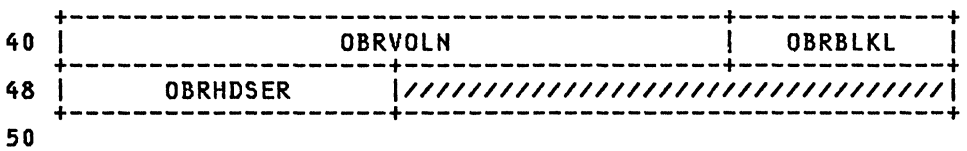
REDEFINITION - 25XX/14XX UNIT RECORD DEVICES



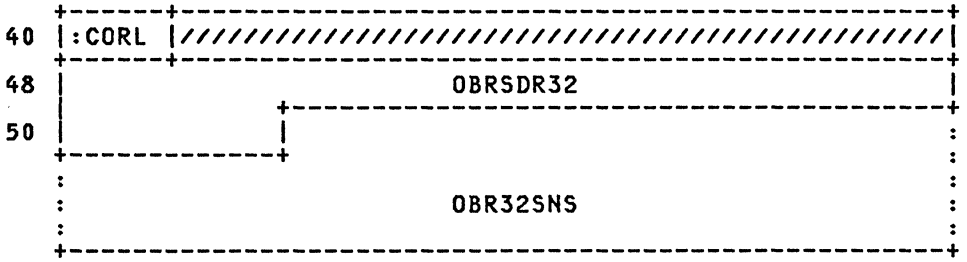
REDEFINITION - 3505/3525 UNIT RECORD DEVICES



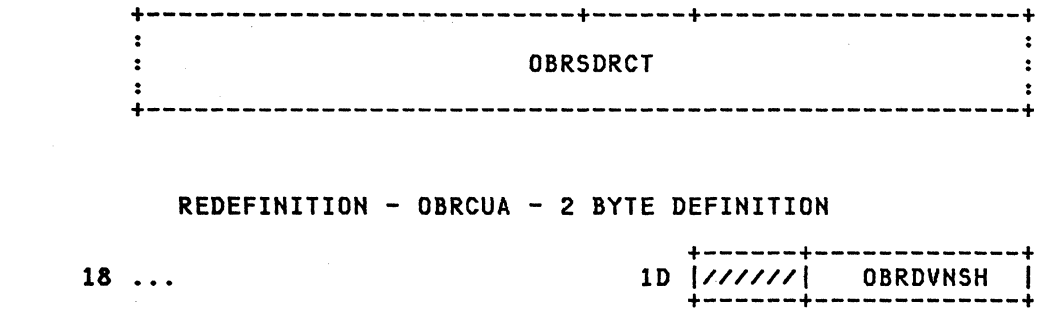
REDEFINITION - 3480 TAPE



REDEFINITION - 3211/3203 LINE PRINTERS



REDEFINITION - SHORT OBR RECORD FORMAT



disp	name	length	description
000	OBRHTYPE	001	CLASS/SOURCE
	CODES DEFINED IN OBRHTYPE (AT HEX DISPLACEMENT: 0)		
	3A OBRTDPA		DYNAMIC PATHING AVAILABLE RECORD
	36 OBRTVTAM		TP ACCESS METHOD (VTAM) RECORD
	34 OBRTTPAM		TP ACCESS METHOD (TCAM(OS)/ BTAM(DOS)) RECORD
	32 OBRTCVTR		CONVERTED OBR RECORD (NOT FOR VS)
	30 OBRTOBRR		OBR (UNIT CHECK) RECORD
001	OBRSYS	001	SYSTEM/RELEASE LEVEL
	BITS DEFINED FOR OBRSYS BY HDRREC HDRHSYS		
002	OBRSWS1	001	SWITCH BYTE ONE
	BITS DEFINED FOR OBRSWS1 BY HDRREC HDRHSW0		
003	OBRSWS2	001	SWITCH BYTE TWO
	BITS DEFINED IN OBRSWS2 (AT HEX DISPLACEMENT: 3)		
	80 OBREOD		SDR COUNTERS DUMPED AT END OF DAY
	40 OBRTEMP		TEMPORARY ERROR
	20 OBRSHOBR		SHORT OBR RECORD
	10 OBRSWMP		MP SYSTEM
	08 OBRCPUB		CPU B ISSUED LAST SIO (370 MP ONLY)
	04 OBRDEMNT		VOLUME DEMOUNT
	01 OBRSWPOL		SECUA CONTAINS POLLING CHARS. (NOT CUA). ONLY SET FOR TP RECORDS
004	OBRSWS3	001	SWITCH BYTE 3
	BITS DEFINED IN OBRSWS3 (AT HEX DISPLACEMENT: 4)		
	80 OBRCHPVA		CHPID VALID
	0E OBR3380		IBM 3380 STANDARD
	1E OBR3380D		IBM 3380 MODEL D
	2E OBR3380E		IBM 3380 MODEL E
	21 OBR3380J		IBM 3380 MODEL J
	23 OBR3380K		IBM 3380 MODEL K
005	OBRCSID	001	CHANNEL SET ID FOR FAILING CHANNEL
006	OBRRDCNT	001	RECORD COUNT
	BITS DEFINED FOR OBRRDCNT BY HDRREC HDRHCNT		
007		XL1	RESERVED FOR FUTURE IBM USE
008	OBRSFTOD	008	TOD OF SYSTEM FAILURE
010	OBRCPUID	008	CPUID AND SERIAL NUMBER
018	OBRVRFMT	008	START OF VARIABLE LENGTH DATA

REDEFINITION - OBRSFTOD

008	OBRDTEN	004	DATE OF SYSTEM FAILURE
00C	OBRTMEN	004	TIME OF SYSTEM FAILURE

REDEFINITION - OBRCPUID

010	OBRVERNO	001	MACHINE VERSION CODE
011	OBRCPSER	003	CPU SERIAL NUMBER
014	OBRCPMOD	002	CPU MACHINE MODEL NUMBER
016	OBRCPMEL	002	MAX LENGTH OF MACHINE-DEPENDENT MACHINE CHECK EXTENDED LOGOUT AREA

REDEFINITION - LONG OBR RECORD FORMAT

018	OBRPRGID	008	PROGRAM IDENTIFICATION/USERID
020	OBRFLCCW	008	FAILING CHANNEL COMMAND WORD
028	OBRFLCSW	008	CHANNEL STATUS WORD (370 ONLY)
030	OBRDCNT	001	DEV-DEP AREA SIZE IN DBL-WDS
031	OBRCUAD	003	FAILING DEVICE ADDRESS (370 ONLY)
034	OBRDVTYP	004	DEVICE TYPE CODE
038	OBRSDRSZ	001	SDR WORK AREA SIZE IN BYTES
039	OBRCUAP	003	DEVICE ADDRESS - PRIMARY PATH
03C	OBRIORTY	002	NUMBER OF RETRIES EXECUTED
03E	OBRSNSCT	002	COUNT OF SENSE BTYES PRESENT

EQUATES

40	OBRLONG	LENGTH IN BYTES OF LONG OBR BASE
08	OBRLSIZE	LONG OBRREC SIZE IN DBL WORDS

040	OBROVLAY	008	START OF VARIABLE LENGTH DATA LENGTH OF LONG OBR RECORD: OBRLONG*8 + OBRDCNT*8 + OBRSDRSZ + OBRSNSCT IF 370/XA MODE, + OBRIRBSZ

REDEFINITION - OBRCUAP - 2 BYTE DEFINITION

039		XL1	RESERVED FOR FUTURE IBM USE
03A	OBRDVNO	002	DEVICE ADDRESS - PRIMARY PATH

REDEFINITION - OBRCUAD - 370/XA ONLY

031	OBRCHPID	001	CHANNEL PATH ID
032	OBRDEVNO	002	DEVICE ADDRESS

REDEFINITION - 3375/3380/3350/3340/3330/2305 DASD

040	OBRVOLN	006	VOLUME SERIAL IDENTIFIER
046		XL2	RESERVED FOR FUTURE IBM USE
048	OBRLSKN	008	LAST SEEK ADDRESS
050	OBRHAN	004	HOME ADDRESS
054		XL4	RESERVED FOR FUTURE IBM USE
058		0D	ALIGNMENT

EQUATES

03	OBR33DCT	DBL-WDS DEV. DEP. DATA
00	OBR33SDR	NUMBER BYTES SDR WORK AREA

058	OBR33SNS	001	START OF VARIABLE LENGTH DATA

EQUATES

20	OBR33SCT	MAXIMUM NUMBER BYTES SENSE DATA
78	OBR33SZ3	370 MAX. SIZE
10	OBRIRBSZ	NUMBER BYTES OF IRB DATA (370/XA) THE FIRST OBRIRBSZ BYTES OF IRB DATA FOLLOWS THE SENSE DATA AT OBR33SNS+VALUE-OF-OBRSNSCT (370/XA)
88	OBR33SZX	MAX. SIZE 3375/3380/3330/3340/3350/2305 REC.

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         REDEFINITION - OBRCUAP - PRIMARY UNIT ADDRESS

039              XL2       UNCHANGED PORTION OF OBRCUAP

                     EQUATES

        03    OBR44CTL     NUMBER OF BITS TO SHIFT RIGHT
                           THE BITS DEFINED BY SNSCNTLR FROM
                           OBR33SB4 FOR 3344 UNIT ADDRESS
                           MODIFICATION

03B  OBRPRIUA   001        BYTE THAT GETS MODIFIED

        BITS DEFINED IN OBRPRIUA (AT HEX DISPLACEMENT: 3B)

        F8    OBR30UAM     UNIT ADDRESS UNCHANGED BITS MASK
                           FOR 3330
        DF    OBR5030M     UNCHANGED BITS MASK FOR 3350 IN
                           3330-1 COMPATIBILITY MODE
        C0    OBR44NCM     UNCHANGED BITS MASK FOR 3344


         REDEFINITION - LAST SEEK ADDRESS

048  OBRLSKM     001       DEVICE MASK
049  OBRLSKB     002       BIN
04B  OBRLSKC     002       CYLINDER
04D  OBRLSKH     002       HEAD
04F  OBRLSKR     001       RECORD

         REDEFINITION - HOME ADDRESS

050  OBRHACYL    002       CYLINDER
052  OBRHAHD     002       HEAD

         REDEFINITION - SENSE DATA BYTES

058              2XL1      SENSE BYTES 0-1
05A  OBR33SB2    001       SENSE BYTE 2

        BITS DEFINED FOR OBR33SB2 BY HCPSNSEQ SNSB2DA

        03    OBRSB2ML
                           MINIMUM LENGTH OF SENSE DATA TO
                           INCLUDE SENSE BYTE 2 FOR HCPVER

05B              XL1       SENSE BYTE 3
05C  OBR33SB4    001       SENSE BYTE 4

        BITS DEFINED FOR OBR33SB4 BY HCPSNSEQ SNSB4DA

        05    OBRSB4ML
                           MINIMUM LENGTH OF SENSE DATA TO
                           INCLUDE SENSE BYTE 4 FOR HCPVER

05D  OBR33SB5    001       SENSE BYTE 5 - LOW-ORDER CYLINDER
                           ADDRESS
05E  OBR33SB6    001       SENSE BYTE 6

        BITS DEFINED FOR OBR33SB6 BY HCPSNSEQ SNSB6DA

        07    OBRSB6ML
                           MINIMUM LENGTH OF SENSE DATA TO
                           INCLUDE SENSE BYTE 6 FOR HCPVER

05F  OBR33SB7    001       SENSE BYTE 7

        BITS DEFINED FOR OBR33SB7 BY HCPSNSEQ SNSB7DA

060  OBR33SB8    002       SENSE BYTES 8 AND 9 - CYLINDER OF
                           LAST COUNT FIELD READ
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                    EQUATES

        0A    OBRSB8ML
                          MINIMUM LENGTH OF SENSE DATA TO
                          INCLUDE SENSE BYTE 8 FOR HCPVER


         REDEFINITION - 34XX TAPE DEVICES

040               CL6       ORBVOLN - VOLUME SERIAL IDENTIFIER
046               XL2       RESERVED FOR FUTURE IBM USE
048   OBRDVDP     016       DEVICE DEPENDENT DATA
058               0D        ALIGNMENT

                    EQUATES

        03    OBR34DCT    DBL-WDS DEV. DEP. DATA

058   OBR342ST    020       SDR WORK AREA

                    EQUATES

        14    OBR34SDR    NUMBER BYTES SDR WORK ARDA

06C   OBR34SNS    001       START OF VARIABLE LENGTH DATA

                    EQUATES

        18    OBR34SCT    MAXIMUM NUMBER BYTES SENSE DATA
        84    OBR34SZ3    370 MAX. SIZE
                          THE FIRST OBRIRBSZ BYTES OF IRB DATA FOLLOWS THE
                          SENSE DATA AT OBR34SNS+VALUE-OF-OBRSNSCT (370/XA)
        94    OBR34SZX
                          MAX. SIZE 34XX TAPE RECORD


         REDEFINITION - 25XX/14XX UNIT RECORD DEVICES

040   OBRURST     010       SDR WORK AREA

                    EQUATES

        0A    OBRURSDR    NUMBER BYTES SDR WORK AREA

04A   OBRURSNS    001       START OF VARIABLE LENGTH DATA

                    EQUATES

        01    OBRURSCT    MAXIMUM NUMBER BYTES SENSE DATA
        4B    OBRURSZ3    370 MAX. SIZE
                          THE FIRST OBRIRBSZ BYTES OF IRB DATA FOLLOWS THE
                          SENSE DATA AT OBRURSNS+VALUE-OF-OBRSNSCT (370/XA)
        5B    OBRURSZX
                          MAX. SIZE 25XX/14XX RECORD


         REDEFINITION - 3505/3525 UNIT RECORD DEVICES

040   OBR35SNS    001       START OF VARIABLE LENGTH DATA

                    EQUATES

        01    OBR35SCT    MAXIMUM NUMBER BYTES SENSE DATA
        41    OBR35SZ3    370 MAX. SIZE
                          THE FIRST OBRIRBSZ BYTES OF IRB DATA FOLLOWS THE
                          SENSE DATA AT OBR35SNS+VALUE-OF-OBRSNSCT (370/XA)
        51    OBR35SZX
                          MAX. SIZE 3505/3525 RECORD


         REDEFINITION - 3480 TAPE
```

```
040                 CL6         VOLUME SERIAL IDENTIFICATION
046   OBRBLKL       002         BLOCK LENGTH
048   OBRHDSER      003         HEADER SERIAL
04B                 XL5         RESERVED
050                 0D          ALIGNMENT

                       EQUATES

        02      OBR19DCT      DBL-WDS DEV. DEP. DATA
        00      OBR19SDR      NUMBER OF BYTES IN SDR WORK AREA

050   OBR19SNS      001         FORMAT 19/20 SENSE BYTES

                       EQUATES

        20      OBR19SCT      MAXIMUM NUMBER BYTES SENSE DATA


          REDEFINITION - 3211/3203 LINE PRINTERS

040   OBRCORL       001         CORRELATION NUMBER
041                 XL7         RESERVED FOR FUTURE IBM USE

                       EQUATES

        01      OBR32DCT      DBL-WDS DEV. DEP. DATA

048   OBRSDR32      010         SDR WORK AREA

                       EQUATES

        0A      OBR32SDR      NUMBER BYTES SDR WORK AREA

052   OBR32SNS      001         START OF VARIABLE LENGTH DATA

                       EQUATES

        18      OBR32SCT      MAXIMUM NUMBER BYTES SENSE DATA
        6A      OBR32SZ3      370 MAX. SIZE
                              THE FIRST OBRIRBSZ BYTES OF IRB DATA FOLLOWS THE
                              SENSE DATA AT OBR32SNS+VALUE-OF-OBRSNSCT (370/XA)
        7A      OBR32SZX
                              MAX. SIZE 3211/2303 RECORD


          REDEFINITION - SHORT OBR RECORD FORMAT

018   OBRDEVSH      004         DEVICE TYPE
01C   OBRSDRSH      001         NUMBER OF SDR WORK AREA BYTES
01D   OBRCUA        003         DEVICE ADDRESS

                       EQUATES

        20      OBRSHORT      LENGTH IN BYTES OF SHORT OBR BASE
        04      OBRSHSZ       SHORT REC. SIZE DBL-WDS

020   OBRSDRCT      001         START OF VARIABLE LENGTH DATA
                              SDR WORK AREA
                              LENGTH OF SHORT RECORD:
                              8*OBRSHORT + OBRSDRSH

          REDEFINITION - OBRCUA - 2 BYTE DEFINITION

01D                 XL1         RESERVED FOR FUTURE IBM USE
01E   OBRDVNSH      002         DEVICE ADDRESS

                       MORE EQUATES

        000     OBRURDCT      DOUBLE-WORDS DEV. DEP. DATA
        000     OBR35DCT      DOUBLE-WORDS DEV. DEP. DATA
        000     OBR35SDR      NUMBER BYTES SDR WORK AREA
        094     OBRMAXSZ      LARGEST OBRREC DEFINED
                              ENSURE NONE OF THE RECORD TYPES ARE LARGER THAN MAX.
```

FF3	OBR@33SZ
FFF	OBR@34SZ
FC6	OBR@URSZ
FBC	OBR@35SZ
FE5	OBR@32SZ

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
OBR@URSZ	001	FC6	OBRSB8ML	002	00A	OBR33SZX	001	088
OBR@32SZ	001	FE5	OBRSDRCT	001	020	OBR33SZ3	001	078
OBR@33SZ	001	FF3	OBRSDRSH	001	01C	OBR3380	001	00E
OBR@34SZ	001	FFF	OBRSDRSZ	001	038	OBR3380D	001	01E
OBR@35SZ	001	FBC	OBRSDR32	010	048	OBR3380E	001	02E
OBRBLKL	002	046	OBRSFTOD	008	008	OBR3380J	001	021
OBRCHPID	001	031	OBRSHOBR	001	020	OBR3380K	001	023
OBRCHPVA	001	080	OBRSHORT	001	020	OBR34DCT	001	003
OBRCORL	001	040	OBRSHSZ	001	004	OBR34SCT	001	018
OBRCPMEL	002	016	OBRSNSCT	002	03E	OBR34SDR	001	014
OBRCPMOD	002	014	OBRSWMP	001	010	OBR34SNS	001	06C
OBRCPSER	003	011	OBRSWPOL	001	001	OBR34SZX	001	094
OBRCPUB	001	008	OBRSWS1	001	002	OBR34SZ3	001	084
OBRCPUID	008	010	OBRSWS2	001	003	OBR342ST	020	058
OBRCSID	001	005	OBRSWS3	001	004	OBR35DCT	001	000
OBRCUA	003	01D	OBRSYS	001	001	OBR35SCT	001	001
OBRCUAD	003	031	OBRTCVTR	001	032	OBR35SDR	001	000
OBRCUAP	003	039	OBRTDPA	001	03A	OBR35SNS	001	040
OBRDCNT	001	030	OBRTEMP	001	040	OBR35SZX	001	051
OBRDEMNT	001	004	OBRTMEN	004	00C	OBR35SZ3	001	041
OBRDEVNO	002	032	OBRTOBRR	001	030	OBR44CTL	001	003
OBRDEVSH	004	018	OBRTTPAM	001	034	OBR44NCM	001	0C0
OBRDTEN	004	008	OBRTVTAM	001	036	OBR5030M	001	0DF
OBRDVDP	016	048	OBRURDCT	001	000			
OBRDVNO	002	03A	OBRURSCT	001	001			
OBRDVNSH	002	01E	OBRURSDR	001	00A			
OBRDVTYP	004	034	OBRURSNS	001	04A			
OBREOD	001	080	OBRURST	010	040			
OBRFLCCW	008	020	OBRURSZX	001	05B			
OBRFLCSW	008	028	OBRURSZ3	001	04B			
OBRHACYL	002	050	OBRVERNO	001	010			
OBRHAHD	002	052	OBRVOLN	006	040			
OBRHAN	004	050	OBRVRFMT	008	018			
OBRHDSER	003	048	OBR19DCT	001	002			
OBRHTYPE	001	000	OBR19SCT	001	020			
OBRIORTY	002	03C	OBR19SDR	001	000			
OBRIRBSZ	001	010	OBR19SNS	001	050			
OBRLONG	001	040	OBR30UAM	001	0F8			
OBRLSIZE	001	008	OBR32DCT	001	001			
OBRLSKB	002	049	OBR32SCT	001	018			
OBRLSKC	002	04B	OBR32SDR	001	00A			
OBRLSKH	002	04D	OBR32SNS	001	052			
OBRLSKM	001	048	OBR32SZX	001	07A			
OBRLSKN	008	048	OBR32SZ3	001	06A			
OBRLSKR	001	04F	OBR33DCT	001	003			
OBRMAXSZ	001	094	OBR33SB2	001	05A			
OBROVLAY	008	040	OBR33SB4	001	05C			
OBRPRGID	008	018	OBR33SB5	001	05D			
OBRPRIUA	001	03B	OBR33SB6	001	05E			
OBRRDCNT	001	006	OBR33SB7	001	05F			
OBRREC	001	000	OBR33SB8	002	060			
OBRSB2ML	001	003	OBR33SCT	001	020			
OBRSB4ML	001	005	OBR33SDR	001	000			
OBRSB6ML	001	007	OBR33SNS	001	058			

HCPOPCTB— OPERATOR CONSOLE RDEV ADDRESS TABLE

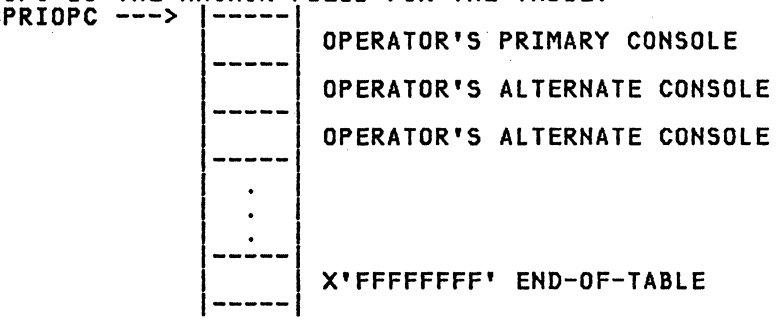
DSECT NAME: OPCTB

DESCRIPTIVE NAME: OPERATOR CONSOLE RDEV ADDRESS TABLE

FUNCTION: CONTAINS THE RDEV ADDRESS OF THE OPERATOR'S PRIMARY AND ALTERNATE CONSOLES.

LOCATED BY:

HCPRIOPC IS THE ANCHOR FIELD FOR THE TABLE.



CREATED BY:

OPCTB IS PART OF THE SYSTEM NUCLEUS AND IS CREATED BY SYSGEN PROCESS.

DELETED BY:

OPCTB IS PART OF THE SYSTEM NUCLEUS AND NEVER DELETED.

OPCTB - OPERATOR CONSOLE TABLE

disp	name	length	description
000	OPCRDEV	004	RDEV ADDRESS OF OPERATOR'S PRIMARY CONSOLE
		EQUATES	
	04 OPCLEN		LENGTH OF ONE ENTRY
004	OPCNEXT	004	RDEV ADDRESS OF OPERATOR'S ALTERNATE CONSOLE

CROSS REFERENCE

Name	Len	Val/Disp
OPCLEN	001	004
OPCNEXT	004	004
OPCRDEV	004	000
OPCTB	001	000

HCPORBLK— OPERATION REQUEST BLOCK MAPPING

DSECT NAME: ORBLK

DESCRIPTIVE NAME: OPERATION REQUEST BLOCK MAPPING

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS OF THE OPERAND OF AN XA START SUBCHANNEL INSTRUCTION.

LOCATED BY:

N/A

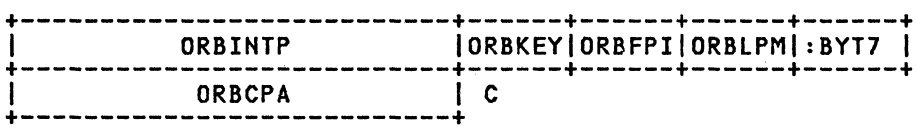
CREATED BY:

N/A

DELETED BY:

N/A

ORBLK - OPERATIONS REQUEST BLOCK



disp	name	length	description
000	ORBORB	012	OPERATION REQUEST BLOCK (ORB)
000	ORBINTP	004	INTERRUPT PARAMETER
004	ORBWORD1	004	ORB WORD-1
004	ORBKEY	001	KEY OF I/O TRANSFER
	BITS DEFINED FOR ORBKEY BY HCPEQUAT CSWSKEY		
005	ORBFPI	001	FORMAT , PREFETCH AND RESPONSE
	BITS DEFINED FOR ORBFPI BY HCPEQUAT CSWFPIZN		
006	ORBLPM	001	LOGICAL PATH MASK
007	ORBBYT7	001	ORB BYTE 7
008	ORBCCWA	004	ADDRESS OF FIRST CHANNEL COMMAND WORD
008	ORBCPA	004	CHANNEL PROGRAM ADDRESS

EQUATES

0C	ORBBLEN	SIZE IN BYTES
02	ORBSIZE	SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
ORBBLEN	001	00C	ORBFPI	001	005	ORBLK	001	000
ORBBYT7	001	007	ORBINTP	004	000	ORBLPM	001	006
ORBCCWA	004	008	ORBIOILF	001	080	ORBORB	012	000
ORBCPA	004	008	ORBKEY	001	004	ORBSIZE	001	002

Name	Len	Val/Disp
ORBWORD1	004	004

HCPPAGBK— PAGE I/O DSECT BLOCK

DSECT NAME: PAGBK

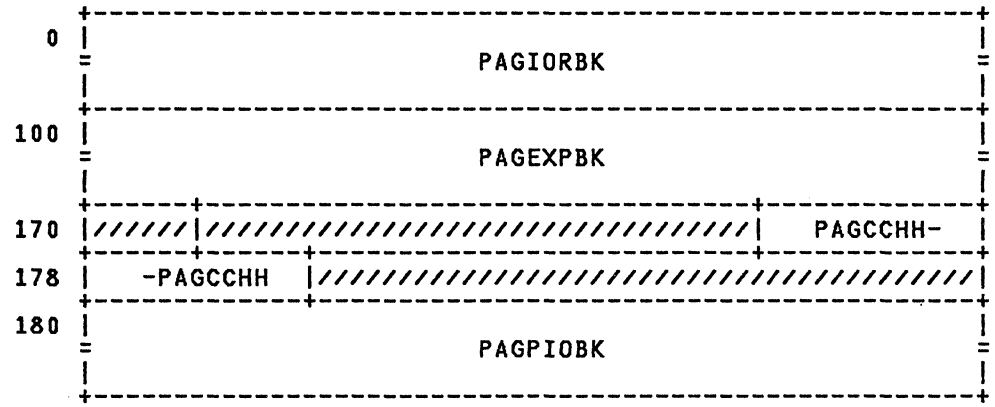
DESCRIPTIVE NAME: PAGE I/O DSECT BLOCK

FUNCTION: PAGBK MAPS A PAGE OF STORAGE THAT CONTAINS THE IORBK, EXPBK (FOR SINGLE EXPOSURES), PIOBKS, AND THE SET PAGING PARAMETER CCW AREA.

LOCATED BY:

EXPIORBK - FIELD IN THE EXPOSURE BLOCK THAT POINTS TO THE BEGINNING OF THE BLOCK.

PAGBK - PAGE I/O DSECT BLOCK



disp	name	length	description
000	PAGIORBK	256	THIS AREA RESERVED FOR THE IORBK.
100	PAGEXPBK	112	THIS AREA RESERVED FOR THE EXPBK.
170	PAGSPPAR	016	THIS AREA CONTAINS THE CACHE CCW DATA INFORMATION.
170	PAGDATA	010	THIS IS THE DATA AREA FOR THE SET PAGING PARAMETER CCW.
170		XL1	
171	PAGDATA1	009	DEFINED FOR THE CLEAR MOVE INSTRUCTION. .....
171		XL5	
176	PAGCCHH	004	THE CYLINDER/HEAD INFO.
17A		XL6	RESERVED FOR IBM USE
180	PAGPIOBK	064	THE BEGINNING OF THE FIRST PIOBK.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
PAGBK	001	000	PAGSPPAR	016	170
PAGCCHH	004	176	PAG2305	001	018
PAGDATA	010	170	PAG3330	001	039
PAGDATA1	009	171	PAG3340	001	018
PAGEXPBK	112	100	PAG3350	001	078
PAGIORBK	256	000	PAG3375	001	060
PAGPIOBK	064	180	PAG3380	001	096

HCPPAGTE— PAGE TABLE ENTRY

DSECT NAME: PAGTE

DESCRIPTIVE NAME: PAGE TABLE ENTRY

FUNCTION: A PAGE TABLE ENTRY IS A HARDWARE ARCHITECTED FULLWORD THAT DESCRIBES ONE 4K BLOCK OF VIRTUAL STORAGE.

LOCATED BY:

PGMPAGTB IN A PGMBK + (PAGE OFFSET
FRMPTE FIELD OF HCPFRMTE
A PAGE TABLE RESIDES IN A PAGE MANAGEMENT BLOCK
ASSOCIATED WITH A MEGABYTE OF VIRTUAL STORAGE
AND IS POINTED TO BY PGMPAGTB.
THERE ARE 256 CONTIGUOUS PAGE TABLE ENTRIES
IN A PAGE TABLE.
A PAGE TABLE ENTRY MAY BE POINTED TO BY THE
FRMPTE FIELD OF A FRAME TABLE ENTRY IF A
FRAME IS ASSOCIATED WITH THE PAGE.
ANY SPECIFIC PAGE TABLE ENTRY CAN BE OBTAINED BY
EXTRACTING THE PAGE NUMBER (BITS 12-19) FROM THE
VIRTUAL ADDRESS AND, USING THAT PAGE NUMBER
TIMES 4, ADDING THE OFFSET OBTAINED TO PGMPAGTB.

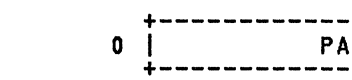
CREATED BY:

HCPBPBCU
HCPBPBIE
HCPBPBIM
HCPBPBSL
A PAGE TABLE IS IMBEDDED IN A PAGE MANAGEMENT
BLOCK AND CONSEQUENTLY SPACE FOR THE PAGTE IS
CREATED WHEN THE PGMBK IS CREATED.
AT INITIALIZATION TIME INFORMATION FOR
CP PAGABLE INITIALIZATION MODULES IS PUT IN
PAGTE'S BY HCPISTOR.
AFTER INITIALIZATION THE INFORMATION WITHIN
EACH PAGTE IS FILLED IN BY HCPPTRAN
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

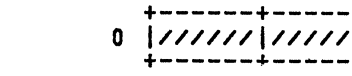
DELETED BY:

HCPRCIRL
HCPRPBPA
HCPRPBPS
HCPRPBRM
HCPRPBSL
A PAGE TABLE IS DELETED WHEN A PAGE MANAGEMENT
BLOCK IS RELEASED.

PAGTE - PAGE TABLE ENTRY



REDEFINITION - PAGE STATUS WITHIN PAGE ENTRY



disp	name	length	description
000	PAGENTRY	004	HARDWARE PAGE TABLE ENTRY

EQUATES

	04	PAGLENTH	LENGTH OF ONE PAGE TABLE ENTRY
004	PAGNEXT	004	NEXT PAGE TABLE ENTRY

EQUATES

	00	PAGMASK	MASK TO EXTRACT REAL PAGE ADDRESS

REDEFINITION - PAGE STATUS WITHIN PAGE ENTRY

000		X	BITS 1-19 ARE ARCHITECTED AS THE
001		X	4K ALIGNED PAGE FRAME ADDRESS.
002	PAGSTAT	001	BITS 0, 20, AND 23 MUST BE ZERO, BITS 21 AND 22 ARE DEFINED BELOW.

BITS DEFINED IN PAGSTAT (AT HEX DISPLACEMENT: 2)

	04	PAGINVAL	PAGE TABLE ENTRY IS INVALID
	02	PAGPROT	PAGE PROTECTED (READ ONLY)
003		X	THIS BYTE IS NOT ARCHITECTED AND IS AVAILABLE FOR SOFTWARE USE. IT IS RECOMMENDED THAT SOFTWARE REFRAIN FROM USING THIS BYTE UNLESS IT IS TO STORE THE GUEST STORAGE KEY.

CROSS REFERENCE

Name	Len	Val/Disp
PAGENTRY	004	000
PAGINVAL	001	004
PAGLENTH	001	004
PAGMASK	001	000
PAGNEXT	004	004
PAGPROT	001	002
PAGSTAT	001	002
PAGTE	001	000
PAG2305	001	018
PAG3330	001	039
PAG3340	001	018
PAG3350	001	078
PAG3375	001	060
PAG3380	001	096

HCPPALBK— PAGE ALLOCATION BLOCK

DSECT NAME: PALBK

DESCRIPTIVE NAME: PAGE ALLOCATION BLOCK

FUNCTION: A PALBK DESCRIBES THE ALLOCATION STATUS FOR ONE CYLINDER OF AUXILIARY STORAGE.

LOCATED BY:

PALPNT	FIELD OF HCPPALBK - FORWARD CHAIN PTR
ALORECP	FIELD OF HCPALOC - PAGE PALBK CHAIN
ALORECS	FIELD OF HCPALOC - SPOOL PALBK CHAIN
SALPALBK	FAST ALLOCATION PATH SALBK FORWARD PTR
SALBKPAL	FAST ALLOCATION PATH PALBK BACK PTR

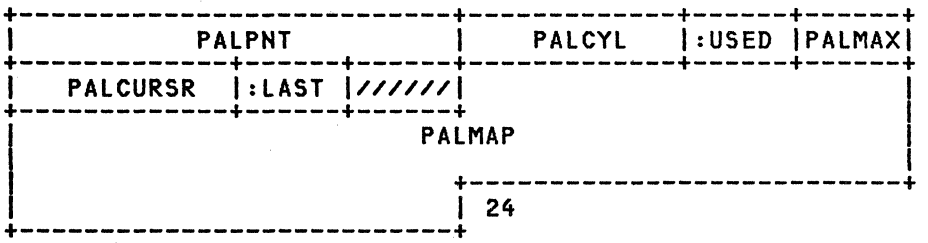
CREATED BY:

HCPPGTDG	SLOT ALLOCATED FROM A NEW CYLINDER
HCPPGTDR	SLOT DEALLOCATED ON EMPTY CYLINDER
HCPPGTRS	EMPTY CYLINDER SELECTED FOR ALLOCATION PATH

DELETED BY:

HCPPGTDR	CYLINDER IS EMPTY AFTER DEALLOCATION
HCPPGTDG	CYLINDER IS FULL AFTER ALLOCATION
HCPRDADT	WHEN DETACHING A DEVICE WHICH HAS PALBK'S FOR EMPTY CYLINDERS

PALBK - PAGE ALLOCATION BLOCK



disp	name	length	description
000	PALPNT	004	POINTER TO NEXT PALBLOK ON CHAIN
004	PALCYL	002	CYLINDER ADDR FOR PAGES IN THIS BLOCK
006	PALUSED	001	NUMBER OF PAGES CURRENTLY IN USE
007	PALMAX	001	MAXIMUM NUMBER OF PAGES AVAILABLE
008	PALCURSR	002	MOVING CURSOR POINTER TO NXT PG
00A	PALLAST	001	LAST RECORD ON CYLINDER
00B		X	RESERVED FOR IBM USE.
00C	PALMAP	024	PAGE ALLOCATION BIT MAP

EQUATES

18	PALMSIZE	PAGE ALLOCATION BIT MAP SIZE
05	PALSIZE	PALBK SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
PALBK	001	000
PALCURSR	002	008
PALCYL	002	004
PALLAST	001	00A
PALMAP	024	00C
PALMAX	001	007
PALMSIZE	001	018
PALPNT	004	000
PALSIZE	001	005
PALUSED	001	006

HCPPCCBK— PROCESSOR CONTROLLER SERVICE CALL DATA BLOCK

DSECT NAME: PCCBK

DESCRIPTIVE NAME: PROCESSOR CONTROLLER SERVICE CALL DATA BLOCK

FUNCTION: MAPS THE GUEST SUPPLIED SERVICE CALL CONTROL BLOCK (SCCB) FOR A REQUESTED PROCESSOR CONTROLLER FUNCTION. USED TO SIMULATE A SERVICE CALL INSTRUCTION FOR A GUEST AND FOR CP REQUESTS TO THE PROCESSOR CONTROLLER.

LOCATED BY:

R2	REGISTER OF A GUEST SERVICE CALL INSTRUCTION
GPR5	IN MODULE HCPPCV
PCRRDBKA	ADDRESS POINTER TO THE PROCESSOR CONTROLLER DATA BLOCK TO BE USED IN PROCESSING THE ASSOCIATED REAL REQUEST.
PCSACTIV	ADDRESS POINTER TO THE PROCESSOR CONTROLLER DATA BLOCK FOR THE CURRENT ACTIVE REQUEST.

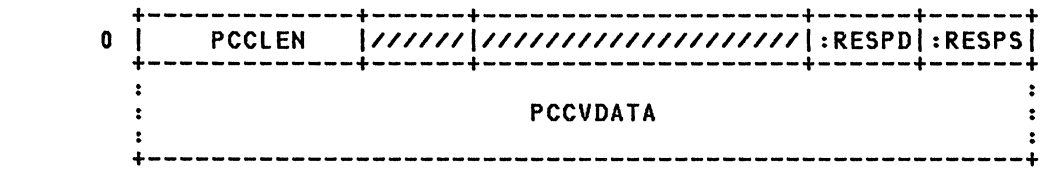
CREATED BY:

HCPPCV	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST. NECESSARY FOR VIRTUAL REQUEST PROCESSING.
HCPRFG	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST.
HCPSCP	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST.
GUEST	WHEN ACTIVATING A VIRTUAL SERVICE CALL INSTRUCTION

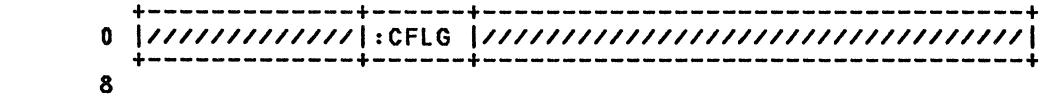
DELETED BY:

HCPPCV	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE.
HCPRFG	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE.
HCPSCP	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE.
GUEST	

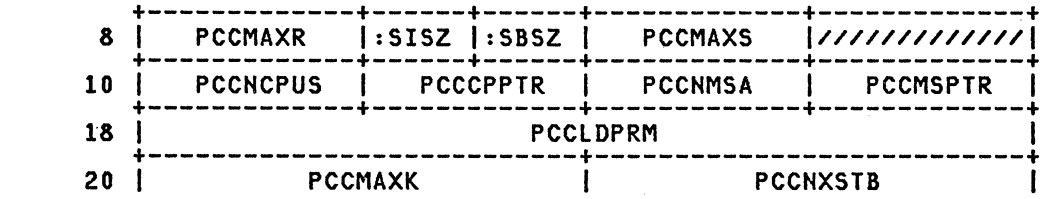
PCCBK - PROCESSOR CONTROLLER SERVICE CALL DATA BLOCK

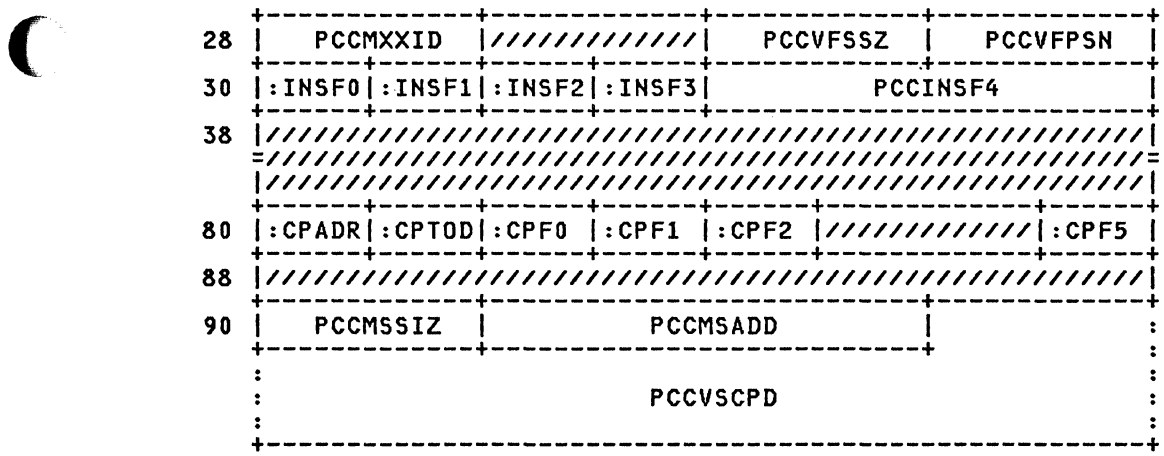


REDEFINITION -

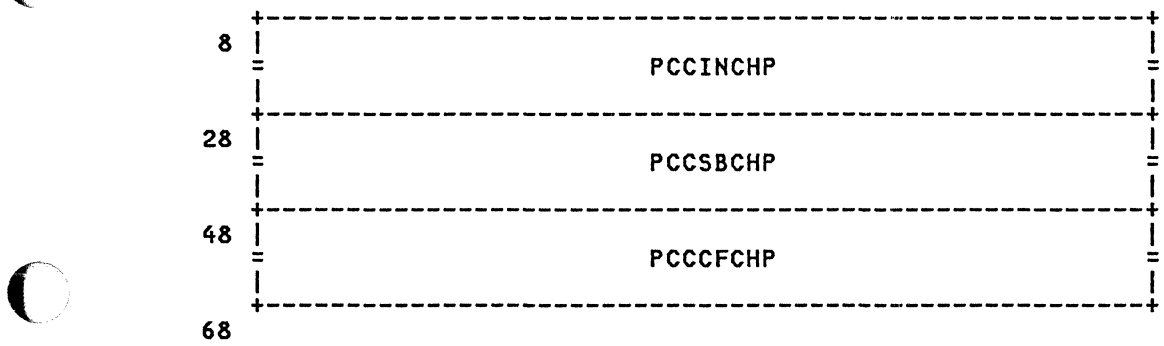


REDEFINITION - READ SCP INFO DATA FORMAT

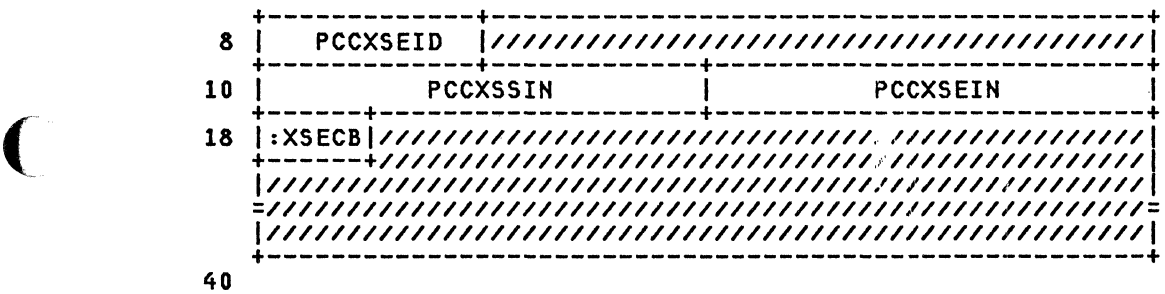




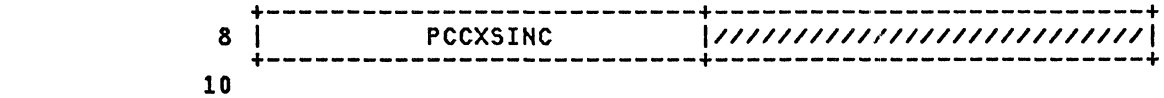
REDEFINITION - 370-XA READ CHANNEL PATH INFO



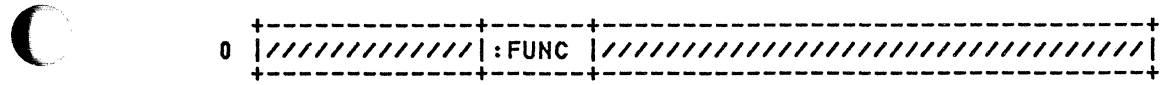
REDEFINITION - READ EXTENDED-STORAGE-ELEMENT



REDEFINITION - READ EXTENDED STORAGE USABILITY



REDEFINITION -



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    8

        REDEFINITION - READ/WRITE DATA DATA FORMAT

      +-------------+------+------+------+------+-------------+
    8 |   PCCMDDRC  |//////|:DSLVL|:OPCL |:NDATA|   PCCRWSEQ  |
      +-------------+------+------+------+------+-------------+
   10 |////////////////////////////////////////////////////////|
      +--------------------------------------------------------+
   18
```

disp	name	length	description
000	PCCHEAD	008	SERVICE CALL CONTROL BLOCK HEADER FOR ALL REQUESTS
000	PCCLEN	002	NO. OF BYTES IN THE SERVICE CALL CONTROL BLOCK
002		X	COMMAND DEPENDENT FIELD
003		XL3	RESERVED FOR FUTURE HARDWARE USE
006	PCCRESP	002	RESPONSE CODE
	CODES DEFINED IN PCCRESP (AT HEX DISPLACEMENT: 6)		
	10 PCCREADN		NORMAL READ COMPLETION
	10 PCCRESVD		NORMAL READ COMPLETION, RESOURCE IS IN RESERVED MODE
	10 PCCSTDBY		NORMAL READ COMPLETION, RESOURCE IS IN STANDBY MODE
	F0 PCCIVRID		INVALID RESOURCE ID IN SCCB
006	PCCRESPD	001	RESPONSE DEPENDENT CODES
	CODES DEFINED IN PCCRESPD (AT HEX DISPLACEMENT: 6)		
	00 PCCNORML		X'0020' NORMAL COMPLETION AND X'0010' NORMAL READ COMPLETION
	00 PCCMALF		X'0040' SCLP EQUIPMENT CHECK
	00 PCCCONFG		X'0010' RESOURCE IS CONFIGURED
	01 PCCN04KB		X'0100' ADDRESS CROSSES A 4K BOUNDARY
	01 PCCNOACT		X'0120' NO ACTION REQUIRED
	10 PCCPOWOF		X'10F0' POWER-OFF STATUS
	01 PCCINVCI		X'01F0' INVALID SCLP COMMAND
	02 PCCCFLAG		X'02F0' INVALID SCCB PARAMETER
	03 PCCBADLN		X'0300' LENGTH WRONG FOR DATA
	03 PCCINVCP		X'03F0' INVALID RESOURCE ID IN ...COMMAND PARM
	03 PCCRSRVD		X'0310' RESOURCE IS IN RESERVED STATE.
	04 PCCSTNBY		X'0410' RESOURCE IS IN STANDBY STATE.
	05 PCCXNOCN		X'05F0' TARGET RESOURCE IN ..IMPROPER STATE
	09 PCCXINVN		X'09F0' INVALID RESOURCE ID IN ..SCCB
	40 PCCREJRC		X'40F0' INVALID FUNCTION CODE
	0A PCCRQRES		X'0AF0' REQUIRED RESOURCE
007	PCCRESPS	001	SPECIFIC RESPONSE CODES
	CODES DEFINED IN PCCRESPS (AT HEX DISPLACEMENT: 7)		
	00 PCCDBERR		SERVICE CALL CONTROL BLOCK ERROR
	10 PCCINFO		NORMAL READ COMPLETION
	20 PCCCMPLT		NORMAL COMPLETION
	30 PCCBUSY		FUNCTION BUSY
	40 PCCEQPCK		EQUIPMENT CHECK
	F0 PCCRJCT		REJECT


```
008   PCCVDATA   001      START OF VARIABLE LENGTH DATA

         REDEFINITION -

000              XL2      DEFINED IN HEADER
002   PCCCFLG    001      SCCB PARAMETER
003              XL5      DEFINED IN HEADER

         REDEFINITION - READ SCP INFO DATA FORMAT

008   PCCMAXR    002      ONE GREATER THAN THE MAXIMUM
                          STORAGE INCREMENT INDEX VALUE
                          (MUST BE A POWER OF 2)
00A   PCCSISZ    001      STORAGE INCREMENT SIZE (IN UNITS
                          OF 1M, MUST BE A POWER OF 2)
00B   PCCSBSZ    001      STORAGE BLOCK SIZE (IN UNITS OF
                          1K, MUST BE A POWER OF 2)
00C   PCCMAXS    002      ONE GREATER THAN THE MAXIMUM
                          STORAGE SUBDIVISION INDEX VALUE
                          (MUST BE A POWER OF 2)
00E              XL2      RESERVED FOR FUTURE IBM USE
010   PCCNCPUS   002      NUMBER OF INSTALLED CPUS
012   PCCCPPTR   002      OFFSET IN PCCBK TO FIRST CPU
                          DESCRIPTION ENTRY
014   PCCNMSA    002      NUMBER OF MACHINE STORAGE AREAS
016   PCCMSPTR   002      OFFSET IN PCCBK TO FIRST MACHINE-
                          STORAGE-AREA DESCRIPTION ENTRY
018   PCCLDPRM   008      LOAD PARAMETER
020   PCCMAXK    004      MAXIMUM EXTENDED STORE INCREMENT
                          ..NUMBER.
024   PCCNXSTB   004      NUMBER OF EXTENDED STORAGE BLOCKS
                          ..IN EACH EXTENDED STORAGE
                          ..INCREMENT
028   PCCMXXID   002      MAX EXTENDED-STORAGE-ELEMENT ID
02A              XL2      RESERVED FOR FUTURE IBM USE
02C   PCCVFPRM   004      VECTOR FACILITY PARAMETERS
02C   PCCVFSSZ   002      VECTOR FACILITY SECTION SIZE
02E   PCCVFPSN   002      VECTOR FACILITY PARTIAL SUM
                          NUMBER
030   PCCINSFC   008      INSTALLED FACILITIES BIT MAP
030   PCCINSF0   001      INSTALLED FACILITY BYTE 0

                    EQUATES

        80    PCCRCHPI    READ CHANNEL PATH INFO INSTALLED

031   PCCINSF1   001      INSTALLED FACILITY BYTE 1

                    EQUATES

        04    PCCLPRMI    LOAD PARAMETER FACILITY INSTALLED
        02    PCCRWDI     READ/WRITE DATA INSTALLED

032   PCCINSF2   001      INSTALLED FACILITY BYTE 2

                    EQUATES

        08    PCCXUMI     READ EXTENDED STORE USABILITY
                          MAP INSTALLED
        04    PCCXEINF    EXTENDED-STORAGE-ELEMENT
                          INFORMATION INSTALLED

033   PCCINSF3   001      INSTALLED FACILITY BYTE 3

                    EQUATES

        80    PCCVFRFG    VECTOR FACILITY RECONFIGURATION
                          INSTALLED

034   PCCINSF4   004      INSTALLED FACILITY BYTES 4 TO 7
038              XL72     RESERVED FOR FUTURE IBM USE
```

EQUATES

	10	PCCVSCPS	:PCCBK SIZE IN DOUBLE WORDS NOTE: SIZE FOR READ SCP INFO REQUESTS VARIES WITH THE NUMBER OF CPUS AND MACHINE-STORAGE-AREAS
	80	PCCVSCPL	PCCBK LENGTH FOR READ SCP INFO REQUESTS VARIES WITH THE NUMBER OF CPUS AND MACHINE-STORAGE-AREAS
080	PCCCPADR	001	LOW EIGHT BITS OF CPU ADDRESS. HIGH ORDER BITS OF THE CPU ADDRESS ARE ZERO
081	PCCCPTOD	001	TOD CLOCK NUMBER WHICH IS USED BY THIS CPU
082	PCCCPFAC	014	CPU FACILITY BIT MAP
082	PCCCPF0	001	CPU FACILITY BIT MAP BYTE 0

BITS DEFINED IN PCCCPF0 (AT HEX DISPLACEMENT: 82)

80	PCCSI370	SIE SYSTEM/370 MODE INSTALLED
40	PCCSIXA	SIE 370-XA MODE INSTALLED
20	PCCIOP37	SIE SET II 370 MODE INSTALLED
10	PCCIOPXA	SIE SET II 370-XA MODE INSTALLED
08	PCCSIF2	SIE NEW INTERCEPTION FORMAT
04	PCCSKA	STORAGE KEY ASSIST INSTALLED INSTALLED

083	PCCCPF1	001	CPU FACILITY BIT MAP BYTE 1

BITS DEFINED IN PCCCPF1 (AT HEX DISPLACEMENT: 83)

40	PCCIOIL2	I/O INTERPRETATION LEVEL 2 INSTALLED
08	PCCSIGPA	SIGP INTERPRETATION ASSIST INSTALLED
04	PCCRCPBY	RCP BYPASS FACILITY INSTALLED INSTALLED

084	PCCCPF2	001	CPU FACILITY BIT MAP BYTE 2

BITS DEFINED IN PCCCPF2 (AT HEX DISPLACEMENT: 84)

80	PCCVFINS	VECTOR FACILITY INSTALLED
40	PCCVFCON	VECTOR FACILITY CONNECTED
20	PCCVFSBY	VECTOR FACILITY IN STANDBY

085		2X	RESERVED FOR FUTURE IBM USE
087	PCCCPF5	001	CPU FACILITY BIT MAP BYTE 5

BITS DEFINED IN PCCCPF5 (AT HEX DISPLACEMENT: 87)

40	PCCWSA	GUEST WAIT-STATE ASSIST INSTALLED

088		8X	NOT-YET-USED FACILITY BYTES

EQUATES

10	PCCCPULN	LENGTH OF EACH CPU ENTRY

090	PCCMSSIZ	002	SIZE OF THE MACHINE-STORAGE-AREA IN UNITS OF 4K BYTES
092	PCCMSADD	004	ABSOLUTE ADDRESS OF THE START OF ..THE MACHINE-STORAGE-AREA
096	PCCVSCPD	001	START OF VARIABLE LENGTH DATA FOR THE CPU AND MACHINE-STORAGE- AREA LIST ENTRIES

REDEFINITION - 370-XA READ CHANNEL PATH INFO

008	PCCINCHP	032	CHANNEL PATH ID VALID BIT MAP
028	PCCSBCHP	032	STAND-BY CHANNEL BIT MAP
048	PCCCFCHP	032	CONFIGURED CHANNEL-PATH BIT MAP

EQUATES

68	PCCCPILN	LENGTH FOR READ CHANNEL PATH INFO

REDEFINITION - READ EXTENDED-STORAGE-ELEMENT

008	PCCXSEID	002	EXTENED-STORAGE-ELEMENT ID
00A		XL6	RESERVED
010	PCCXSSIN	004	STARTING EXTENDED-STORAGE-INCREMENT NUMBER
014	PCCXSEIN	004	ENDING EXTENDED-STORAGE-INCREMENT NUMBER
018	PCCXSECB	001	EXTENDED-STORAGE-ELEMENT CHARACTERISTICS BYTE

EQUATES

80	PCCXSRE	REQUIRED EXTENDED-STORAGE-ELEMENT

019		XL39	RESERVED

EQUATES

40	PCCXSELN	LENGTH OF READ EXTENDED STORAGE ELEMENT INFORMATION MAP

REDEFINITION - READ EXTENDED STORAGE USABILITY

008	PCCXSINC	004	EXTENDED STORAGE INCREMENT NUMBER
00C		XL4	RESERVED FOR FUTURE IBM USE
010	PCCXSTUM	001	START OF VARIABLE LENGTH ..USABILITY MAP.

REDEFINITION -

000		XL2	DEFINED IN HEADER
002	PCCFUNC	001	FUNCTION CODE

EQUATES

01	PCCIOCDS	READ/WRITE DATA FUNCTION CODE

003		XL5	DEFINED IN HEADER

REDEFINITION - READ/WRITE DATA DATA FORMAT

008	PCCMDDRC	002	MODEL DEPENDENT RETURN CODE
00A		X	RESERVED FOR FUTURE IBM USE
00B	PCCDSLVL	001	IOCDS LEVEL
00C	PCCOPCL	001	MODEL DEPENDENT RETURN CODE

EQUATES

80	PCCOPNRW	READ/WRITE DATA WITH OPEN
40	PCCCLSRW	READ/WRITE CLOSE

00D	PCCNDATA	001	NUMBER OF RECORDS TO BE PROCESSED
00E	PCCRWSEQ	002	BEGINNING RECORD FOR READ/WRITE SEQUENCE
010		XL8	RESERVED FOR FUTURE USE
018	PCCRWDAT	001	UNFORMATTED DATA

MORE EQUATES

002	PCCSCPCM	READ SCP INFO
003	PCCCPICM	STORE CHANNEL PATH INFO
010	PCCDCPCM	DECONFIGURE CPU
011	PCCVCPCM	CONFIGURE CPU
01A	PCCDVFCM	DISCONNECT VECTOR FACILITY
01B	PCCCVFCM	CONNECT VECTOR FACILITY

```
024     PCCXEICM    READ EXTENDED STORE ELEMENT INFO
025     PCCXUMCM    READ EXTENDED STORE USABILITY MAP
040     PCCWRDCM    WRITE MODEL DEPENDENT DATA
041     PCCRDDCM    READ MODEL DEPENDENT DATA
                    END OF DEFINITION

                    COMMAND PARAMETERS

                    PCCPCODE CODE DEFINITIONS
000     PCCSCPPM    READ SCP INFO
000     PCCCPIPM    STORE CHANNEL PATH INFO
                    END OF DEFINITION

                    COMMAND-CLASS CODES

                    PCCCLASS CODE DEFINITIONS
001     PCCCNFIG    CONFIGURATION COMMAND CLASS
002     PCCIOCP     IOCP COMMAND CLASS
                    END OF DEFINITION

008     PCCHDLEN    :PCCBK HEADER LENGTH IN BYTES
001     PCCHDSIZ    :PCCBK HEADER SIZE IN DOUBLE
                    WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PCCBADLN	001	003	PCCINSF0	001	030	PCCRCHPI	001	080
PCCBK	001	000	PCCINSF1	001	031	PCCRCPBY	001	004
PCCBUSY	001	030	PCCINSF2	001	032	PCCRDDCM	001	041
PCCCFCHP	032	048	PCCINSF3	001	033	PCCREADN	001	010
PCCCFLAG	001	002	PCCINSF4	004	034	PCCREJRC	001	040
PCCCFLG	001	002	PCCINVCI	001	001	PCCRESP	002	006
PCCCLSRW	001	040	PCCINVCP	001	003	PCCRESPD	001	006
PCCCMPLT	001	020	PCCIOCDS	001	001	PCCRESPS	001	007
PCCCNFIG	001	001	PCCIOCP	001	002	PCCRESVD	001	310
PCCCONFG	001	000	PCCIOIL2	001	040	PCCRJCT	001	0F0
PCCCPADR	001	080	PCCIOPXA	001	010	PCCRQRES	001	00A
PCCCPFAC	014	082	PCCIOP37	001	020	PCCRSRVD	001	003
PCCCPF0	001	082	PCCIVRID	001	9F0	PCCRWDAT	001	018
PCCCPF1	001	083	PCCLDPRM	008	018	PCCRWDI	001	002
PCCCPF2	001	084	PCCLEN	002	000	PCCRWSEQ	002	00E
PCCCPF5	001	087	PCCLPRMI	001	004	PCCSBCHP	032	028
PCCCPICM	001	003	PCCMALF	001	000	PCCSBSZ	001	00B
PCCCPILN	001	068	PCCMAXK	004	020	PCCSCPCM	001	002
PCCCPIPM	001	000	PCCMAXR	002	008	PCCSCPPM	001	000
PCCCPPTR	002	012	PCCMAXS	002	00C	PCCSIF2	001	008
PCCCPTOD	001	081	PCCMDDRC	002	008	PCCSIGPA	001	008
PCCCPULN	001	010	PCCMSADD	004	092	PCCSISZ	001	00A
PCCCVFCM	001	01B	PCCMSPTR	002	016	PCCSIXA	001	040
PCCDBERR	001	000	PCCMSSIZ	002	090	PCCSI370	001	080
PCCDCPCM	001	010	PCCMXXID	002	028	PCCSKA	001	004
PCCDSLVL	001	00B	PCCNCPUS	002	010	PCCSTDBY	001	410
PCCDVFCM	001	01A	PCCNDATA	001	00D	PCCSTNBY	001	004
PCCEQPCK	001	040	PCCNMSA	002	014	PCCVCPCM	001	011
PCCFUNC	001	002	PCCNOACT	001	001	PCCVDATA	001	008
PCCHDLEN	001	008	PCCNORML	001	000	PCCVFCON	001	040
PCCHDSIZ	001	001	PCCNO4KB	001	001	PCCVFINS	001	080
PCCHEAD	008	000	PCCNXSTB	004	024	PCCVFPRM	004	02C
PCCINCHP	032	008	PCCOPCL	001	00C	PCCVFPSN	002	02E
PCCINFO	001	010	PCCOPNRW	001	080	PCCVFRFG	001	080
PCCINSFC	008	030	PCCPOWOF	001	010	PCCVFSBY	001	020

Name	Len	Val/Disp
PCCVFSSZ	002	02C
PCCVSCPD	001	096
PCCVSCPL	001	080
PCCVSCPS	001	010
PCCWRDCM	001	040
PCCWSA	001	040
PCCXEICM	001	024
PCCXEINF	001	004
PCCXINVN	001	009
PCCXNOCN	001	005
PCCXSECB	001	018
PCCXSEID	002	008
PCCXSEIN	004	014
PCCXSELN	001	040
PCCXSINC	004	008
PCCXSRE	001	080
PCCXSSIN	004	010
PCCXSTUM	001	010
PCCXUMCM	001	025
PCCXUMI	001	008

HCPPCDBK— PROCESSOR CONTROLLER DIAGNOSE DATA BLOCK

DSECT NAME: PCDBK

DESCRIPTIVE NAME: PROCESSOR CONTROLLER DIAGNOSE DATA BLOCK

FUNCTION: MAPS HARDWARE PROCESSOR CONTROLLER DATA BLOCK FOR A REQUESTED COMMAND. USED TO PASS INFORMATION BETWEEN CP AND THE PROCESSOR CONTROLLER WHEN USING THE DIAGNOSE X'80' INTERFACE.

LOCATED BY:

PCRRDBKA	ADDRESS POINTER TO THE PROCESSOR CONTROLLER DATA BLOCK TO BE USED IN PROCESSING THE ASSOCIATED REAL REQUEST.
PCSACTIV	ADDRESS POINTER TO THE PROCESSOR CONTROLLER DATA BLOCK FOR THE CURRENT ACTIVE REQUEST.

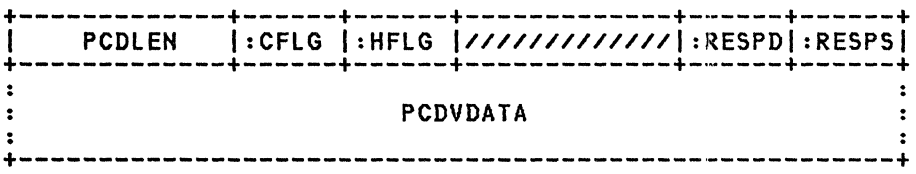
CREATED BY:

HCPPCV	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST NECESSARY FOR VIRTUAL REQUEST PROCESSING
HCPRFG	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST
HCPSCP	WHEN BUILDING REAL PROCESSOR CONTROLLER REQU

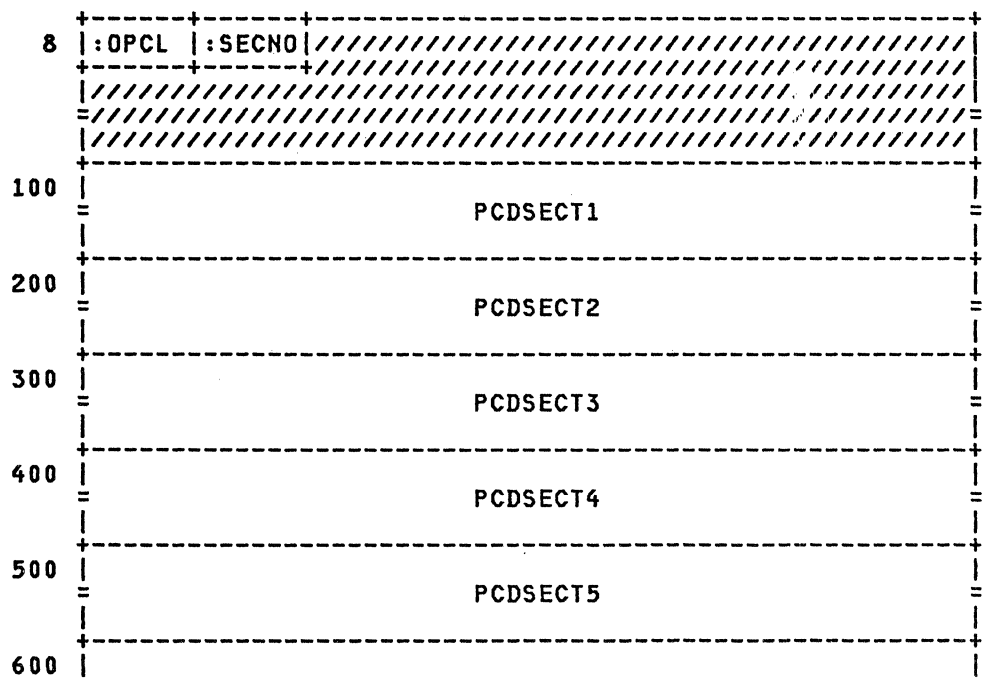
DELETED BY:

HCPPCV	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE
HCPRFG	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE
HCPSCP	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPL

PCDBK - PROCESSOR CONTROLLER DIAGNOSE X'80' DATA BLOCK



REDEFINITION - I/O CONFIG. PROGRAM DATA FORMAT




```
    =                     PCDSECT6                      =
    |                                                   |
    +---------------------------------------------------+
700 |                                                   |
    =                     PCDSECT7                      =
    |                                                   |
    +---------------------------------------------------+
800
```

REDEFINITION - CHANNEL PATH INFO. DATA FORMAT

```
    +---------------------------------------------------+
  8 |                                                   |
    =                     PCDCHPAL                      =
    |                                                   |
    +---------------------------------------------------+
 28 |                                                   |
    =                     PCDCHPOW                      =
    |                                                   |
    +---------------------------------------------------+
 48 |                                                   |
    =                     PCDCHPON                      =
    |                                                   |
    +---------------------------------------------------+
 68 |                                                   |
    =                     PCDCHP0A                      =
    |                                                   |
    +---------------------------------------------------+
 88
```

REDEFINITION -

```
    +---------------------------------------------------+
 68 |                                                   |
    =                     PCDCHP0S                      =
    |                                                   |
    +---------------------------------------------------+
 88 |                                                   |
    =                     PCDCHP1A                      =
    |                                                   |
    +---------------------------------------------------+
 A8 |                                                   |
    =                     PCDCHP0B                      =
    |                                                   |
    +---------------------------------------------------+
 C8 |                                                   |
    =                     PCDCHP1B                      =
    |                                                   |
    +------+--------------------------------------------+
 E8 |:CHPST| E9
    +------+
```

REDEFINITION - SCP INFORMATION DATA FORMAT

```
    +------+------+------+------+-------------------------+
  8 |PCDSAR|PCDSAI|PCDSBS|PCDSII|         PCDIPL          |
    +------+------+------+------+------------+------------+
 10 |  PCDNOCPU   |  PCDCPPTR   |  PCDNOHSA  |  PCDHSAPT  |
    +-------------+-------------+------------+------------+
 18 |                      PCDLOADP                       |
    +------+------+------+------+------------+------------+
 20 |:CNFFG|:FEATS|:CPADR|:CPSID|  PCDMSSIZ  | PCDMSADD-  |
    +------+------+------+------+------------+------------+
 28 |  -PCDMSADD  |                                       :
    +-------------+                                       :
    :                                                     :
    :                     PCDVCPDA                        :
```

```
:                                                          :
+----------------------------------------------------------+
```

disp	name	length	description
000	PCDHEAD	008	DATA BLOCK HEADER FOR ALL REQUESTS
000	PCDLEN	002	NO. OF BYTES IN THE DATA BLOCK
	CODES DEFINED IN PCDLEN (AT HEX DISPLACEMENT: 0)		
	08 PCDVCLEN		PCDBK LENGTH FOR VARY CP REQUESTS
	00 PCDMXLEN		MAXIMUM PCDBK LENGTH (2K)
002	PCDCFLG	001	CALLER FLAG (REQUESTOR)
003	PCDHFLG	001	HARDWARE FLAG (PROCESSOR CONTROLLER)
004		H	RESERVED FOR FUTURE HARDWARE USE
006	PCDRESP	002	RESPONSE CODE
006	PCDRESPD	001	RESPONSE DEPENDENT CODES
	CODES DEFINED IN PCDRESPD (AT HEX DISPLACEMENT: 6)		
	00 PCDINVAD		X'0000' INVALID ADDR. OF DATABLOCK
	01 PCDNO2KB		X'0100' ADDR. NOT ON 2K BOUNDARY
	02 PCDNO8BT		X'0200' LENGTH NOT IN 8 BYTE INCREMENTS
	03 PCDBADLN		X'0300' LENGTH WRONG FOR DATA
	00 PCDVALCM		X'0020' VALID COMMAND COMPLETE
	02 PCDNOFLG		X'02F0' INVALID FLAG BYTE
	03 PCDINVCP		X'03F0' INVALID CPU ADDRESS ..SPECIFIED.
	00 PCDLGCMS		X'0020' LOGICAL IOCP WRITE LOCK ACQUIRED OR RELEASED FOR CMS IOCP USER
	01 PCDNOCMS		X'01F0' LOGICAL IOCP WRITE LOCK WAS PREVIOUSLY LOCKED BY ANOTHER USER OR ALREADY RELEASED
	01 PCDINVCI		X'01F0' INVALID COMMAND OR IDENTIFICATION
	42 PCDICPRJ		X'42F0' INVALID IOCP COMMAND
007	PCDRESPS	001	SPECIFIC RESPONSE CODES
	CODES DEFINED IN PCDRESPS (AT HEX DISPLACEMENT: 7)		
	00 PCDDBERR		DATA BLOCK ERROR
	10 PCDINFO		INFORMATION
	20 PCDCMPLT		COMPLETE
	30 PCDICMPT		INCOMPLETE
	40 PCDBKOUT		BACKOUT
	50 PCDCMND		COMMAND
	60 PCDQUIES		QUIESCED
	F0 PCDRJCT		REJECT
008	PCDVDATA	001	START OF VARIABLE LENGTH DATA
	REDEFINITION - I/O CONFIG. PROGRAM DATA FORMAT		
008	PCDIOCPF	002	IOCP DATA FORMAT
008	PCDOPCL	001	OPEN-CLOSE STATUS ON THIS REQUEST
	BITS DEFINED IN PCDOPCL (AT HEX DISPLACEMENT: 8)		
	80 PCDOPNRW		FIRST READ OR WRITE WITH OPEN
	40 PCDCLSRW		READ OR WRITE CLOSE WITH NO DATA
009	PCDSECNO	001	NUMBER DATA SECTORS TRANSFERRED

BITS DEFINED IN PCDSECNO (AT HEX DISPLACEMENT: 9)

	00	PCDNODAT	NO DATA TRANSFERRED WITH THIS REQUEST

00A		246XL1	
100	PCDSECT1	256	DATA SECTOR NUMBER 1
200	PCDSECT2	256	DATA SECTOR NUMBER 2
300	PCDSECT3	256	DATA SECTOR NUMBER 3
400	PCDSECT4	256	DATA SECTOR NUMBER 4
500	PCDSECT5	256	DATA SECTOR NUMBER 5
600	PCDSECT6	256	DATA SECTOR NUMBER 6
700	PCDSECT7	256	DATA SECTOR NUMBER 7

EQUATES

00	PCDICSIZ	:PCDBK SIZE IN DOUBLE WORDS NOTE: SIZE FOR IOCP REQUESTS
00	PCDICLEN	:PCDBK LENGTH FOR IOCP REQUESTS

REDEFINITION - CHANNEL PATH INFO. DATA FORMAT

008	PCDCHPAL	032	INSTALLED CHANNEL PATHS
028	PCDCHPOW	032	OWNED CHANNEL PATHS
048	PCDCHPON	032	ON/OFF-LINE CHANNEL PATHS
068	PCDCHP0A	032	370 CHANNEL SET 0A

REDEFINITION -

068	PCDCHP0S	002	370 CHANNEL SET 0A
088	PCDCHP1A	032	370 CHANNEL SET 1A
0A8	PCDCHP0B	032	370 CHANNEL SET 0B
0C8	PCDCHP1B	032	370 CHANNEL SET 1B
0E8	PCDCHPST	001	CHANNEL SET CONFIGURATION BYTE

EQUATES

1E	PCDCHSIZ	:PCDBK SIZE IN DOUBLE WORDS NOTE: SIZE FOR CHANNEL PATH INFORMATION REQUESTS
E9	PCDCHLEN	:PCDBK LEN FOR CHANNEL PATH INFORMATION REQUESTS

REDEFINITION - SCP INFORMATION DATA FORMAT

008	PCDSAR	001	STORAGE ADDRESS RANGE
009	PCDSAI	001	STORAGE ADDRESS INCREMENT
00A	PCDSBS	001	STORAGE BLOCK SIZE
00B	PCDSII	001	STORAGE INTERLEAVE INTERVAL
00C	PCDIPL	004	IPL DUMP ID
010	PCDNOCPU	002	NUMBER OF CPUS
012	PCDCPPTR	002	OFFSET TO CPUDATA
014	PCDNOHSA	002	NUMBER OF HARDWARE SYSTEM AREAS
016	PCDHSAPT	002	OFFSET TO HARDWARE SYSTEM AREAS
018	PCDLOADP	008	LOAD PARAMETERS
020	PCDCNFFG	001	BYTE OF CONFIGURATION INDICATORS
021	PCDFEATS	001	BYTE OF INSTALLED FEATURES

BITS DEFINED IN PCDFEATS (AT HEX DISPLACEMENT: 21)

80	PCDIOPIN	I/O PASSTHROUGH INSTALLED
05	PCDVSCPS	:PCDBK SIZE IN DOUBLE WORDS NOTE: SIZE FOR SCPINFO REQUESTS VARIES WITH THE NUMBER OF CPUS
22	PCDVSCPL	PCDBK LENGTH FOR SCPINFO REQUEST S VARIES WITH THE NUMBER OF CPUS

022	PCDCPADR	001	CPU ADDRESS
023	PCDCPSID	001	CPU SIDE

EQUATES

	02	PCDCPULN	LENGTH OF EACH CPU ENTRY
	24	PCDVHSAP	OFFSET TO HARDWARE SYSTEM AREA
024	PCDMSSIZ	002	SIZE OF MACHINE STORAGE AREA IN 4K BYTES IF BIT 0 = 1 OR 32K BYTES IF BIT 0 = 0
026	PCDMSADD	004	ABSOLUTE ADDRESS OF MACHINE STORAGE AREA
02A	PCDNXMSA	002	NEXT MACHINE STORAGE AREA DESCRIPTION
02A	PCDVCPDA	001	START OF VARIABLE LENGTH DATA

MORE EQUATES

002	PCDSCPIN	SCP INFO
003	PCDCHPIN	CHANNEL PATH INFO
00F	PCDVYCHN	VARY CHANNEL PATH ON
010	PCDVYCPF	VARY PROCESSOR (CPU) OFF
011	PCDVYCPN	VARY PROCESSOR (CPU) ON
040	PCDICPWT	IOCP WRITE
041	PCDICPRD	IOCP READ
		END OF DEFINITION
		COMMAND DEPENDENT CODE BYTE
		PCDDCODE CODE DEFINITIONS
000	PCDCMDVR	VERIFY CHANNEL PATH INFO AND SCPINFO COMMANDS
003	PCDCPMAX	MAXIMUM CPU ADDRESS
		END OF DEFINITION
		IDENTIFICATION CODE BYTE
		PCDIDBYT CODE DEFINITIONS
002	PCDIOCP	IOCP COMMAND
001	PCDCONFG	CONFIGURATION COMMAND
		END OF DEFINITION
001	PCDHDSIZ	:PCDBK HEADER SIZE IN DOUBLE WORDS
008	PCDHDLEN	:PCDBK HEADER LENGTH IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PCDBADLN	001	003	PCDCHP1B	032	0C8	PCDFEATS	001	021
PCDBK	001	000	PCDCHSIZ	001	01E	PCDHDLEN	001	008
PCDBKOUT	001	040	PCDCLSRW	001	040	PCDHDSIZ	001	001
PCDCFLG	001	002	PCDCMDVR	001	000	PCDHEAD	008	000
PCDCHLEN	001	0E9	PCDCMND	001	050	PCDHFLG	001	003
PCDCHPAL	032	008	PCDCMPLT	001	020	PCDHSAPT	002	016
PCDCHPIN	001	003	PCDCNFFG	001	020	PCDICLEN	001	800
PCDCHPON	032	048	PCDCONFG	001	001	PCDICMPT	001	030
PCDCHPOW	032	028	PCDCPADR	001	022	PCDICPRD	001	041
PCDCHPST	001	0E8	PCDCPMAX	001	003	PCDICPRJ	001	042
PCDCHP0A	032	068	PCDCPPTR	002	012	PCDICPWT	001	040
PCDCHP0B	032	0A8	PCDCPSID	001	023	PCDICSIZ	001	100
PCDCHP0S	002	068	PCDCPULN	001	002	PCDINFO	001	010
PCDCHP1A	032	088	PCDDBERR	001	000	PCDINVAD	001	000

Name	Len	Val/Disp
PCDINVCI	001	001
PCDINVCP	001	003
PCDIOCP	001	002
PCDIOCPF	002	008
PCDIOPIN	001	080
PCDIPL	004	00C
PCDLEN	002	000
PCDLGCMS	001	000
PCDLOADP	008	018
PCDMSADD	004	026
PCDMSSIZ	002	024
PCDMXLEN	001	800
PCDNOCMS	001	001
PCDNOCPU	002	010
PCDNODAT	001	000
PCDNOFLG	001	002
PCDNOHSA	002	014
PCDNO2KB	001	001
PCDNO8BT	001	002
PCDNXMSA	002	02A
PCDOPCL	001	008
PCDOPNRW	001	080
PCDQUIES	001	060
PCDRESP	002	006
PCDRESPD	001	006
PCDRESPS	001	007
PCDRJCT	001	0F0
PCDSAI	001	009
PCDSAR	001	008
PCDSBS	001	00A
PCDSCPIN	001	002
PCDSECNO	001	009
PCDSECT1	256	100
PCDSECT2	256	200
PCDSECT3	256	300
PCDSECT4	256	400
PCDSECT5	256	500
PCDSECT6	256	600
PCDSECT7	256	700
PCDSII	001	00B
PCDVALCM	001	000
PCDVCLEN	001	008
PCDVCPDA	001	02A
PCDVDATA	001	008
PCDVHSAP	001	024
PCDVSCPL	001	022
PCDVSCPS	001	005
PCDVYCHN	001	00F
PCDVYCPF	001	010
PCDVYCPN	001	011

HCPPCRBK— PROCESSOR CONTROLLER REQUEST BLOCK

DSECT NAME: PCRBK

DESCRIPTIVE NAME: PROCESSOR CONTROLLER REQUEST BLOCK

FUNCTION: EACH PCRBK IDENTIFIES ONE OUTSTANDING PROCESSOR CONTROLLER REQUEST.

LOCATED BY:

PCSPCRQ	ANCHOR FOR PROCESSOR CONTROLLER REQUEST QUEUE
PCRFPTR	CHAINED VIA FORWARD POINTER OF PREVIOUS REQUEST IN THE REQUEST QUEUE

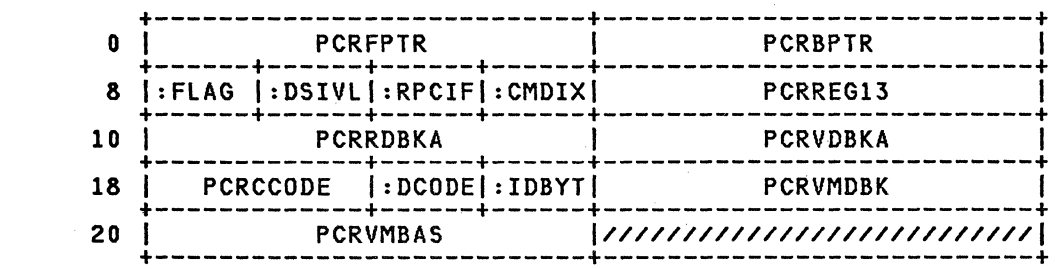
CREATED BY:

HCPPCV	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST NECESSARY FOR VIRTUAL REQUEST PROCESSING
HCPRFG	WHEN BUILDING REAL PROCESSOR CONTROLLER REQUEST
HCPSCP	WHEN BUILDING REAL PROCESSOR CONTROLLER REQU

DELETED BY:

HCPPCV	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE
HCPRFG	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPLETE
HCPSCP	WHEN REAL PROCESSOR CONTROLLER REQUEST COMPL

PCRBK - PROCESSOR CONTROLLER REQUEST BLOCK



disp	name	length	description
000	PCRFPTR	004	FORWARD POINTER TO NEXT PCRBK
004	PCRBPTR	004	BACKWARD PCRBK PREVIOUS POINTER
008	PCRFLAG	001	REQUEST STATUS FLAG
	BITS DEFINED FOR PCRFLAG BY HCPEQUAT PCRRQ		
009	PCRDSIVL	001	THIS REQUEST WILL CAUSE THE IOCDS DATA SET LEVEL TO BE MARKED INVALID
	CODES DEFINED IN PCRDSIVL (AT HEX DISPLACEMENT: 9)		
	10 PCRIOCPW		IOCP OPEN WRITE REQUEST STARTED; WHEN THIS REQUEST IS ACTIVATED SEND A MESSAGE THAT THAT THE IOCDS DATA SET WILL BE ALTERED (MARKED INVALID)
	00 PCRNODS		FLAG TO SHOW THAT NO IOCDS DATASET IS CURRENTLY BEING ALTERED NOTE: CODES DEFINED FOR PCRRPCIF BY HCPSYSCM SYSRPCIF
00A	PCRRPCIF	001	PROCESSOR CONTROLLER INTERFACE USED FOR REAL REQUEST PROCESSING
	NOTE: CODES DEFINED FOR PCRRPCIF BY HCPSYSCM SYSRPCIF		
00B	PCRCMDIX	001	SUPPORTED REAL PC COMMAND TABLE INDEX

CODES DEFINED IN PCRCMDIX (AT HEX DISPLACEMENT: B)

00	PCRCMDNO	NO PC COMMANDS IDENTIFIED
04	PCRCMDIR	IOCP READ
08	PCRCMDIW	IOCP WRITE
0C	PCRCMDPN	VARY CENTRAL PROCESSOR ON OR CONFIGURE CPU
10	PCRCMDPF	VARY CENTRAL PROCESSOR OFF OR DECONFIGURE CPU
14	PCRCMDSC	READ SCPINFO
18	PCRCMDXS	READ EXPANDED STORE USABILITY MAP
1C	PCRCMDXI	READ EXPANDED STORAGE ELEMENT INFORMATION
20	PCRCMDCV	CONNECT VECTOR FACILITY
24	PCRCMDDV	DISCONNECT VECTOR FACILITY

00C	PCRREG13	004	SAVEAREA ADDRESS USED TO COMPLETE A CP REQUEST
010	PCRRDBKA	004	REAL PROCESSOR CONTROLLER DATA BLOCK ADDRESS POINTER
014	PCRVDBKA	004	VIRTUAL PROCESSOR CONTROLLER DATA BLOCK ADDRESS POINTER FOR VIRTUAL MACHINE REQUEST
018	PCRCMDWD	004	PROCESSOR CONTROLLER COMMAND WORD
018	PCRCCODE	002	COMMAND CODE

CODES DEFINED FOR PCRCCODE BY HCPPCCBK PCCCCODE

01A	PCRDCODE	001	COMMAND DEPENDENT CODE

CODES DEFINED FOR PCRDCODE BY HCPPCCBK PCCPCODE

01B	PCRIDBYT	001	IDENTIFICATION BYTE

CODES DEFINED FOR PCRIDBYT BY HCPPCCBK PCCCLASS

01C	PCRVMDBK	004	REQUESTOR'S VMDBK ADDRESS
020	PCRVMBAS	004	REQUESTOR'S BASE VMDBK ADDRESS
024		F	RESERVED FOR FUTURE IBM USE

EQUATES

05	PCRSIZE	:SIZE OF BLOCK IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PCRBK	001	000	PCRCPREQ	001	040	PCRVMREQ	001	080
PCRBPTR	004	004	PCRDCODE	001	01A			
PCRCCODE	002	018	PCRDSIVL	001	009			
PCRCMDCV	001	020	PCRFLAG	001	008			
PCRCMDDV	001	024	PCRFPTR	004	000			
PCRCMDIR	001	004	PCRIDBYT	001	01B			
PCRCMDIW	001	008	PCRIOCPW	001	010			
PCRCMDIX	001	00B	PCRNODS	001	000			
PCRCMDNO	001	000	PCRRDBKA	004	010			
PCRCMDPF	001	010	PCRREG13	004	00C			
PCRCMDPN	001	00C	PCRRPCIF	001	00A			
PCRCMDSC	001	014	PCRSIZE	001	005			
PCRCMDWD	004	018	PCRVDBKA	004	014			
PCRCMDXI	001	01C	PCRVMBAS	004	020			
PCRCMDXS	001	018	PCRVMDBK	004	01C			

HCPPCSBK— PROCESSOR CONTROLLER STATUS BLOCK

DSECT NAME: PCSBK

DESCRIPTIVE NAME: PROCESSOR CONTROLLER STATUS BLOCK

FUNCTION: THIS CONTROL BLOCK RECORDS ALL COMMUNICATION STATUS BETWEEN CP AND THE PROCESSOR CONTROLLER. THE REAL PROCESSOR CONTROLLER REQUEST STATUS IS STRICTLY MAINTAINED BY THE PROCESSING SUPPORT MODULE HCPPCR.

LOCATED BY:

SYSPCSBK ANCHOR FIELD IN HCPSYSCM

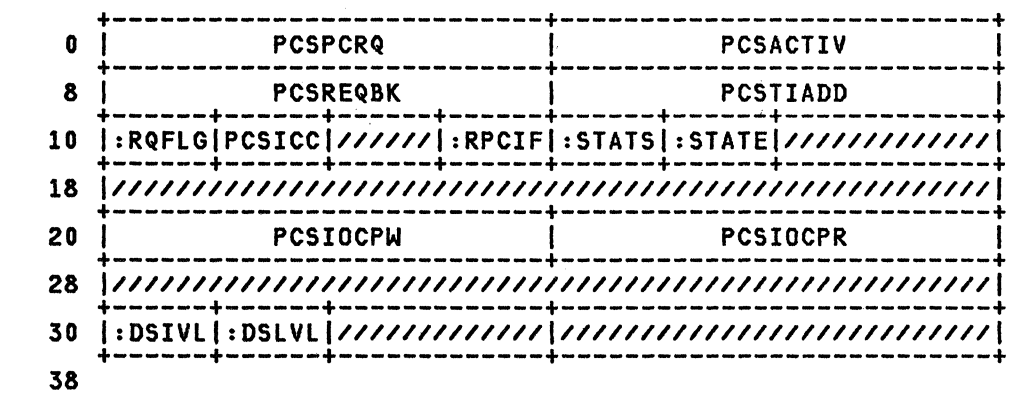
CREATED BY:

HCPPCR ALLOCATED AND INITIALIZED WHEN REAL PROCESSOR CONTROLLER REQUEST PROCESS IS FIRST INVOKED.

DELETED BY:

NEVER DELETED

PCSBK - PROCESSOR CONTROLLER STATUS BLOCK



disp	name	length	description
000	PCSPCRQ	004	POINTER TO FIRST PCRBK IN PC QUEUE
004	PCSACTIV	004	ADDRESS OF PROCESSOR CONTROLLER DATA BLOCK SENT IN DIAGNOSE INST.
008	PCSREQBK	004	ADDRESS OF ACTIVE PCRBK
00C	PCSTIADD	004	ADDRESS OF TRQBK USED FOR PC TIMER INTERVAL
010	PCSRQFLG	001	PROCESSOR CONTROLLER REQUEST FLAG

CODES DEFINED IN PCSRQFLG (AT HEX DISPLACEMENT: 10)

00	PCSRQNON	NO VALID REQUESTS MADE YET
01	PCSRQFST	FIRST VALID REQUEST
FF	PCSRQPST	PAST FIRST VALID REQUEST

011	PCSICC	001	CONDITION CODE RESULTING FROM PC INTERFACE INSTRUCTION

BITS DEFINED FOR PCSICC BY HCPEQUAT PSW2

012		X	RESERVED FOR FUTURE IBM USE
013	PCSRPCIF	001	REAL PROCESSOR CONTROLLER INTERFACES USED BY VM/XA FOR REAL REQUEST PROCESSING

BITS DEFINED FOR PCSRPCIF BY HCPSYSCM SYSRPCIF


```
014   PCSSTATS   001      PROCESSOR CONTROLLER STATUS BITS

        BITS DEFINED IN PCSSTATS (AT HEX DISPLACEMENT: 14)

        80     PCSSPDMC    SERVICE PROCESSOR DAMAGE MACHINE
                           CHECK HAS BEEN RECEIVED
        40     PCSLDISC    PROCESSOR CONTROLLER IS LOGICALLY
                           DISCONNECTED FROM THE SYSTEM
        02     PCSINOPW    PC INTERRUPT HANDLER HAS OPENED
                           A WINDOW TO ALLOW THE PC TIMER
                           INTERRUPT TO HAVE PRIORITY OVER
                           THE TIMEOUT INTERRUPT IN THE
                           SITUATION WHERE THEY ARE BOTH
                           RECEIVED AT THE SAME TIME
        01     PCSPRVRQ    ASSUMPTION IS MADE THAT THE PC
                           IS BUSY FROM A PREVIOUS REQUEST
                           ACTIVATED PRIOR TO THE IPL OF
                           THIS SYSTEM

015   PCSSTATE   001      STATE(S) OF THE ACTIVE REQUEST

        BITS DEFINED IN PCSSTATE (AT HEX DISPLACEMENT: 15)

        80     PCSXPEND    EXTERNAL INTERRUPT PENDING
                           (PROCESSOR CONTROLLER WILL
                           SIGNAL COMPLETION)
        40     PCSRSREQ    ACTIVE REQUEST IS FOR A VIRTUAL
                           SYSTEM WHICH HAS BEEN RESET
        20     PCSTOUT     TIMER INTERVAL HAS EXPIRED FOR
                           ACTIVE REQUEST

016                XL2     RESERVED BY IBM FOR FUTURE USE
018                D       RESERVED FOR FUTURE IBM USE
020   PCSIOCPL     008     DOUBLE IOCP LOCKS
020   PCSIOCPW     004     IOCP WRITE LOCK
                           (BASE ADDRESS OF VMDBK
                           CONFIGURATION ISSUING AN
                           IOCP WRITE REQUEST)
024   PCSIOCPR     004     IOCP READ LOCK
                           (BASE ADDRESS OF VMDBK
                           CONFIGURATION ISSUING AN
                           IOCP READ REQUEST)
028                D       RESERVED FOR FUTURE IBM USE
030   PCSDSIVL     001     INDICATES WHEN A QUEUED REQUEST
                           TO WRITE TO IOCDS DATASET HAS
                           BEEN ACTIVATED AND THE DATA SET
                           IS NOW OPEN (INVALID)

        CODES DEFINED FOR PCSDSIVL BY HCPPCRBK PCRDSIVL

031   PCSDSLVL     001     DATASET LEVEL USED DURING
                           AN IOCP READ OR WRITE SEQUENCE
032                XL2     RESERVED BY IBM FOR FUTURE USE
034                F       RESERVED BY IBM FOR FUTURE USE

                     EQUATES

        07     PCSSIZE     :SIZE OF BLOCK IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
PCSACTIV	004	004
PCSBK	001	000
PCSDSIVL	001	030
PCSDSLVL	001	031
PCSICC	001	011
PCSINOPW	001	002
PCSIOCPL	008	020
PCSIOCPR	004	024
PCSIOCPW	004	020
PCSLDISC	001	040
PCSPCRQ	004	000
PCSPRVRQ	001	001
PCSREQBK	004	008
PCSRPCIF	001	013
PCSRQFLG	001	010
PCSRQFST	001	001
PCSRQNON	001	000
PCSRQPST	001	0FF
PCSRSREQ	001	040
PCSSIZE	001	007
PCSSPDMC	001	080
PCSSTATE	001	015
PCSSTATS	001	014
PCSTIADD	004	00C
PCSTOUT	001	020
PCSXPEND	001	080

HCPPDEBK— PATH DESCRIPTOR ENTRY

DSECT NAME: PDEBK

DESCRIPTIVE NAME: PATH DESCRIPTOR ENTRY

FUNCTION: TO HOLD INFORMATION ABOUT AN IUCV PATH.

LOCATED BY:

CCTPDSEG FIELD IN HCPCCTBK

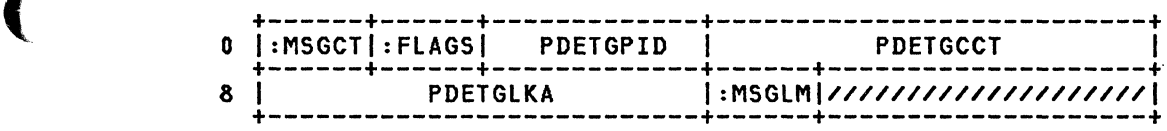
CREATED BY:

IUCV CONNECT FUNCTION (HCPIUBCO)

DELETED BY:

IUCV SEVER FUNCTION (HCPIUESV)

PDEBK - PATH DESCRIPTOR ENTRY



disp	name	length	description
000	PDEMSGCT	001	CNT OF OUTSTANDING MSGS ON PATH
001	PDEFLAGS	001	STATUS

BITS DEFINED IN PDEFLAGS (AT HEX DISPLACEMENT: 1)

80	PDEVALID	VALID PATH
40	PDESEND	SEND ALLOWED ON THIS PATH
20	PDEPRTY	MAY INITIATE PRIORITY MESSAGES
10	PDEPRMD	MAY PUT DATA IN PARMLIST
04	PDECNTRL	CONTROL PATH
02	PDEPEND1	INITIATED CONNECTION
01	PDEPEND2	INCOMING CONNECTION
00	PDEZERO	PDEBK INVALID AND AVAILABLE
03	PDESEVRD	ENTRY HAS BEEN SEVERED

002	PDETGPID	002	TARGET PATH ID
004	PDETGCCT	004	TARGET CCT ADDRESS
008	PDETGLKA	004	TARGET IUCV LOCKWORD POINTER
00C	PDEMSGLM	001	MESSAGE LIMIT
00D		3X	RESERVED

EQUATES

02	PDESIZE	PDEBK SIZE IN DOUBLEWORDS
08	PDENTMIN	MIN NUMBER OF PDEBKS TO BE BUILT
00	PDENTMAX	MAXIMUM PDEBKS IN A PDSEG

CROSS REFERENCE

Name	Len	Val/Disp
PDEBK	001	000
PDECNTRL	001	004
PDEFLAGS	001	001
PDEMSGCT	001	000
PDEMSGLM	001	00C
PDENTMAX	001	100
PDENTMIN	001	008
PDEPEND1	001	002
PDEPEND2	001	001
PDEPRMD	001	010
PDEPRTY	001	020
PDESEND	001	040
PDESEVRD	001	003
PDESIZE	001	002
PDETGCCT	004	004
PDETGLKA	004	008
PDETGPID	002	002
PDEVALID	001	080
PDEZERO	001	000

HCPPFMBK— PAGEABLE FREE MANAGMENT BLOCK

DSECT NAME: PFMBK

DESCRIPTIVE NAME: PAGEABLE FREE MANAGMENT BLOCK

FUNCTION: A PAGEABLEFREE MANAGMENT BLOCK DESCIBES UNALLOCATED PAGEABLE FREE STORAGE

LOCATED BY:

HCPRSMPF 8 QUEUES OF PAGEABLE FREE STORAGE

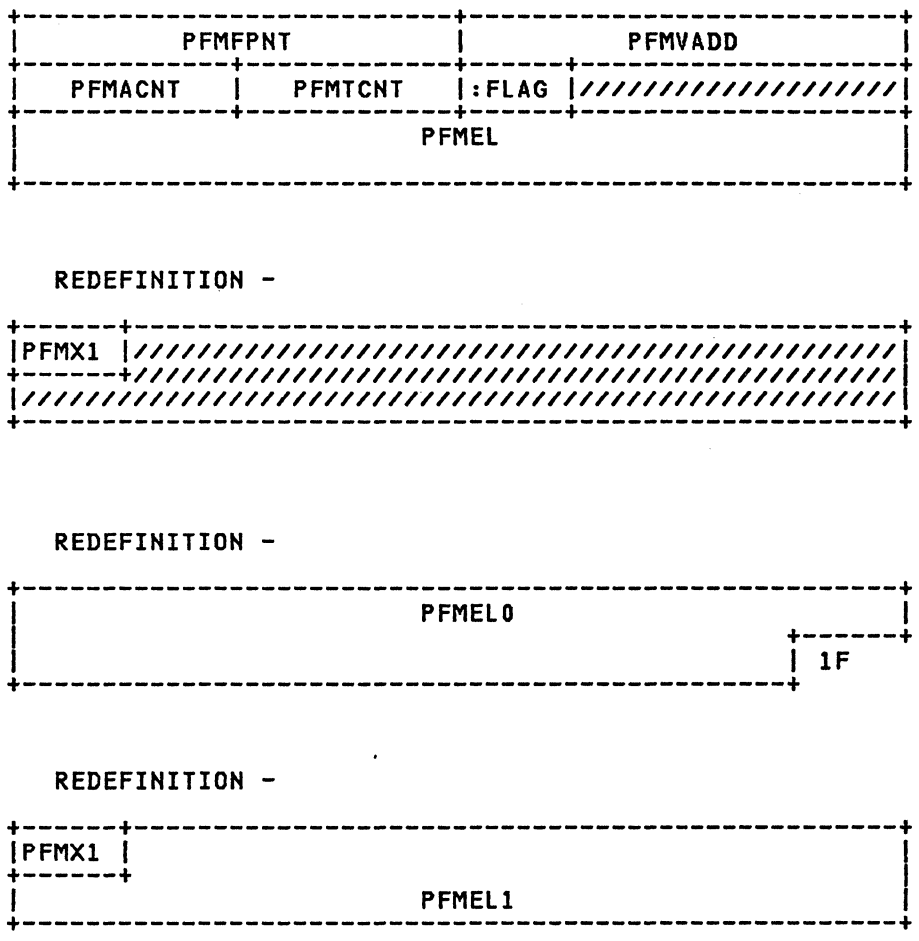
CREATED BY:

HCPPFMAL BLOCKS CREATED WHEN PAGEABLE FREE STORAGE IS CREATED
HCPPFMDE BLOCKS CREATED WHEN PAGEABLE FREE STORAGE IS RELEASED AND NO PFMBK EXISTS

DELETED BY:

HCPPFM

PFMBK - PAGEABLE FREE MANAGEMENT BLOCK



disp	name	length	description
000	PFMFPNT	004	POITER TO NEXT PFMBK

```
004    PFMVADD     004       VIRTUAL ADDRESS OF THIS PAGE
008    PFMACNT     002       COUNT OF UNALLOCATED BLOCKS
00A    PFMTCNT     002       MAXIMUM AVAILABLE BLOCKS IN THIS PAGE
00C    PFMFLAG     001
00D                XL3       RESERVED FOR FUTURE IBM USE
010    PFMEL       016       1ST BLOCK NUMBER AVAILABLE

          REDEFINITION -

010    PFMX1       001
011                XL15

          REDEFINITION -

010    PFMEL0      015       1ST BLOCK NUMBER AVAILABLE

          REDEFINITION -

010                X
011    PFMEL1      015       REMAINING BLOCK NUMBERS AVAILABLE

                     EQUATES

         04     PFMSIZE      LENGTH OF PAGEABLE FREE STORAGE
                             BLOCK IN DOUBLEWORDS


                   MORE EQUATES

        080     PFMERROR     TRANSLATION ERROR ON PAGE
```

CROSS REFERENCE

Name	Len	Val/Disp
PFMACNT	002	008
PFMBK	001	000
PFMEL	016	010
PFMEL0	015	010
PFMEL1	015	011
PFMERROR	001	080
PFMFLAG	001	00C
PFMFPNT	004	000
PFMSIZE	001	004
PFMTCNT	002	00A
PFMVADD	004	004
PFMX1	001	010

HCPPFXPG— PREFIX PAGE FOR ALL HOST CPU'S

DSECT NAME: PFXPG

DESCRIPTIVE NAME: PREFIX PAGE FOR ALL HOST CPU'S

FUNCTION: HCPPFXPG IS PAGE ZERO FOR EACH HOST PROCESSOR. IT CONTAINS PROCESSOR-RELATED INFORMATION DEFINED BY BOTH HARDWARE AND SOFTWARE.

LOCATED BY:

HOST REAL	PREFIX REGISTER
HCPPFX	MODULE CONTAINS THE PFXPG FOR IPL'D PROCESSOR
SYSPRFIX	FIELD OF HCPSYSCM (PFXPG FOR IPL'D PROCESSOR)
PFXPRFIX	FIELD OF HCPPFXPG (PREFIX VALUE FOR THIS CPU)
PFXNXTPF	FIELD OF HCPPFXPG (CYCLIC POINTER TO NEXT PFXPG)
DFIPFX	FIELD OF HCPDFIR (PFXPG OF DUMPED SYSTEM)

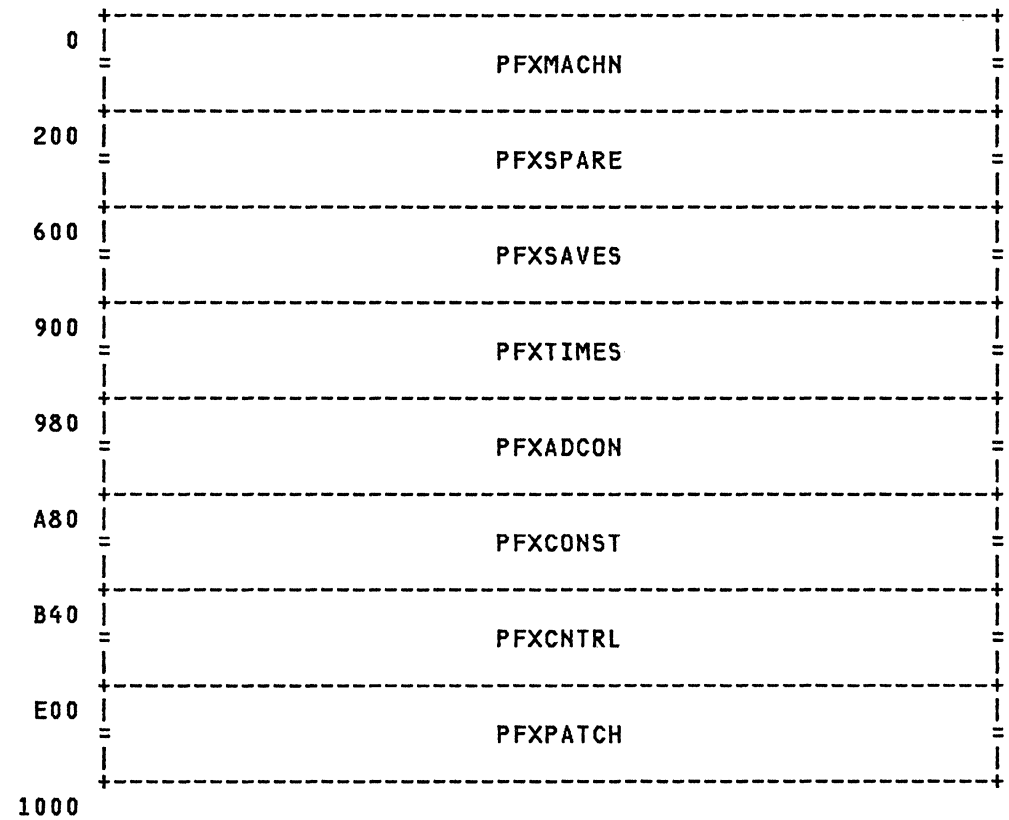
CREATED BY:

HCPLOD	DURING SYSTEM INITIALIZATION (IPL'D PROCESSOR) (LOADS HCPPFX MODULE AS IPL'D PROCESSOR PFXPG)
HCPMPS	DURING SYSTEM INITIALIZATION AND VARY ON PROCESSOR (ALTERNATE PROCESSOR)

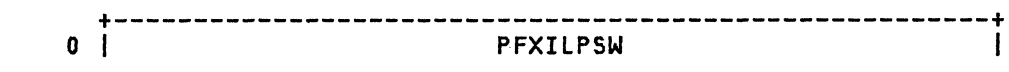
DELETED BY:

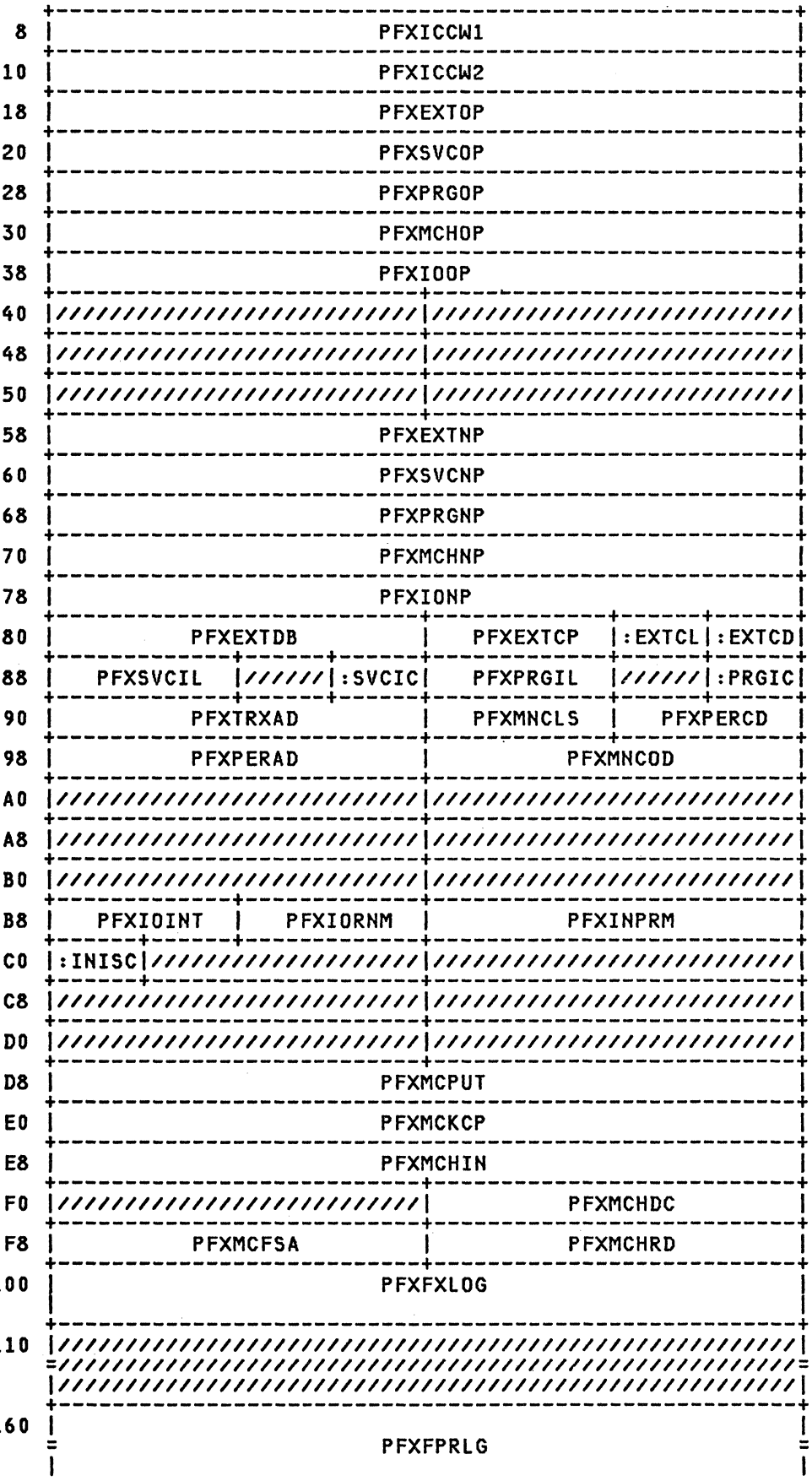
HCPMPS	DURING VARY OFF OF AN ALTERNATE PROCESSOR (IPL'D PROCESSOR'S PFXPG NEVER DELETED, BUT ZEROED OUT IF THE PROCESSOR IS VARIED OFF)

PFXPG - PREFIX PAGE FOR ALL HOST CPU'S



REDEFINITION - MACHINE USAGE REGION






```
     +-----------------------------------------------------+
 180 |                                                     |
     =                      PFXGPRLG                       =
     |                                                     |
     +-----------------------------------------------------+
 1C0 |                                                     |
     =                      PFXCRLG                        =
     |                                                     |
     +-----------------------------------------------------+
 200
```

REDEFINITION - DEFINITION FOR INITIAL LOADING PSW

```
     +------+------+------+------+------+--------------------+
   0 |:ILP00|:ILP01|:ILP02|:ILP03|:ILP04|////////////////////|
     +------+------+------+------+------+--------------------+
   8
```

REDEFINITION - VARY PROCESSOR ONLINE WORK AREA

```
     +------+-----------------------------------+-------------+
  10 |:SGPND|///////////////////////////////////|   PFXSGPCP  |
     +------+-----------------------------------+-------------+
  18
```

REDEFINITION - DEFINITION FOR OLD EXT PSW

```
     +------+------+------+------+------+--------------------+
  18 |:EXT00|:EXT01|:EXT02|:EXT03|:EXT04|////////////////////|
     +------+------+------+------+------+--------------------+
  20
```

REDEFINITION - DEFINITION FOR OLD SVC PSW

```
     +------+------+------+------+------+--------------------+
  20 |:SVC00|:SVC01|:SVC02|:SVC03|:SVC04|////////////////////|
     +------+------+------+------+------+--------------------+
  28
```

REDEFINITION - DEFINITION FOR PRG OLD PSW

```
     +------+------+------+------+------+--------------------+
  28 |:PRG00|:PRG01|:PRG02|:PRG03|:PRG04|////////////////////|
     +------+------+------+------+------+--------------------+
  30
```

REDEFINITION - DEFINITION FOR MCH OLD PSW

```
     +------+------+------+------+------+--------------------+
  30 |:MCH00|:MCH01|:MCH02|:MCH03|:MCH04|////////////////////|
     +------+------+------+------+------+--------------------+
  38
```

REDEFINITION - DEFINITION FOR I/O OLD PSW

```
     +------+------+------+------+------+--------------------+
  38 |:IOP00|:IOP01|:IOP02|:IOP03|:IOP04|////////////////////|
     +------+------+------+------+------+--------------------+
```

```
40


      REDEFINITION - DEFINITION FOR NEW EXT PSW

   +------+------+------+------+------+--------------------+
58 |:EXTN0|:EXTN1|:EXTN2|:EXTN3|:EXTN4|////////////////////|
   +------+------+------+------+------+--------------------+
60


      REDEFINITION - DEFINITION FOR NEW SVC PSW

   +------+------+------+------+------+--------------------+
60 |:SVCN0|:SVCN1|:SVCN2|:SVCN3|:SVCN4|////////////////////|
   +------+------+------+------+------+--------------------+
68


      REDEFINITION - DEFINITION FOR PRG NEW PSW

   +------+------+------+------+------+--------------------+
68 |:PRGN0|:PRGN1|:PRGN2|:PRGN3|:PRGN4|////////////////////|
   +------+------+------+------+------+--------------------+
70


      REDEFINITION - DEFINITION FOR MCH NEW PSW

   +------+------+------+------+------+--------------------+
70 |:MCHN0|:MCHN1|:MCHN2|:MCHN3|:MCHN4|////////////////////|
   +------+------+------+------+------+--------------------+
78


      REDEFINITION - DEFINITION FOR I/O NEW PSW

   +------+------+------+------+------+--------------------+
78 |:IOPN0|:IOPN1|:IOPN2|:IOPN3|:IOPN4|////////////////////|
   +------+------+------+------+------+--------------------+
80


      REDEFINITION - OVERLAY FOR MACHINE CHECK CODES

   +------+------+------+------+------+------+-------------+
E8 |:MCHI0|:MCHI1|:MCHI2|:MCHI3|:MCHI4|:MCHI5|   PFXMCHI6  |
   +------+------+------+------+------+------+-------------+
F0


      REDEFINITION - MACHINE CHECK EXTERNAL DAMAGE CODE

                                 +------+------+-------------+
F0 ...                        F4 |//////|:DCBY1|/////////////|
                                 +------+------+-------------+
F8


      REDEFINITION - STORE STATUS AREA DEFINITION

   +-----------------------------------------------------------+
100 |                          PFXSTPSW                         |
   +--------------------------+--------------------------------+
108 |          PFXSTPFX        |          PFXSTMDL              |
```



```
    +-------------------------+-------------------------+
110 |                                                   |
```

REDEFINITION - SAVE AREA REGION

```
    +---------------------------------------------------+
600 |                                                   |
    =                    PFXTMPSV                       =
    |                                                   |
    +---------------------------------------------------+
680 |                                                   |
    =                    PFXWRKSV                       =
    |                                                   |
    +---------------------------------------------------+
700 |                                                   |
    =                    PFXBALSV                       =
    |                                                   |
    +---------------------------------------------------+
780 |                                                   |
    =                    PFXPTRSV                       =
    |                                                   |
    +---------------------------------------------------+
800 |                                                   |
    =                    PFXFRESV                       =
    |                                                   |
    +---------------------------------------------------+
880 |                    PFXIRPSV                       |
    |                                                   |
    +---------------------------------------------------+
890 |                    PFXLNKSV                       |
    |                                                   |
    +---------------------------------------------------+
8A0 |                                                   |
    =                    PFXSVCSV                       =
    |                                                   |
    +-------------------------+-------------------------+
8E0 |         PFXSVC          |         PFXSVCLC        |
    +-------------------------+-------------------------+
8E8 |         PFXLRC          |          PFXLRQ         |
    +-------------------------+-------------------------+
8F0 |        PFXCPRQA         |         PFXCPRQP        |
    +-------------------------+-------------------------+
8F8 |        PFXSSABK         |         PFXSVR13        |
    +-------------------------+-------------------------+
900 |
```

REDEFINITION - TEMPORARY SAVE AREA

```
    +-------------------------+-------------------------+
600 |         PFXTMPFP        |         PFXTMPBP        |
    +-------------------------+-------------------------+
608 |/////////////////////////|/////////////////////////|
    +------+------+------+---+-------------------------+
610 |:TMPSC|:TMPCL|//////|///|/////////////////////////|
    +------+------+------+---+-------------------------+
618 |         PFXTMPR0        |         PFXTMPR1        |
    +-------------------------+-------------------------+
620 |         PFXTMPR2        |         PFXTMPR3        |
    +-------------------------+-------------------------+
628 |         PFXTMPR4        |         PFXTMPR5        |
    +-------------------------+-------------------------+
630 |         PFXTMPR6        |         PFXTMPR7        |
    +-------------------------+-------------------------+
638 |         PFXTMPR8        |         PFXTMPR9        |
    +-------------------------+-------------------------+
640 |         PFXTMPRA        |         PFXTMPRB        |
    +-------------------------+-------------------------+
648 |         PFXTMPRC        |         PFXTMPRD        |
    +-------------------------+-------------------------+
```

```
650 |           PFXTMPRE          |           PFXTMPRF          |
    +-----------------------------+-----------------------------+
658 |           PFXTMPW0          |           PFXTMPW1          |
    +-----------------------------+-----------------------------+
660 |           PFXTMPW2          |           PFXTMPW3          |
    +-----------------------------+-----------------------------+
668 |           PFXTMPW4          |           PFXTMPW5          |
    +-----------------------------+-----------------------------+
670 |           PFXTMPW6          |           PFXTMPW7          |
    +-----------------------------+-----------------------------+
678 |           PFXTMPW8          |           PFXTMPW9          |
    +-----------------------------+-----------------------------+
680
```

REDEFINITION - WORK SAVE AREA

```
    +-----------------------------+-----------------------------+
680 |           PFXWRKFP          |           PFXWRKBP          |
    +-----------------------------+-----------------------------+
688 |/////////////////////////////|/////////////////////////////|
    +------+------+------+------+-----------------------------+
690 |:WRKSC|:WRKCL|//////|//////|/////////////////////////////|
    +------+------+------+------+-----------------------------+
698 |           PFXWRKR0          |           PFXWRKR1          |
    +-----------------------------+-----------------------------+
6A0 |           PFXWRKR2          |           PFXWRKR3          |
    +-----------------------------+-----------------------------+
6A8 |           PFXWRKR4          |           PFXWRKR5          |
    +-----------------------------+-----------------------------+
6B0 |           PFXWRKR6          |           PFXWRKR7          |
    +-----------------------------+-----------------------------+
6B8 |           PFXWRKR8          |           PFXWRKR9          |
    +-----------------------------+-----------------------------+
6C0 |           PFXWRKRA          |           PFXWRKRB          |
    +-----------------------------+-----------------------------+
6C8 |           PFXWRKRC          |           PFXWRKRD          |
    +-----------------------------+-----------------------------+
6D0 |           PFXWRKRE          |           PFXWRKRF          |
    +-----------------------------+-----------------------------+
6D8 |           PFXWRKW0          |           PFXWRKW1          |
    +-----------------------------+-----------------------------+
6E0 |           PFXWRKW2          |           PFXWRKW3          |
    +-----------------------------+-----------------------------+
6E8 |           PFXWRKW4          |           PFXWRKW5          |
    +-----------------------------+-----------------------------+
6F0 |           PFXWRKW6          |           PFXWRKW7          |
    +-----------------------------+-----------------------------+
6F8 |           PFXWRKW8          |           PFXWRKW9          |
    +-----------------------------+-----------------------------+
700
```

REDEFINITION - BALR LINKAGE SAVE AREA

```
    +-----------------------------+-----------------------------+
700 |           PFXBALFP          |           PFXBALBP          |
    +-----------------------------+-----------------------------+
708 |/////////////////////////////|/////////////////////////////|
    +------+------+------+------+-----------------------------+
710 |:BALSC|:BALCL|//////|//////|/////////////////////////////|
    +------+------+------+------+-----------------------------+
718 |           PFXBALR0          |           PFXBALR1          |
    +-----------------------------+-----------------------------+
720 |           PFXBALR2          |           PFXBALR3          |
    +-----------------------------+-----------------------------+
728 |           PFXBALR4          |           PFXBALR5          |
    +-----------------------------+-----------------------------+
730 |           PFXBALR6          |           PFXBALR7          |
    +-----------------------------+-----------------------------+
738 |           PFXBALR8          |           PFXBALR9          |
```



```
    +---------------------------+---------------------------+
740 |          PFXBALRA         |          PFXBALRB         |
    +---------------------------+---------------------------+
748 |          PFXBALRC         |          PFXBALRD         |
    +---------------------------+---------------------------+
750 |          PFXBALRE         |          PFXBALRF         |
    +---------------------------+---------------------------+
758 |          PFXBALW0         |          PFXBALW1         |
    +---------------------------+---------------------------+
760 |          PFXBALW2         |          PFXBALW3         |
    +---------------------------+---------------------------+
768 |          PFXBALW4         |          PFXBALW5         |
    +---------------------------+---------------------------+
770 |          PFXBALW6         |          PFXBALW7         |
    +---------------------------+---------------------------+
778 |          PFXBALW8         |          PFXBALW9         |
    +---------------------------+---------------------------+
780
```

REDEFINITION - HCPPTRAN LINKAGE SAVE AREA

```
    +---------------------------+---------------------------+
780 |          PFXPTRFP         |          PFXPTRBP         |
    +---------------------------+---------------------------+
788 |///////////////////////////|///////////////////////////|
    +------+------+------+------+---------------------------+
790 |:PTRSC|:PTRCL|//////|//////|///////////////////////////|
    +------+------+------+------+---------------------------+
798 |          PFXPTRR0         |          PFXPTRR1         |
    +---------------------------+---------------------------+
7A0 |          PFXPTRR2         |          PFXPTRR3         |
    +---------------------------+---------------------------+
7A8 |          PFXPTRR4         |          PFXPTRR5         |
    +---------------------------+---------------------------+
7B0 |          PFXPTRR6         |          PFXPTRR7         |
    +---------------------------+---------------------------+
7B8 |          PFXPTRR8         |          PFXPTRR9         |
    +---------------------------+---------------------------+
7C0 |          PFXPTRRA         |          PFXPTRRB         |
    +---------------------------+---------------------------+
7C8 |          PFXPTRRC         |          PFXPTRRD         |
    +---------------------------+---------------------------+
7D0 |          PFXPTRRE         |          PFXPTRRF         |
    +---------------------------+---------------------------+
7D8 |          PFXPTRW0         |          PFXPTRW1         |
    +---------------------------+---------------------------+
7E0 |          PFXPTRW2         |          PFXPTRW3         |
    +---------------------------+---------------------------+
7E8 |          PFXPTRW4         |          PFXPTRW5         |
    +---------------------------+---------------------------+
7F0 |          PFXPTRW6         |          PFXPTRW7         |
    +---------------------------+---------------------------+
7F8 |          PFXPTRW8         |          PFXPTRW9         |
    +---------------------------+---------------------------+
800
```

REDEFINITION - FREE STORAGE SAVE AREA

```
    +---------------------------+---------------------------+
800 |          PFXFREFP         |          PFXFREBP         |
    +---------------------------+---------------------------+
808 |///////////////////////////|///////////////////////////|
    +------+------+------+------+---------------------------+
810 |:FRESC|:FRECL|//////|//////|///////////////////////////|
    +------+------+------+------+---------------------------+
818 |          PFXFRER0         |          PFXFRER1         |
    +---------------------------+---------------------------+
820 |          PFXFRER2         |          PFXFRER3         |
    +---------------------------+---------------------------+
```

```
828 |          PFXFRER4          |          PFXFRER5          |
    +----------------------------+----------------------------+
830 |          PFXFRER6          |          PFXFRER7          |
    +----------------------------+----------------------------+
838 |          PFXFRER8          |          PFXFRER9          |
    +----------------------------+----------------------------+
840 |          PFXFRERA          |          PFXFRERB          |
    +----------------------------+----------------------------+
848 |          PFXFRERC          |          PFXFRERD          |
    +----------------------------+----------------------------+
850 |          PFXFRERE          |          PFXFRERF          |
    +----------------------------+----------------------------+
858 |          PFXFREW0          |          PFXFREW1          |
    +----------------------------+----------------------------+
860 |          PFXFREW2          |          PFXFREW3          |
    +----------------------------+----------------------------+
868 |          PFXFREW4          |          PFXFREW5          |
    +----------------------------+----------------------------+
870 |          PFXFREW6          |          PFXFREW7          |
    +----------------------------+----------------------------+
878 |          PFXFREW8          |          PFXFREW9          |
    +----------------------------+----------------------------+
880
```

REDEFINITION - INTERRUPT FLIH R12-R15 SAVE AREA

```
    +----------------------------+----------------------------+
880 |          PFXIRP12          |          PFXIRP13          |
    +----------------------------+----------------------------+
888 |          PFXIRP14          |          PFXIRP15          |
    +----------------------------+----------------------------+
890
```

REDEFINITION - CALLING LINKAGE R12-R15 SAVE AREA

```
    +----------------------------+----------------------------+
890 |          PFXLNK12          |          PFXLNK13          |
    +----------------------------+----------------------------+
898 |          PFXLNK14          |          PFXLNK15          |
    +----------------------------+----------------------------+
8A0
```

REDEFINITION - TIMER WORK REGION

```
    +-------------------------------------------------------+
900 |                        PFXCVTDA                       |
    +-------------------------------------------------------+
908 |                        PFXPTLBT                       |
    +-------------------------------------------------------+
910 |                        PFXTMRUN                       |
    +-------------------------------------------------------+
918 |                        PFXTMURN                       |
    +-------------------------------------------------------+
920 |                        PFXTMDSP                       |
    +-------------------------------------------------------+
928 |                        PFXTMUDS                       |
    +-------------------------------------------------------+
930 |                        PFXVTDSP                       |
    +-------------------------------------------------------+
938 |///////////////////////////////////////////////////////|
    +------+------+------+------+------+------+------+------+
940 |:CR0B0|:CR0B1|:CR0B2|:CR0B3|:CR1B0|:CR1B1|:CR1B2|:CR1B3|
    +------+------+------+------+------+------+------+------+
948 |:CR2B0|:CR2B1|:CR2B2|:CR2B3|:CR3B0|:CR3B1|:CR3B2|:CR3B3|
    +------+------+------+------+------+------+------+------+
950 |:CR4B0|:CR4B1|:CR4B2|:CR4B3|:CR5B0|:CR5B1|:CR5B2|:CR5B3|
    +------+------+------+------+------+------+------+------+
```

```
958 |:CR6B0|:CR6B1|:CR6B2|:CR6B3|:CR7B0|:CR7B1|:CR7B2|:CR7B3|
    +------+------+------+------+------+------+------+------+
960 |:CR8B0|:CR8B1|:CR8B2|:CR8B3|:CR9B0|:CR9B1|:CR9B2|:CR9B3|
    +------+------+------+------+------+------+------+------+
968 |          PFXCPCRA          |          PFXCPCRB          |
    +------+------+------+------+------+------+------+------+
970 |:CRCB0|:CRCB1|:CRCB2|:CRCB3|:CRDB0|:CRDB1|:CRDB2|:CRDB3|
    +------+------+------+------+------+------+------+------+
978 |:CREB0|:CREB1|:CREB2|:CREB3|:CRFB0|:CRFB1|:CRFB2|:CRFB3|
    +------+------+------+------+------+------+------+------+
980
```

REDEFINITION - SUPPLY INITIAL CONTROL REG VALUES

```
    +----------------------------+----------------------------+
940 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
948 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
950 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
958 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
960 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
968 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
970 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
978 |////////////////////////////|////////////////////////////|
    +----------------------------+----------------------------+
980
```

REDEFINITION - ADDRESS CONSTANTS FOR FAST LINKAGES

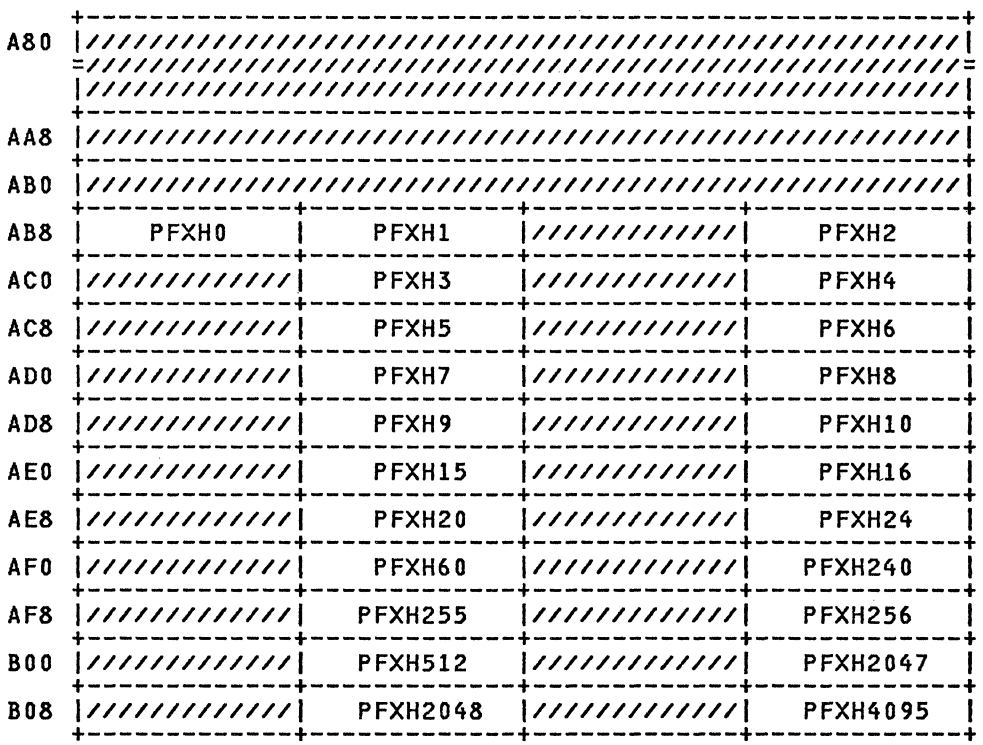
```
    +-------------------------------------------------------+
980 |                       PFXFEIBM                        |
    |                                                       |
    +-------------------------------------------------------+
990 |                                                       |
    =                       PFXCPYRT                        =
    |                                                       |
    +----------------------------+--------------------------+
9B8 |          PFXCFMRD          |          PFXCVTBH        |
    +----------------------------+--------------------------+
9C0 |          PFXCVTDT          |          PFXCVTOD        |
    +----------------------------+--------------------------+
9C8 |          PFXDSPCH          |          PFXERMSG        |
    +----------------------------+--------------------------+
9D0 |          PFXFREE           |          PFXFRET         |
    +----------------------------+--------------------------+
9D8 |          PFXGSVC0          |          PFXGSVC1        |
    +----------------------------+--------------------------+
9E0 |          PFXGSVC2          |          PFXGSVC3        |
    +----------------------------+--------------------------+
9E8 |          PFXTTATB          |          PFXIOSRQ        |
    +----------------------------+--------------------------+
9F0 |          PFXPTRAN          |          PFXPTFLK        |
    +----------------------------+--------------------------+
9F8 |          PFXPTFUL          |          PFXPTRAB        |
    +----------------------------+--------------------------+
A00 |          PFXQCNWT          |          PFXRUNXT        |
    +----------------------------+--------------------------+
A08 |          PFXSTKCP          |          PFXSTKGT        |
    +----------------------------+--------------------------+
A10 |          PFXSTKIO          |          PFXSCCFD        |
    +----------------------------+--------------------------+
A18 |           PFXSYS           |          PFXFTBL         |
    +----------------------------+--------------------------+
```

Offset		
A20	PFXSYSVM	PFXRUNU
A28	PFXENDOP	PFXSVCSW
A30	PFXMM0	PFXMM5
A38	PFXSVCGS	PFXPAGCP
A40	PFXSVCRS	PFXLUSER
A48	PFXPRFIX	PFXNXTPF
A50	PFXSPIEA	PFXSPIEM
A58	PFXSTDBK	PFXMCHA
A60	PFXMCVBK	PFXINST1
A68	PFXINST2	PFXINST3
A70	PFXINST4	A74

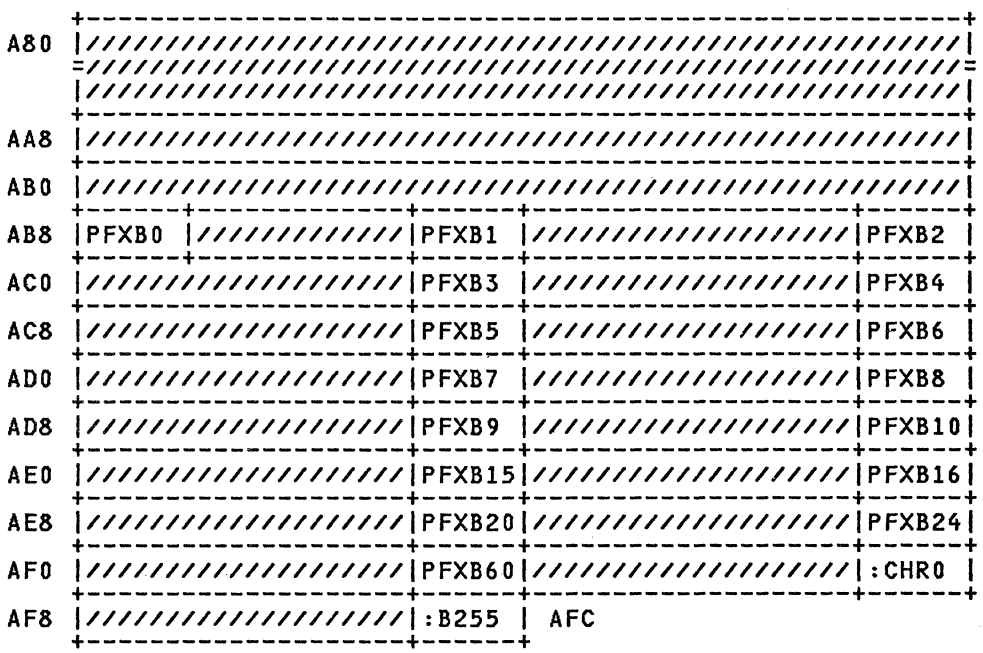
REDEFINITION - COMMONLY USED CONSTANTS

Offset		
A80	PFXZEROS	
AA8	PFXBLANK	
AB0	PFXFFS	
AB8	PFX1	PFX2
AC0	PFX3	PFX4
AC8	PFX5	PFX6
AD0	PFX7	PFX8
AD8	PFX9	PFX10
AE0	PFX15	PFX16
AE8	PFX20	PFX24
AF0	PFX60	PFX240
AF8	PFX255	PFX256
B00	PFX512	PFX2047
B08	PFX2048	PFX4095
B10	PFX4096	PFXHALF
B18	PFX00FFS	PFXPGNUM
B20	PFXHLFPG	PFXSTEMK
B28	PFX8000S	PFXNOADD
B30	//	
B40		

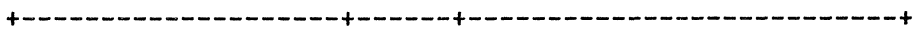
REDEFINITION - COMMONLY USED HALF WORD CONSTANTS

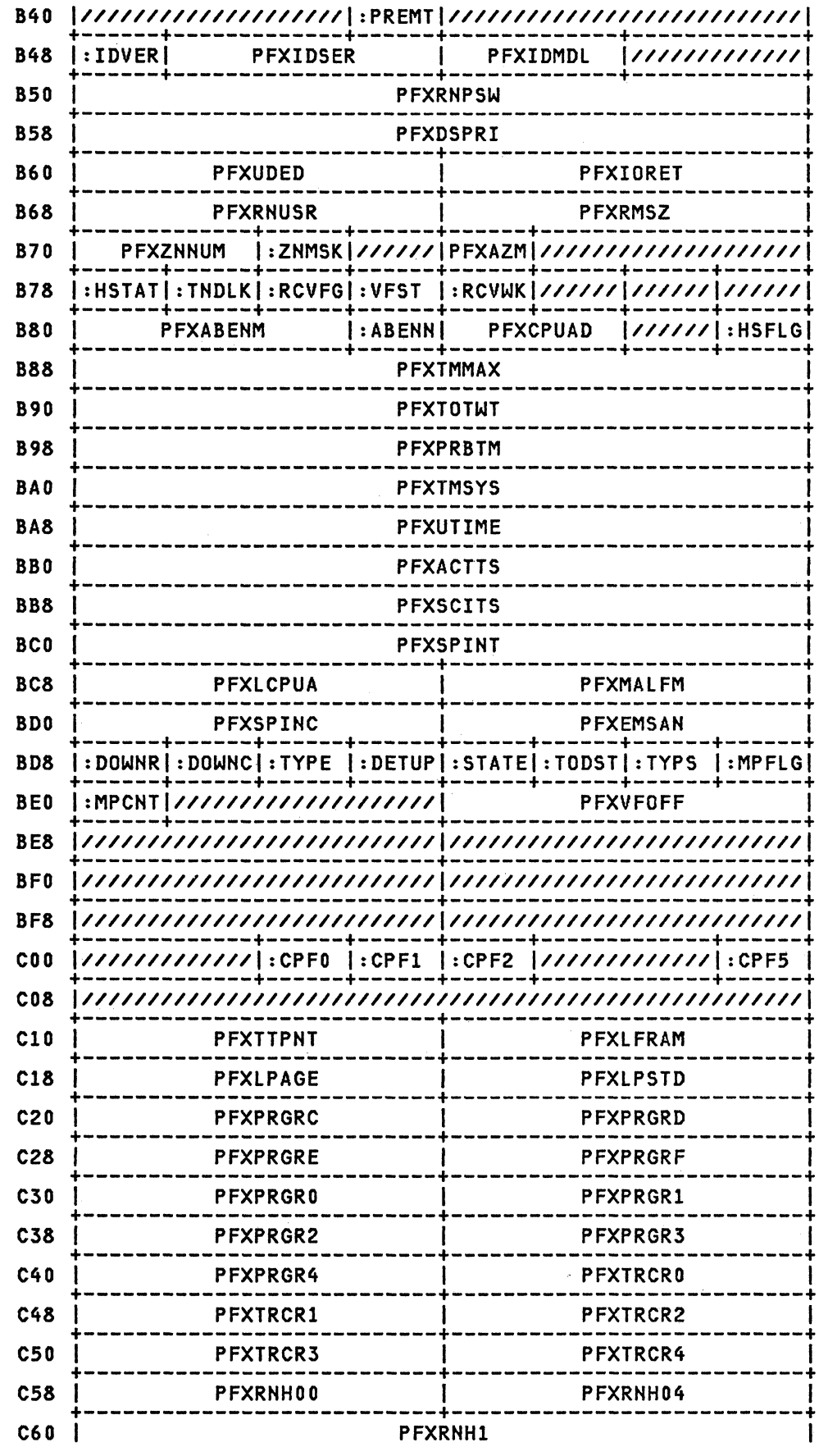


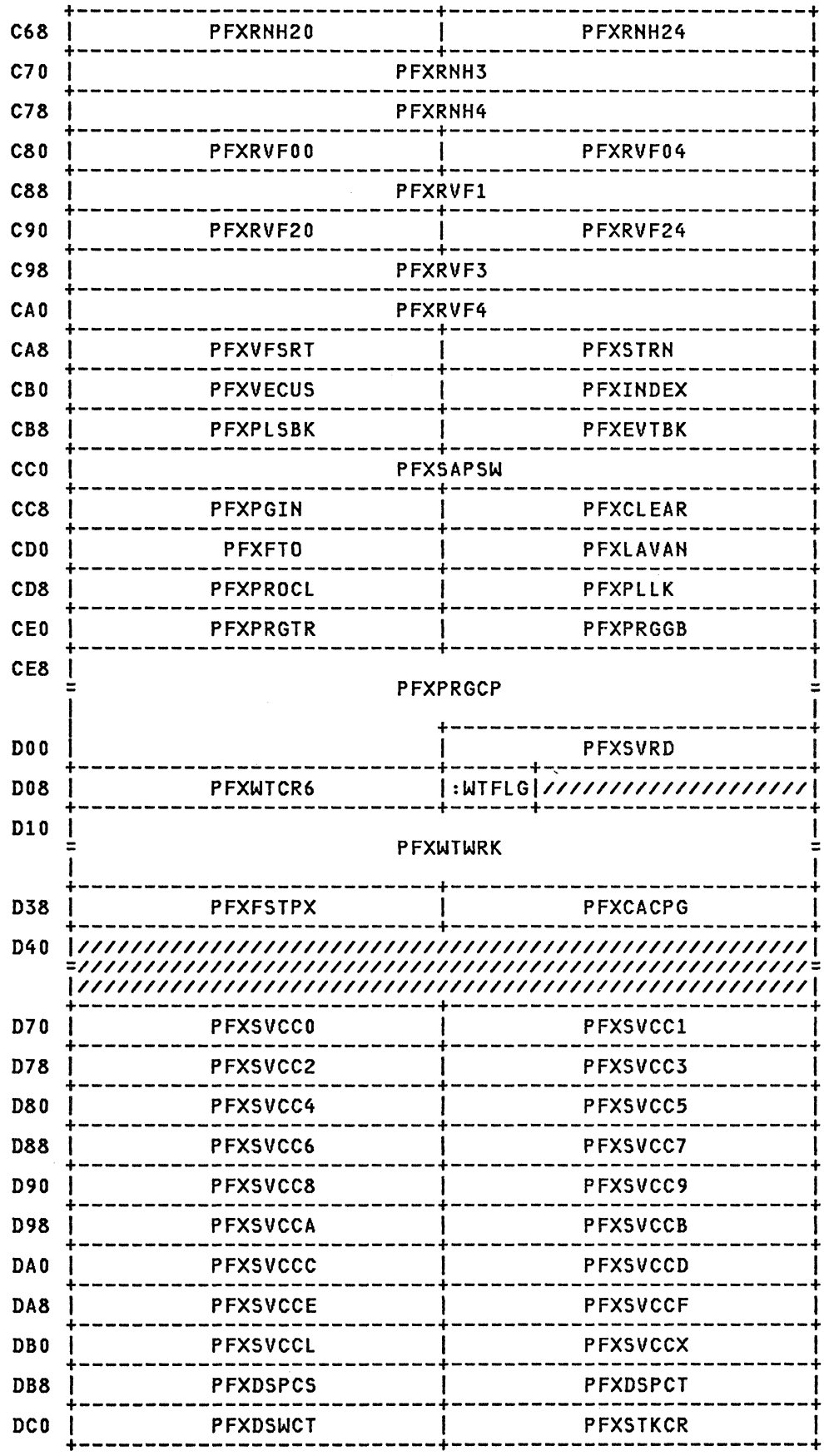
REDEFINITION - COMMONLY USED ONE BYTE CONSTANTS



REDEFINITION -






C68 PFXRNH20 PFXRNH24
C70 PFXRNH3
C78 PFXRNH4
C80 PFXRVF00 PFXRVF04
C88 PFXRVF1
C90 PFXRVF20 PFXRVF24
C98 PFXRVF3
CA0 PFXRVF4
CA8 PFXVFSRT PFXSTRN
CB0 PFXVECUS PFXINDEX
CB8 PFXPLSBK PFXEVTBK
CC0 PFXSAPSW
CC8 PFXPGIN PFXCLEAR
CD0 PFXFTO PFXLAVAN
CD8 PFXPROCL PFXPLLK
CE0 PFXPRGTR PFXPRGGB
CE8 PFXPRGCP
D00 PFXSVRD
D08 PFXWTCR6 :WTFLG
D10 PFXWTWRK
D38 PFXFSTPX PFXCACPG
D40
D70 PFXSVCC0 PFXSVCC1
D78 PFXSVCC2 PFXSVCC3
D80 PFXSVCC4 PFXSVCC5
D88 PFXSVCC6 PFXSVCC7
D90 PFXSVCC8 PFXSVCC9
D98 PFXSVCCA PFXSVCCB
DA0 PFXSVCCC PFXSVCCD
DA8 PFXSVCCE PFXSVCCF
DB0 PFXSVCCL PFXSVCCX
DB8 PFXDSPCS PFXDSPCT
DC0 PFXDSWCT PFXSTKCR

```
  DC8 |          PFXSTKPQ          |          PFXPTRCT          |
      +-----------------------------+-----------------------------+
  DD0 |          PFXCTID           |          PFXCTIG           |
      +-----------------------------+-----------------------------+
  DD8 |          PFXCTVD           |          PFXCTVG           |
      +-----------------------------+-----------------------------+
  DE0 |          PFXRUNCI          |          PFXRUNCP          |
      +-----------------------------+-----------------------------+
  DE8 |          PFXRUNCR          |          PFXRUNPF          |
      +-----------------------------+-----------------------------+
  DF0 |          PFXRUNPR          |          PFXFSTSG          |
      +-----------------------------+-----------------------------+
  DF8 |          PFXFSTXC          |          PFXFST44          |
      +-----------------------------+-----------------------------+
  E00
```

REDEFINITION -

CE8

REDEFINITION - PATCH AREA

```
      +-----------------------------------------------------------+
  E00 |                                                           |
      =                         PFXPINST                          =
      |                                                           |
      +-----------------------------------------------------------+
  F88 |                                                           |
      =                         PFXPSAVE                          =
      |                                                           |
      +-----------------------------------------------------------+
 1000
```

REDEFINITION - DEFAULT INSTRUCTION

E00

disp	name	length	description
000	PFXMACHN	008	MACHINE USAGE
200	PFXSPARE	008	RESERVED FOR FUTURE IBM USE
600	PFXSAVES	008	SAVE AREAS
900	PFXTIMES	008	CPU TIMER REGION
980	PFXADCON	008	ADDRESS CONSTANT
A80	PFXCONST	008	COMMON CONSTANTS
B40	PFXCNTRL	008	CPU CONTROL REGION
E00	PFXPATCH	008	FE PATCH AREA

REDEFINITION - MACHINE USAGE REGION

000	PFXILPSW	008	IPL START PSW, RESTART NEW PSW
008	PFXRSTOP	008	RESTART OLD PSW
008	PFXICCW1	008	IPL CCW, RESTART OLD PSW
010	PFXICCW2	008	IPL CCW
018	PFXEXTOP	008	EXTERNAL OLD PSW
020	PFXSVCOP	008	SVC OLD PSW
028	PFXPRGOP	008	PROGRAM OLD PSW
030	PFXMCHOP	008	MACHINE CHECK OLD PSW
038	PFXIOOP	008	INPUT/OUTPUT OLD PSW
040		1F	RESERVED FOR FUTURE HARDWARE USE
044		1F	RESERVED FOR FUTURE HARDWARE USE
048		1F	RESERVED FOR FUTURE HARDWARE USE
04C		1F	RESERVED FOR FUTURE HARDWARE USE
050		1F	RESERVED FOR FUTURE HARDWARE USE


```
054                 1F          RESERVED FOR FUTURE HARDWARE USE
058   PFXEXTNP      008         EXTERNAL NEW PSW
060   PFXSVCNP      008         SVC NEW PSW
068   PFXPRGNP      008         PROGRAM NEW PSW
070   PFXMCHNP      008         MACHINE CHECK NEW PSW
078   PFXIONP       008         INPUT/OUTPUT NEW PSW
080   PFXCPULG      008         CPU AND STORAGE LOGOUT AREA
080   PFXEXTDB      004         PROCESSOR CONTROLLER DATA BLOCK
                                ADDRESS FOR SERVICE SIGNAL INTERRUPT
084   PFXEXTCF      004         EXTERNAL INTERRUPT CODE FIELDS
084   PFXEXTCP      002         EXTERNAL INTERRUPT CPU ADDR
086   PFXEXTIN      002         EXTERNAL INTERRUPT CODE
086   PFXEXTCL      001         EXTERNAL INTERRUPT CLASS CODE

        CODES DEFINED FOR PFXEXTCL BY HCPEQUAT EXTICLAS

087   PFXEXTCD      001         EXTERNAL INTERRUPT TYPE CODE

        CODES DEFINED FOR PFXEXTCD BY HCPEQUAT EXTICODE

088   PFXSVCIF      004         SVC INTERRUPT CODE FIELDS
088   PFXSVCIL      002         SVC INSTRUCTION LENGTH CODE
08A                 X           RESERVED FOR FUTURE HARDWARE USE
08B   PFXSVCIC      001         SVC INTERRUPT CODE

        CODES DEFINED FOR PFXSVCIC BY HCPEQUAT SVC

08C   PFXPRGCF      004         PROGRAM INTERRUPT CODE FIELDS
08C   PFXPRGIL      002         PROGRAM INTERRUPT INSTRUCTION
                                LENGTH CODE
08E   PFXPRGIN      002         PROGRAM INTERRUPT CODE, HALFWORD
08E                 X           RESERVED FOR FUTURE HARDWARE USE
08F   PFXPRGIC      001         PROGRAM INTERRUPT CODE

        CODES DEFINED FOR PFXPRGIC BY HCPEQUAT PRGICODE

090   PFXTRXAD      004         TRANSLATION EXCEPTION ADDRESS
094   PFXMNCLS      002         MONITOR CLASS
096   PFXPERCD      002         PROGRAM EVENT RECORDER (PER) CODE
098   PFXPERAD      004         PER ADDRESS
09C   PFXMNCOD      004         MONITOR CODE
0A0                 1F          RESERVED FOR FUTURE HARDWARE USE
0A4                 1F          RESERVED FOR FUTURE HARDWARE USE
0A8                 1F          RESERVED FOR FUTURE HARDWARE USE
0AC                 1F          RESERVED FOR FUTURE HARDWARE USE
0B0                 1F          RESERVED FOR FUTURE HARDWARE USE
0B4                 1F          RESERVED FOR FUTURE HARDWARE USE
0B8   PFXIOSID      004         SUBCHANNEL IDENTIFICATION
0B8   PFXIOINT      002         I/O INTERRUPT CONSTANT 0001
0BA   PFXIORNM      002         I/O INTERRUPT SUBCHANNEL NUMBER
0BC   PFXINPRM      004         I/O INTERRUPT PARAMETER
0C0   PFXINTID      004         INTERRUPTION ID WORD:
0C0   PFXINISC      001         FIRST BYTE - THE ISC
0C1                 3X          THE OTHER 3 BYTES
0C4                 1F          RESERVED FOR FUTURE HARDWARE USE
0C8                 1F          RESERVED FOR FUTURE HARDWARE USE
0CC                 1F          RESERVED FOR FUTURE HARDWARE USE
0D0                 1F          RESERVED FOR FUTURE HARDWARE USE
0D4                 1F          RESERVED FOR FUTURE HARDWARE USE
0D8   PFXMCPUT      008         MACHINE CHECK CPU TIMER LOGOUT
0E0   PFXMCKCP      008         MACHINE CHECK TOD COMPARATOR LOGOUT
0E8   PFXMCHIN      008         MACHINE CHECK INTERRUPT CODE
0F0                 1F          RESERVED FOR FUTURE HARDWARE USE
0F4   PFXMCHDC      004         MACHINE CHECK EXTERNAL-DAMAGE CODE
0F8   PFXMCFSA      004         MACHINE CHECK FAILING STORAGE ADDRESS
0FC   PFXMCHRD      004         MACHINE DEPENDENT REGION CODE
100   PFXFXLOG      016         MACHINE DEPENDENT FIXED LOGOUT AREA

                      EQUATES

        10    PFXFXLEN    LENGTH OF FIXED LOGOUT AREA.
```

```
110                 XL80        RESERVED FOR FUTURE HARDWARE USE
160     PFXFPRLG    008         FLOATING POINT REGISTER LOGOUT AREA
180     PFXGPRLG    004         GENERAL REGISTER LOGOUT AREA
1C0     PFXCRLG     004         CONTROL REGISTER LOGOUT AREA

                      EQUATES

          40     PFXCRLGL       LENGTH OF CONTROL REGISTER
                                LOGOUT AREA
          00     PFXLAPND       END OF AREA COVERED BY LOW ADDRESS
                                PROTECTION


           REDEFINITION - DEFINITION FOR INITIAL LOADING PSW

000     PFXILP00    001         ILP PSW BYTE 0

          BITS DEFINED FOR PFXILP00 BY HCPEQUAT PSW0

001     PFXILP01    001         ILP PSW BYTE 1

          BITS DEFINED FOR PFXILP01 BY HCPEQUAT PSW1

002     PFXILP02    001         ILP PSW BYTE 2

          BITS DEFINED FOR PFXILP02 BY HCPEQUAT PSW2

003     PFXILP03    001         ILP PSW BYTE 3
004     PFXILP0I    004         ILP PSW INSTRUCTION COUNTER
004     PFXILP04    001         ILP PSW BYTE 4

          BITS DEFINED FOR PFXILP04 BY HCPEQUAT PSW4

005                 3X          ILP PSW BYTES 5-7

           REDEFINITION - VARY PROCESSOR ONLINE WORK AREA

010     PFXSGPND    001         SIGP RESTART FUNCTION COMPLETION FLAG

          CODES DEFINED IN PFXSGPND (AT HEX DISPLACEMENT: 10)

          FF     PFXSGPGD       SUCCESSFUL COMPLETION
          EE     PFXSGPNG       NOT SUCCESSFUL COMPLETION

011     PFXCC2B1    007         BYTES 1-7 OF PFXICCW2
011                 5X          RESERVED FOR FUTURE USE
016     PFXSGPCP    002         SIGP RESTART FUNCTION WORK AREA

           REDEFINITION - DEFINITION FOR OLD EXT PSW

018     PFXEXT00    001         EXT OLD PSW BYTE 0

          BITS DEFINED FOR PFXEXT00 BY HCPEQUAT PSW0

019     PFXEXT01    001         EXT OLD PSW BYTE 1

          BITS DEFINED FOR PFXEXT01 BY HCPEQUAT PSW1

01A     PFXEXT02    001         EXT OLD PSW BYTE 2

          BITS DEFINED FOR PFXEXT02 BY HCPEQUAT PSW2

01B     PFXEXT03    001         EXT OLD PSW BYTE 3
01C     PFXEXT0I    004         EXT OLD PSW INSTRUCTION COUNTER
01C     PFXEXT04    001         EXT OLD PSW BYTE 4

          BITS DEFINED FOR PFXEXT04 BY HCPEQUAT PSW4

01D                 3X          EXT OLD PSW BYTES 5-7

           REDEFINITION - DEFINITION FOR OLD SVC PSW

020     PFXSVC00    001         SVC OLD PSW BYTE 0
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        BITS DEFINED FOR PFXSVC00 BY HCPEQUAT PSW0

021   PFXSVC01   001       SVC OLD PSW BYTE 1

        BITS DEFINED FOR PFXSVC01 BY HCPEQUAT PSW1

022   PFXSVC02   001       SVC OLD PSW BYTE 2

        BITS DEFINED FOR PFXSVC02 BY HCPEQUAT PSW2

023   PFXSVC03   001       SVC OLD PSW BYTE 3
024   PFXSVCOI   004       SVC OLD PSW INSTRUCTION COUNTER
024   PFXSVC04   001       SVC OLD PSW BYTE 4

        BITS DEFINED FOR PFXSVC04 BY HCPEQUAT PSW4

025              3X       SVC OLD PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR PRG OLD PSW

028   PFXPRG00   001       PRG OLD PSW BYTE 0

        BITS DEFINED FOR PFXPRG00 BY HCPEQUAT PSW0

029   PFXPRG01   001       PRG OLD PSW BYTE 1

        BITS DEFINED FOR PFXPRG01 BY HCPEQUAT PSW1

02A   PFXPRG02   001       PRG OLD PSW BYTE 2

        BITS DEFINED FOR PFXPRG02 BY HCPEQUAT PSW2

02B   PFXPRG03   001       PRG OLD PSW BYTE 3
02C   PFXPRGOI   004       PRG OLD PSW INSTRUCTION COUNTER
02C   PFXPRG04   001       PRG OLD PSW BYTE 4

        BITS DEFINED FOR PFXPRG04 BY HCPEQUAT PSW4

02D              3X       PRG OLD PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR MCH OLD PSW

030   PFXMCH00   001       MCH OLD PSW BYTE 0

        BITS DEFINED FOR PFXMCH00 BY HCPEQUAT PSW0

031   PFXMCH01   001       MCH OLD PSW BYTE 1

        BITS DEFINED FOR PFXMCH01 BY HCPEQUAT PSW1

032   PFXMCH02   001       MCH OLD PSW BYTE 2

        BITS DEFINED FOR PFXMCH02 BY HCPEQUAT PSW2

033   PFXMCH03   001       MCH OLD PSW BYTE 3
034   PFXMCHOI   004       MCH OLD PSW INSTRUCTION COUNTER
034   PFXMCH04   001       MCH OLD PSW BYTE 4

        BITS DEFINED FOR PFXMCH04 BY HCPEQUAT PSW4

035              3X       MCH OLD PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR I/O OLD PSW

038   PFXIOP00   001       I/O OLD PSW BYTE 0

        BITS DEFINED FOR PFXIOP00 BY HCPEQUAT PSW0

039   PFXIOP01   001       I/O OLD PSW BYTE 1

        BITS DEFINED FOR PFXIOP01 BY HCPEQUAT PSW1
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03A   PFXIOPO2   001       I/O OLD PSW BYTE 2

        BITS DEFINED FOR PFXIOPO2 BY HCPEQUAT PSW2

03B   PFXIOPO3   001       I/O OLD PSW BYTE 3
03C   PFXIOPOI   004       I/O OLD PSW INSTRUCTION COUNTER
03C   PFXIOPO4   001       I/O OLD PSW BYTE 4

        BITS DEFINED FOR PFXIOPO4 BY HCPEQUAT PSW4

03D              3X       I/O OLD PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR NEW EXT PSW

058   PFXEXTN0   001       EXT NEW PSW BYTE 0

        BITS DEFINED FOR PFXEXTN0 BY HCPEQUAT PSW0

059   PFXEXTN1   001       EXT NEW PSW BYTE 1

        BITS DEFINED FOR PFXEXTN1 BY HCPEQUAT PSW1

05A   PFXEXTN2   001       EXT NEW PSW BYTE 2

        BITS DEFINED FOR PFXEXTN2 BY HCPEQUAT PSW2

05B   PFXEXTN3   001       EXT NEW PSW BYTE 3
05C   PFXEXTNI   004       EXT NEW PSW INSTRUCTION COUNTER
05C   PFXEXTN4   001       EXT NEW PSW BYTE 4

        BITS DEFINED FOR PFXEXTN4 BY HCPEQUAT PSW4

05D              3X       EXT NEW PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR NEW SVC PSW

060   PFXSVCN0   001       SVC NEW PSW BYTE 0

        BITS DEFINED FOR PFXSVCN0 BY HCPEQUAT PSW0

061   PFXSVCN1   001       SVC NEW PSW BYTE 1

        BITS DEFINED FOR PFXSVCN1 BY HCPEQUAT PSW1

062   PFXSVCN2   001       SVC NEW PSW BYTE 2

        BITS DEFINED FOR PFXSVCN2 BY HCPEQUAT PSW2

063   PFXSVCN3   001       SVC NEW PSW BYTE 3
064   PFXSVCNI   004       SVC NEW PSW INSTRUCTION COUNTER
064   PFXSVCN4   001       SVC NEW PSW BYTE 4

        BITS DEFINED FOR PFXSVCN4 BY HCPEQUAT PSW4

065              3X       SVC NEW PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR PRG NEW PSW

068   PFXPRGN0   001       PRG NEW PSW BYTE 0

        BITS DEFINED FOR PFXPRGN0 BY HCPEQUAT PSW0

069   PFXPRGN1   001       PRG NEW PSW BYTE 1

        BITS DEFINED FOR PFXPRGN1 BY HCPEQUAT PSW1

06A   PFXPRGN2   001       PRG NEW PSW BYTE 2

        BITS DEFINED FOR PFXPRGN2 BY HCPEQUAT PSW2

06B   PFXPRGN3   001       PRG NEW PSW BYTE 3
06C   PFXPRGNI   004       PRG NEW PSW INSTRUCTION COUNTER
06C   PFXPRGN4   001       PRG NEW PSW BYTE 4
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        BITS DEFINED FOR PFXPRGN4 BY HCPEQUAT PSW4

06D             3X      PRG NEW PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR MCH NEW PSW

070   PFXMCHN0  001     MCH NEW PSW BYTE 0

        BITS DEFINED FOR PFXMCHN0 BY HCPEQUAT PSW0

071   PFXMCHN1  001     MCH NEW PSW BYTE 1

        BITS DEFINED FOR PFXMCHN1 BY HCPEQUAT PSW1

072   PFXMCHN2  001     MCH NEW PSW BYTE 2

        BITS DEFINED FOR PFXMCHN2 BY HCPEQUAT PSW2

073   PFXMCHN3  001     MCH NEW PSW BYTE 3
074   PFXMCHNI  004     MCH NEW PSW INSTRUCTION COUNTER
074   PFXMCHN4  001     MCH NEW PSW BYTE 4

        BITS DEFINED FOR PFXMCHN4 BY HCPEQUAT PSW4

075             3X      MCH NEW PSW BYTES 5-7

         REDEFINITION - DEFINITION FOR I/O NEW PSW

078   PFXIOPN0  001     I/O NEW PSW BYTE 0

        BITS DEFINED FOR PFXIOPN0 BY HCPEQUAT PSW0

079   PFXIOPN1  001     I/O NEW PSW BYTE 1

        BITS DEFINED FOR PFXIOPN1 BY HCPEQUAT PSW1

07A   PFXIOPN2  001     I/O NEW PSW BYTE 2

        BITS DEFINED FOR PFXIOPN2 BY HCPEQUAT PSW2

07B   PFXIOPN3  001     I/O NEW PSW BYTE 3
07C   PFXIOPNI  004     I/O NEW PSW INSTRUCTION COUNTER
07C   PFXIOPN4  001     I/O NEW PSW BYTE 4

        BITS DEFINED FOR PFXIOPN4 BY HCPEQUAT PSW4

07D             3X      I/O NEW PSW BYTES 5-7

         REDEFINITION - OVERLAY FOR MACHINE CHECK CODES

0E8   PFXMCHI0  001     MACHINE CHECK INTERRUPT CODE BYTE 0

        BITS DEFINED FOR PFXMCHI0 BY HCPEQUAT MCIC0

0E9   PFXMCHI1  001     MACHINE CHECK INTERRUPT CODE BYTE 1

        BITS DEFINED FOR PFXMCHI1 BY HCPEQUAT MCIC1

0EA   PFXMCHI2  001     MACHINE CHECK INTERRUPT CODE BYTE 2

        BITS DEFINED FOR PFXMCHI2 BY HCPEQUAT MCIC2

0EB   PFXMCHI3  001     MACHINE CHECK INTERRUPT CODE BYTE 3

        BITS DEFINED FOR PFXMCHI3 BY HCPEQUAT MCIC3

0EC   PFXMCHI4  001     MACHINE CHECK INTERRUPT CODE BYTE 4

        BITS DEFINED FOR PFXMCHI4 BY HCPEQUAT MCIC4

0ED   PFXMCHI5  001     MACHINE CHECK INTERRUPT CODE BYTE 5
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        BITS DEFINED FOR PFXMCHI5 BY HCPEQUAT MCIC5

0EE   PFXMCHI6    002       MACHINE CHECK INTERRUPT CODE BYTE 6-7

         REDEFINITION - MACHINE CHECK EXTERNAL DAMAGE CODE

0F4               X         RESERVED FOR FUTURE IBM USE
0F5   PFXDCBY1    001       BYTE 1 OF THE EXTERNAL DAMAGE CODE

        BITS DEFINED FOR PFXDCBY1 BY HCPEQUAT MCEXTDMC

0F6               H         RESERVED FOR FUTURE IBM USE

         REDEFINITION - STORE STATUS AREA DEFINITION

100   PFXSTPSW    008       STORE STATUS PSW LOGOUT AREA
108   PFXSTPFX    004       STORE STATUS PREFIX LOGOUT AREA
10C   PFXSTMDL    004       STORE STATUS MODEL DEPENDENT DATA

         REDEFINITION - SAVE AREA REGION

600   PFXTMPSV    128       TEMPORARY SAVE AREA
680   PFXWRKSV    128       SPECIAL WORK SAVE AREA
700   PFXBALSV    128       BALR LINKAGE SAVE AREA
780   PFXPTRSV    128       PAGE TRANSLATION SAVE AREA
800   PFXFRESV    128       HCPFRE SAVE AREA
880   PFXIRPSV    016       R12-R15 SAVE AREA FOR FLIHS
890   PFXLNKSV    016       CP CALL/RETURN LINKAGE SAVEAREA
8A0   PFXSVCSV    064       SVC R0-R15 SAVEAREA
8E0   PFXSVC      004       HPCSVC ADDRESS

        BITS DEFINED FOR PFXSVCN4 BY HCPEQUAT PSW4

8E4   PFXSVCLC    004       COUNT OF CP CALL-WITH-SAVEAREA
8E8   PFXLRC      004       LOCAL SAVBK RETURN QUEUE COUNT
8EC   PFXLRQ      004       LOCAL SAVBK RETURN QUEUE
8F0   PFXCPRQA    004       CROSS PROCESSOR RETURN QUEUE ADDR
8F4   PFXCPRQP    004       CROSS PROCESSOR RETURN QUEUE ADDR
8F8   PFXSSABK    004       STATIC SAVEAREA BLOCK
8FC   PFXSVR13    004       TEMPORARY R13 SAVE FOR SSABK USAGE

         REDEFINITION - TEMPORARY SAVE AREA

600   PFXTMPFP    004
604   PFXTMPBP    004
608               F
60C               F
610   PFXTMPSC    001
611   PFXTMPCL    001
612               X
613               X
614               F
618   PFXTMPRG    064
618   PFXTMPR0    004
61C   PFXTMPR1    004
620   PFXTMPR2    004
624   PFXTMPR3    004
628   PFXTMPR4    004
62C   PFXTMPR5    004
630   PFXTMPR6    004
634   PFXTMPR7    004
638   PFXTMPR8    004
63C   PFXTMPR9    004
640   PFXTMPRA    004
644   PFXTMPRB    004
648   PFXTMPRC    004
64C   PFXTMPRD    004
650   PFXTMPRE    004
654   PFXTMPRF    004
658   PFXTMPWK    040
658   PFXTMPW0    004
65C   PFXTMPW1    004
660   PFXTMPW2    004
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664    PFXTMPW3    004
668    PFXTMPW4    004
66C    PFXTMPW5    004
670    PFXTMPW6    004
674    PFXTMPW7    004
678    PFXTMPW8    004
67C    PFXTMPW9    004
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REDEFINITION - WORK SAVE AREA

```
680    PFXWRKFP    004
684    PFXWRKBP    004
688                F
68C                F
690    PFXWRKSC    001
691    PFXWRKCL    001
692                X
693                X
694                F
698    PFXWRKRG    064
698    PFXWRKR0    004
69C    PFXWRKR1    004
6A0    PFXWRKR2    004
6A4    PFXWRKR3    004
6A8    PFXWRKR4    004
6AC    PFXWRKR5    004
6B0    PFXWRKR6    004
6B4    PFXWRKR7    004
6B8    PFXWRKR8    004
6BC    PFXWRKR9    004
6C0    PFXWRKRA    004
6C4    PFXWRKRB    004
6C8    PFXWRKRC    004
6CC    PFXWRKRD    004
6D0    PFXWRKRE    004
6D4    PFXWRKRF    004
6D8    PFXWRKWK    040
6D8    PFXWRKW0    004
6DC    PFXWRKW1    004
6E0    PFXWRKW2    004
6E4    PFXWRKW3    004
6E8    PFXWRKW4    004
6EC    PFXWRKW5    004
6F0    PFXWRKW6    004
6F4    PFXWRKW7    004
6F8    PFXWRKW8    004
6FC    PFXWRKW9    004
```

REDEFINITION - BALR LINKAGE SAVE AREA

```
700    PFXBALFP    004
704    PFXBALBP    004
708                F
70C                F
710    PFXBALSC    001
711    PFXBALCL    001
712                X
713                X
714                F
718    PFXBALRG    064
718    PFXBALR0    004
71C    PFXBALR1    004
720    PFXBALR2    004
724    PFXBALR3    004
728    PFXBALR4    004
72C    PFXBALR5    004
730    PFXBALR6    004
734    PFXBALR7    004
738    PFXBALR8    004
73C    PFXBALR9    004
740    PFXBALRA    004
744    PFXBALRB    004
748    PFXBALRC    004
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74C	PFXBALRD	004
750	PFXBALRE	004
754	PFXBALRF	004
758	PFXBALWK	040
758	PFXBALW0	004
75C	PFXBALW1	004
760	PFXBALW2	004
764	PFXBALW3	004
768	PFXBALW4	004
76C	PFXBALW5	004
770	PFXBALW6	004
774	PFXBALW7	004
778	PFXBALW8	004
77C	PFXBALW9	004

REDEFINITION - HCPPTRAN LINKAGE SAVE AREA

780	PFXPTRFP	004
784	PFXPTRBP	004
788		F
78C		F
790	PFXPTRSC	001
791	PFXPTRCL	001
792		X
793		X
794		F
798	PFXPTRRG	064
798	PFXPTRR0	004
79C	PFXPTRR1	004
7A0	PFXPTRR2	004
7A4	PFXPTRR3	004
7A8	PFXPTRR4	004
7AC	PFXPTRR5	004
7B0	PFXPTRR6	004
7B4	PFXPTRR7	004
7B8	PFXPTRR8	004
7BC	PFXPTRR9	004
7C0	PFXPTRRA	004
7C4	PFXPTRRB	004
7C8	PFXPTRRC	004
7CC	PFXPTRRD	004
7D0	PFXPTRRE	004
7D4	PFXPTRRF	004
7D8	PFXPTRWK	040
7D8	PFXPTRW0	004
7DC	PFXPTRW1	004
7E0	PFXPTRW2	004
7E4	PFXPTRW3	004
7E8	PFXPTRW4	004
7EC	PFXPTRW5	004
7F0	PFXPTRW6	004
7F4	PFXPTRW7	004
7F8	PFXPTRW8	004
7FC	PFXPTRW9	004

REDEFINITION - FREE STORAGE SAVE AREA

800	PFXFREFP	004
804	PFXFREBP	004
808		F
80C		F
810	PFXFRESC	001
811	PFXFRECL	001
812		X
813		X
814		F
818	PFXFRERG	064
818	PFXFRER0	004
81C	PFXFRER1	004
820	PFXFRER2	004
824	PFXFRER3	004
828	PFXFRER4	004
82C	PFXFRER5	004

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830   PFXFRER6   004
834   PFXFRER7   004
838   PFXFRER8   004
83C   PFXFRER9   004
840   PFXFRERA   004
844   PFXFRERB   004
848   PFXFRERC   004
84C   PFXFRERD   004
850   PFXFRERE   004
854   PFXFRERF   004
858   PFXFREWK   040
858   PFXFREW0   004
85C   PFXFREW1   004
860   PFXFREW2   004
864   PFXFREW3   004
868   PFXFREW4   004
86C   PFXFREW5   004
870   PFXFREW6   004
874   PFXFREW7   004
878   PFXFREW8   004
87C   PFXFREW9   004

         REDEFINITION - INTERRUPT FLIH R12-R15 SAVE AREA

880   PFXIRP12   004       R12 SAVE AREA
884   PFXIRP13   004       R13 SAVE AREA
888   PFXIRP14   004       R14 SAVE AREA
88C   PFXIRP15   004       R15 SAVE AREA

         REDEFINITION - CALLING LINKAGE R12-R15 SAVE AREA

890   PFXLNK12   004       R12 SAVE AREA
894   PFXLNK13   004       R13 SAVE AREA
898   PFXLNK14   004       R14 SAVE AREA
89C   PFXLNK15   004       R15 SAVE AREA

         REDEFINITION - TIMER WORK REGION

900   PFXTODHO   004       HIGH HALF OF TOD CLOCK
900   PFXCVTDA   008       WORK AREA FOR HCPCVTOD
908   PFXPTLBT   008       TOD CLOCK AT LAST PTLB ON THIS CPU
910   PFXTMRUN   008       CPU TIMER AT USER RUN
918   PFXTMURN   008       CPU TIMER AT USER UN-RUN
920   PFXTMDSP   008       CPU TIMER AT USER DISPATCH
928   PFXTMUDS   008       CPU TIMER AT USER UN-DISPATCH
930   PFXVTDSP   008       VALUE OF VMSVTIME AT USER DISPATCH
938              FL8S12'0'RESERVED FOR FUTURE IBM USE
940   PFXCPCR    064       HOST CONTROL REGISTERS
940   PFXCPCR0   004       CONTROL AND  EXTERNAL MASKS
940   PFXCR0B0   001

        BITS DEFINED FOR PFXCR0B0 BY HCPEQUAT CR0B0

941   PFXCR0B1   001

        BITS DEFINED FOR PFXCR0B1 BY HCPEQUAT CR0B1

942   PFXCR0B2   001

        BITS DEFINED FOR PFXCR0B2 BY HCPEQUAT CR0B2

943   PFXCR0B3   001

        BITS DEFINED FOR PFXCR0B3 BY HCPEQUAT CR0B3

944   PFXCPCR1   004       USER SEGMENT TABLE ADDRESS
944   PFXCR1B0   001

        BITS DEFINED FOR PFXCR1B0 BY HCPEQUAT CR1B0

945   PFXCR1B1   001
946   PFXCR1B2   001
947   PFXCR1B3   001
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948   PFXCPCR2   004
948   PFXCR2B0   001
949   PFXCR2B1   001
94A   PFXCR2B2   001
94B   PFXCR2B3   001
94C   PFXCPCR3   004
94C   PFXCR3B0   001
94D   PFXCR3B1   001
94E   PFXCR3B2   001
94F   PFXCR3B3   001
950   PFXCPCR4   004
950   PFXCR4B0   001
951   PFXCR4B1   001
952   PFXCR4B2   001
953   PFXCR4B3   001
954   PFXCPCR5   004
954   PFXCR5B0   001
955   PFXCR5B1   001
956   PFXCR5B2   001
957   PFXCR5B3   001
958   PFXCPCR6   004      I/O INTERRUPTION SUBCLASS MASKS
958   PFXCR6B0   001

        BITS DEFINED IN PFXCR6B0 (AT HEX DISPLACEMENT: 958)

        80     PFXCPIOI    I/O INTERRUPT SUBCLASS 00 FOR
                           CP-INITIATED I/O
        80     PFXIOCL0    FLOATING CHANNEL INTERRUPT CLASS 0
        40     PFXIOCL1    FLOATING CHANNEL INTERRUPT CLASS 1
        40     PFXVRIOI    I/O INTERRUPT SUBCLASS FOR V=R
                           GUEST INITIATED I/O
        40     PFXFPIOI    I/O INTERRUPT SUBCLASS 04 FOR I/O
                           ISSUED TO A FULL PACK IN THE V=R
                           I/O CONFIGURATION.
        20     PFXIOCL2    FLOATING CHANNEL INTERRUPT CLASS 2
        10     PFXIOCL3    FLOATING CHANNEL INTERRUPT CLASS 3
        08     PFXIOCL4    FLOATING CHANNEL INTERRUPT CLASS 4
        08     PFXVRREP    LEVEL 1 REPLACEMENT ISC
        04     PFXIOCL5    FLOATING CHANNEL INTERRUPT CLASS 5
        02     PFXIOCL6    FLOATING CHANNEL INTERRUPT CLASS 6
        01     PFXIOCL7    FLOATING CHANNEL INTERRUPT CLASS 7
        15     PFXISCPT    INTERRUPTION SUBCLASSES DEDICATED FOR
                           LEVEL 1 I/O PASS THROUGH'S USE.(3,5,7)
        1D     PFXDRFPT    INTERRUPTION SUBCLASSES DEDICATED FOR
                           LEVEL 2 I/O PASS THRU'S USE.(3,4,5,7)

959   PFXCR6B1   001
95A   PFXCR6B2   001
95B   PFXCR6B3   001
95C   PFXCPCR7   004
95C   PFXCR7B0   001
95D   PFXCR7B1   001
95E   PFXCR7B2   001
95F   PFXCR7B3   001
960   PFXCPCR8   004      MONITOR CALL ENABLE MASKS
960   PFXCR8B0   001
961   PFXCR8B1   001
962   PFXCR8B2   001
963   PFXCR8B3   001
964   PFXCPCR9   004      PER CONTROL
964   PFXCR9B0   001

        BITS DEFINED FOR PFXCR9B0 BY HCPEQUAT CR9B0

965   PFXCR9B1   001
                         BITS-DEFINED FOR PFXCR9B2 BY HCPEQUAT CR9B2
966   PFXCR9B2   001
                         BITS-DEFINED FOR PFXCR9B3 BY HCPEQUAT CR9B3
967   PFXCR9B3   001
968   PFXCPCRA   004      PER ADDRESS RANGE
96C   PFXCPCRB   004      PER ADDRESS RANGE
970   PFXCPCRC   004
970   PFXCRCB0   001
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          BITS DEFINED FOR PFXCRCB0 BY HCPEQUAT CRCB0

971   PFXCRCB1    001
972   PFXCRCB2    001
973   PFXCRCB3    001

          BITS DEFINED FOR PFXCRCB3 BY HCPEQUAT CRCB3

974   PFXCPCRD    004
974   PFXCRDB0    001
975   PFXCRDB1    001
976   PFXCRDB2    001
977   PFXCRDB3    001
978   PFXCPCRE    004       MACHINE CHECK CONTROL MASK
978   PFXCREB0    001

          BITS DEFINED FOR PFXCREB0 BY HCPEQUAT CREB0

979   PFXCREB1    001

          BITS DEFINED FOR PFXCREB1 BY HCPEQUAT CREB1

97A   PFXCREB2    001
97B   PFXCREB3    001
97C   PFXCPCRF    004
97C   PFXCRFB0    001
97D   PFXCRFB1    001
97E   PFXCRFB2    001
97F   PFXCRFB3    001

            REDEFINITION - SUPPLY INITIAL CONTROL REG VALUES

940               XL4'80B00CONTROL AND  EXTERNAL MASKS
944               XL4'FFFFFUSER SEGMENT TABLE ADDRESS
948               XL4'00000CROSS MEMORY
94C               XL4'00000
950               XL4'00000
954               XL4'00000
958               XL4'00000I/O INTERRUPTION SUBCLASS MASKS
95C               XL4'00000
960               XL4'00000MONITOR CALL ENABLE MASKS
964               XL4'00000PER CONTROL
968               XL4'00000PER ADDRESS RANGE
96C               XL4'00000PER ADDRESS RANGE
970               XL4'00000
974               XL4'00000
978               XL4'FFFF0MACHINE CHECK CONTROL MASK
97C               XL4'00000

            REDEFINITION - ADDRESS CONSTANTS FOR FAST LINKAGES

9B8   PFXCFMRD    004       CONSOLE FUNCTION READ MODULE
9BC   PFXCVTBH    004       CONVERT BINARY TO HEXIDECIMAL
9C0   PFXCVTDT    004       OBTAIN TODAY'S DATE
9C4   PFXCVTOD    004       OBTAIN TIME OF DAY CLOCK VALUE
9C8   PFXDSPCH    004       SYSTEM DISPATCHER
9CC   PFXERMSG    004       ERROR MESSAGE FORMATTER
9D0   PFXFREE     004       ALLOCATE FREE STORAGE
9D4   PFXFRET     004       RELEASE FREE STORAGE
9D8   PFXGSVC0    004       SET USER'S CONDITION CODE 0
9DC   PFXGSVC1    004       SET USER'S CONDITION CODE 1
9E0   PFXGSVC2    004       SET USER'S CONDITION CODE 2
9E4   PFXGSVC3    004       SET USER'S CONDITION CODE 3
9E8   PFXTTATB    004       TABLE OF TRACE ENTRY CODES
9EC   PFXIOSRQ    004       INPUT/OUTPUT SCHEDULING REQUEST
9F0   PFXPTRAN    004       VIRTUAL ADDR TRANSLATE ROUTINE
9F4   PFXPTFLK    004       LOCK A PAGE IN STORAGE
9F8   PFXPTFUL    004       PAGE UNLOCKING ROUTINE
9FC   PFXPTRAB    004       ABSOLUTE ADDR TRANSLATE ROUTINE
A00   PFXQCNWT    004       WRITE A TERMINAL MESSAGE
A04   PFXRUNXT    004       EMULATION STATE EXIT ROUTINE
A08   PFXSTKCP    004       STACK A CPEBK
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A0C   PFXSTKGT   004      STACK A DELAYED GOTO
A10   PFXSTKIO   004      STACK AN IORBK
A14   PFXSCCFD   004      SCAN FOR NEXT FIELD IN GSDBLOK
A18   PFXSYS     004      SYSTEM COMMON AREA
A1C   PFXFTBL    004      SYSTEM FRAME TABLE
A20   PFXSYSVM   004      SYSTEM VMDBLOCK
A24   PFXRUNU    004      ROUTINE TO RUN USER
A28   PFXENDOP   004      END OF INSTRUCTION SIMULATION
A2C   PFXSVCSW   004      SWITCH-TO-MASTER LINKAGE
A30   PFXMM0     004      START OF RESIDENT NUCLEUS
A34   PFXMM5     004      MP BOUNDARY FOR RESIDENT MODULES
A38   PFXSVCGS   004      GET A SAVBK
A3C   PFXPAGCP   004      ADDR OF FIRST PAGEABLE PROGRAM
A40   PFXSVCRS   004      RELEASE A SAVBK
A44   PFXLUSER   004      PRIOR RUNNING USER
A48   PFXPRFIX   004      PREFIX VALUE FOR THIS CPU
A4C   PFXNXTPF   004      CYCLIC POINTER TO NEXT PREFIX AREA
A50   PFXSPIEA   004      PROG INTERRUPT EXIT ADDR - SEE HCPSPIE
A54   PFXSPIEM   004      PROG INTERRUPT EXIT MASK - SEE HCPSPIE
A58   PFXSTDBK   004      SYSTEM TERMINATION DUMP BLOCK ADDRESS
A5C   PFXMCHA    004      MACHINE CHECK WORK AREA
A60   PFXMCVBK   004      THIS CPU'S PERMANENT MCVBK.  IF BLOCK
                          IS NON-0, A DAMAGE INCIDENT IS IN PROGRESS.
A64   PFXINST1   004      RESERVED FOR INSTALLATION USE
A68   PFXINST2   004      RESERVED FOR INSTALLATION USE
A6C   PFXINST3   004      RESERVED FOR INSTALLATION USE
A70   PFXINST4   004      RESERVED FOR INSTALLATION USE

         REDEFINITION - COMMONLY USED CONSTANTS

A80   PFXZEROS   008      40 BYTES OF BINARY ZEROES
AA8   PFXBLANK   008
AB0   PFXFFS     008

                    EQUATES

        80    PFX0

AB8   PFX1       004
ABC   PFX2       004
AC0   PFX3       004
AC4   PFX4       004
AC8   PFX5       004
ACC   PFX6       004
AD0   PFX7       004
AD4   PFX8       004
AD8   PFX9       004
ADC   PFX10      004
AE0   PFX15      004      ALSO = X'0000000F'
AE4   PFX16      004
AE8   PFX20      004
AEC   PFX24      004
AF0   PFX60      004      ALSO = X'0000003C'
AF4   PFX240     004      ALSO = X'000000F0' = C'0'
AF8   PFX255     004      ALSO = X'000000FF'
AFC   PFX256     004      ALSO = X'00000100'
B00   PFX512     004      ALSO = X'00000200'
B04   PFX2047    004      ALSO = X'000007FF'
B08   PFX2048    004      ALSO = X'00000800'
B0C   PFX4095    004      ALSO = X'00000FFF'
B10   PFX4096    004      ALSO = X'00001000'
B14   PFXHALF    004      ALSO = F'65535' (65K-1)
B18   PFX00FFS   004
B1C   PFXPGNUM   004
B20   PFXHLFPG   004
B24   PFXSTEMK   004      MASK TO ISOLATE SEGTABLE ENTRY

                    EQUATES

        1C    PFXSTOMK    MASK TO ISOLATE VMDPSTO ENTRY
        1C    PFXPTEMK    MASK TO ISOLATE PAGTABLE ENTRY
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B28   PFX8000S   004
B2C   PFXNOADD   004

                    EQUATES

        88    PFX7FFFS    X'7FFFFFFF', 4 BYTES LENGTH

B30               4F       RESERVED FOR FUTURE IBM USE

          REDEFINITION - COMMONLY USED HALF WORD CONSTANTS

A80               5D'0'
AA8               XL8'40404
AB0               XL8'FFFFF
AB8   PFXH0       002
ABA   PFXH1       002
ABC               H'0'
ABE   PFXH2       002
AC0               H'0'
AC2   PFXH3       002
AC4               H'0'
AC6   PFXH4       002
AC8               H'0'
ACA   PFXH5       002
ACC               H'0'
ACE   PFXH6       002
AD0               H'0'
AD2   PFXH7       002
AD4               H'0'
AD6   PFXH8       002
AD8               H'0'
ADA   PFXH9       002
ADC               H'0'
ADE   PFXH10      002
AE0               H'0'
AE2   PFXH15      002
AE4               H'0'
AE6   PFXH16      002
AE8               H'0'
AEA   PFXH20      002
AEC               H'0'
AEE   PFXH24      002
AF0               H'0'
AF2   PFXH60      002
AF4               H'0'
AF6   PFXH240     002
AF8               H'0'
AFA   PFXH255     002
AFC               H'0'
AFE   PFXH256     002
B00               H'0'
B02   PFXH512     002
B04               H'0'
B06   PFXH2047    002
B08               H'0'
B0A   PFXH2048    002
B0C               H'0'
B0E   PFXH4095    002
B10               H'0'
B12   PFXH4096    002

          REDEFINITION - COMMONLY USED ONE BYTE CONSTANTS

A80               5D'0'
AA8               XL8'40404
AB0               XL8'FFFFF
AB8   PFXB0       001
AB9               XL2'00'
ABB   PFXB1       001
ABC               XL3'00'
ABF   PFXB2       001
AC0               XL3'00'
AC3   PFXB3       001
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AC4                 XL3'00'
AC7   PFXB4         001
AC8                 XL3'00'
ACB   PFXB5         001
ACC                 XL3'00'
ACF   PFXB6         001
AD0                 XL3'00'
AD3   PFXB7         001
AD4                 XL3'00'
AD7   PFXB8         001
AD8                 XL3'00'
ADB   PFXB9         001
ADC                 XL3'00'
ADF   PFXB10        001
AE0                 XL3'00'
AE3   PFXB15        001
AE4                 XL3'00'
AE7   PFXB16        001
AE8                 XL3'00'
AEB   PFXB20        001
AEC                 XL3'00'
AEF   PFXB24        001
AF0                 XL3'00'
AF3   PFXB60        001
AF4                 XL3'00'
AF7   PFXB240       001
AF7   PFXCHR0       001
AF8                 XL3'00'
AFB   PFXB255       001

        REDEFINITION -

B40                 3X'00'    RESERVED FOR IBM USE
B43   PFXPREMT      001       CPU PREEMPTION FLAG

        CODES DEFINED IN PFXPREMT (AT HEX DISPLACEMENT: B43)

        FF    PFXPRERQ      CPU PREEMPTION IS REQUESTED
        00    PFXPREMF      CPU PREEMPTION HAS BEEN SATISFIED

B44   PFXPLDV      004       ADDR  OF THIS CPU'S PROCESSOR LOCAL
                             DISPATCH VECTOR
B48   PFXCPUID     008       CPU IDENTIFICATION FIELD
B48   PFXIDVER     001       CPU MODEL VERSION CODE

        CODES DEFINED FOR PFXIDVER BY HCPEQUAT CPUID

B49   PFXIDSER     003       CPU SERIAL NUMBER - PACKED DECIMAL
B4C   PFXIDMDL     002       CPU MODEL NUMBER - PACKED DECIMAL
B4E                 1H'0'     RESERVED FOR FUTURE IBM U E.
B50   PFXRNPSW     008       PSW FOR LAST RUN USER
B58   PFXDSPRI     008       DISPATCH PRIORITY OF DISPATCHED VMDBK
B60   PFXUDED      004       VMDBK TO WHICH THIS CPU IS DEDICATED
                             (ZERO = NOT A DEDICATED FIELD)
B64   PFXIORET     004       RETURN LINKAGE FOR I/O
B68   PFXRNUSR     004       LAST RUN USER
B6C   PFXRMSZ      004       REAL MACHINE SIZE (=HCPSYSRM)
B70   PFXZNNUM     002       HOST ZONE NUMBER
B72   PFXZNMSK     001       HOST ZONE MASK
B73                 1X'00'    RESERVED FOR FUTURE IBM USE
B74   PFXAZMWD     004       ALERT ZONE MASK WORD.  THIS MAPPING
                             ..IS USED FOR COMPARE-AND-SWAP
                             ..OPERATIONS.
B74   PFXAZM       001       ALERT ZONE MASK.  THIS MASK CONTAINS
                             ..A ONE FOR EACH ZONE WHICH MUST BE
                             ..ALERTED FOR BY THIS PROCESSOR.
                             ..SERIALIZED BY COMPARE-AND-SWAP.
B75                 XL3'00'   REST OF PFXAZMWD
B78   PFXFLAGS     004       STATUS FLAGS
B78   PFXHSTAT     001       HOST CP RUNNING STATUS

        BITS DEFINED IN PFXHSTAT (AT HEX DISPLACEMENT: B78)
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         80     PFXHWAIT    HOST CP IN WAIT STATE
         40     PFXHRUN     DISPATCHED USER HAS BEEN PUT IN THE
                            SIE, OR EXITED FROM SIE BUT NOT YET
                            'UN-RUN'.  THE HOST GPR'S AND FPR'S
                            CONTAIN GUEST DATA, AND THE CPU
                            TIMER IS TRACKING EMULATION-MODE TIME.
         20     PFXHSYS     HOST CP EXECUTING ON BEHALF OF SYSTEM
         10     PFXHUSER    HOST CP EXECUTING ON BEHALF OF USER
                            (PFXHRUN AND/OR PFXHSYS MAY ALSO
                            BE INDICATED WITH PFXHUSER)
         08     PFXHABEN    HOST CP ABEND MACRO HAS BEEN ISSUED
         04     PFXHSIE     SIE IS RUNNING ON THIS CPU.  (FLAG IS
                            SET JUST BEFORE START, UNSET JUST AFTER EXIT.)
         02     PFXHRUNX    DISPATCHED USER IS IN THE 'RUN'
                            STATE, WITH THE POSSIBLE EXCEPTION
                            OF HOST GPR'S, WHOSE STATE IS
                            INDICATED SOLELY BY PFXHRUN.

B79   PFXTNDLK   001        SYSTEM SPECIAL STATES FLAGS

        BITS DEFINED IN PFXTNDLK (AT HEX DISPLACEMENT: B79)

         40     PFXHINIT    CONTROL PROGRAM IS INITIALIZING
         20     PFXSFIPL    INITIALIZATION IS DUE TO SOFTWARE IPL
         04     PFXTINIT    TIMER HAS BEEN INITIALIZED
         02     PFXTRPON    FREE STORAGE TRAP IN EFFECT

B7A   PFXRCVFG   001        CPU RECOVERY CONTROL FLAGS

        BITS DEFINED IN PFXRCVFG (AT HEX DISPLACEMENT: B7A)

         80     PFXMALFW    SPIN LOCK MALFUNCTION ALERT WINDOW
                            IS IN PROGRESS
         40     PFXHDLAY    PREFIX PAGE IS AWAITING DE-ALLOCATION

B7B   PFXVFST    001        VECTOR FACILITY STATUS

        CODES DEFINED IN PFXVFST  (AT HEX DISPLACEMENT: B7B)

         80     PFXVFOFL    VECTOR FACILITY IS OFFLINE
         40     PFXVFSBY    VECTOR FACILITY IS IN STANDBY
         20     PFXVFOP     VECTOR FACILITY IS OPERATIONAL
         00     PFXVFNI     VECTOR FACILITY IS NOT INSTALLED

B7C   PFXDSPWK   004        DISPATCHER WORK CONTROLS
B7C   PFXRCVWK   001        CPU RECOVERY TYPE WORK CONTROLS

        BITS DEFINED IN PFXRCVWK (AT HEX DISPLACEMENT: B7C)

         40     PFXMALFP    MALFUNCTION ALERT WORK IS PENDING
         20     PFXEMSWK    EMERGENCY SIGNAL WORK IS PENDING
         10     PFXMCHWK    MACHINE CHECK RECOVERY WORK PENDING

B7D              X'00'      RESERVED FOR FUTURE WORK CONTROLS
B7E              X'00'      RESERVED FOR FUTURE WORK CONTROLS
B7F              X'00'      RESERVED FOR FUTURE WORK CONTROLS
B80   PFXABEND   004        CP ABNORMAL TERMINATION CODE
B80   PFXTRMCD   004        MACHINE CHECK TERMINATION CODE
B80   PFXABENM   003        CP ABEND MODULE ID
B83   PFXABENN   001        CP ABEND DETAIL CODE
B84   PFXCPUAD   002        'STAP' PROCESSOR ADDRESS
B86              1X         RESERVED FOR FUTURE IBM USE
B87   PFXHSFLG   001        SHARED NAMED SYSTEMS FLAG

        BITS DEFINED IN PFXHSFLG (AT HEX DISPLACEMENT: B87)

         80     PFXSHRLK    PROCESSING SHARED NAMED SYSTEM PAGE

B88   PFXTMMAX   008        MAXIMUM TIMER VALUE.
                            CONSTANT TO BE USED FOR
                            INITIALIZING OTHER FIELDS
                            AND FOR TIMER ARITHMETIC.
B90   PFXTOTWT   008        SYSTEM TOTAL WAIT TIME
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                                ON THIS CPU
B98    PFXPRBTM    008          TOTAL EMULATION STATE
                                TIME FOR ALL USERS ON
                                THIS CPU
BA0    PFXTMSYS    008          SYSTEM TIMER VALUE
                                ON THIS CPU
BA8    PFXUTIME    008          TOTAL CPU TIME FOR ALL
                                USERS ON THIS CPU
BB0    PFXACTTS    008          SYSTEM ACCOUNTING TIME,
                                VALUE OF PFXTMSYS AT
                                LAST 'ACNT' COMMAND
BB8    PFXSCITS    008          A COPY OF PFXTMSYS THE
                                ..LAST TIME IT WAS INSPECTED BY
                                ..THE SCHEDULER RUNNING ON THIS
                                ..CPU.  THIS FIELD IS PROTECTED
                                ..BY THE SCHEDULER LOCK.
BC0    PFXSPINT    008          ELAPSED TIME IN SPIN LOCK
                                ON THIS CPU
                                STARTING AT ZERO AND
                                COUNTING UPWARDS
BC8    PFXLCPUA    004          LOGICAL CPU ADDRESS
BCC    PFXMALFM    004          MASK OF MALFUNCTION ALERTS
                                RECEIVED BUT NOT YET HANDLED.
                                BITS CORRESPOND TO LOGICAL CPU
                                IDENTIFIERS OF FAILING CPU'S.
                                (PFXMALFP BIT ON IF NON ZERO)
BD0    PFXSPINC    004          COUNT OF SPINS ON A SPIN LOCK
BD4    PFXEMSAN    004          EMERGENCY SIGNAL EMSBK ANCHOR
BD8    PFXDOWNR    001          TERMINATION REQUEST FIELD

       CODES DEFINED IN PFXDOWNR (AT HEX DISPLACEMENT: BD8)

       FF    PFXDOWN      REQUEST FOR TERMINATION
       00    PFXDNRZ      NO REQUEST FOR TERMINATION

BD9    PFXDOWNC    001          TERMINATION COMPLETE FIELD

       CODES DEFINED IN PFXDOWNC (AT HEX DISPLACEMENT: BD9)

       00    PFXDNCZ      TERMINATION NOT COMPLETE
       FF    PFXDNEMS     TERM COMPLETE DUE TO EMS
       EE    PFXDNRES     TERM COMPLETE DUE TO RESET
       DD    PFXDNU       CPU TERM STATUS UNKNOWN

BDA    PFXTYPE     001          HOST CPU USAGE TYPE IDENTIFIER

       CODES DEFINED IN PFXTYPE  (AT HEX DISPLACEMENT: BDA)

       00    PFXTYOFL     CPU IS NOT OPERATIONAL,
                          SEE PFXSTATE FIELD FOR DETAILS
       14    PFXMASTR     THIS IS A MASTER-TYPE CPU
       1E    PFXTYDED     THIS IS A DEDICATED CPU
       28    PFXTYSLV     THIS IS A SLAVE-TYPE CPU

BDB    PFXDETUP    001          FLAG USED DURING DETECTION FOR
                                UNRESPONSIVE PROCESSORS

       CODES DEFINED IN PFXDETUP (AT HEX DISPLACEMENT: BDB)

       00    PFXPRESP     PROCESSOR IS RESPONSIVE
       FF    PFXTESTP     TEST PROCESSOR RESPONSIVE
       CC    PFXPRUNR     PROCESSOR APPEARS UNRESPONSIVE
       11    PFXTMOUT     PROCESSOR IS UNRESPONSIVE
                          AND IS TIMED OUT

BDC    PFXSTATE    001          CPU OPERATING STATUS

       CODES DEFINED IN PFXSTATE (AT HEX DISPLACEMENT: BDC)

       00    PFXAVAIL     CPU IS ONLINE AND AVAILABLE
                          (SEE PFXTYPE FOR ALLOWED USAGE)
       16    PFXRQUIS     ATTEMPTING TO QUIESCE THIS CPU
                          SO IT CAN BE TAKEN OFFLINE
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         2C     PFXVWAIT     CPU HAS BEEN QUIESCED AND IS
                             IN DISABLED WAIT STATE
                             SO IT CAN BE TAKEN OFFLINE
         37     PFXCSTOP     CPU IS CHECK-STOPPED AND
                             HCPMCHCS HAS DEALT WITH IT.
                             OR IT WAS RESET AND HCPMCWRS
                             HAS DEALT WITH IT.
         42     PFXLGOFF     CPU IS NOW LOGICALLY OFFLINE
         6E     PFXNOCPU     CPU IS PHYSICALLY OFFLINE
         EE     PFXUNKNO     CPU IS IN AN UNKNOWN STATE
                             (SIGP COMMUNICATION FAILURE)
         82     PFXNEWCP     CPU IS BEING BROUGHT ONLINE

BDD    PFXTODST    001       TOD CLOCK SYNC STATUS BYTE

         CODES DEFINED IN PFXTODST (AT HEX DISPLACEMENT: BDD)

         00     PFXNOVRY     TOD CLOCK SYNC STATUS OK
         FF     PFXVRYOF     TOD SYNC HAS INITIATED THE
                             VARY OFF OF THIS PROCESSOR

BDE    PFXTYPS     001       PFXTYPE SAVEAREA WHILE CPU
                             IS QUIESCED. USED BY TOD SYNC
BDF    PFXMPFLG    001       MP DEFER FLAGS

         BITS DEFINED IN PFXMPFLG (AT HEX DISPLACEMENT: BDF)

         80     PFXMPSET     PROCESS CHECKPOINT SET

BE0    PFXMPCNT    001       FLAG SET IF THIS PROCESSOR HAS
                             BEEN COUNTED IN SRMNCPUA.
BE1                3X'0'     RESERVED FOR MP SUPPORT USE
BE4    PFXVFOFF    004       ADDRESS OF CPEBK FOR VARY OFF
                             ...VECTOR DURING MACHINE CHECK
                             ...PROCESSING
BE8                F'0'      RESERVED FOR MP SUPPORT USE
BEC                F'0'      RESERVED FOR MP SUPPORT USE
BF0                F'0'      RESERVED FOR MP SUPPORT USE
BF4                F'0'      RESERVED FOR MP SUPPORT USE
BF8                F'0'      RESERVED FOR MP SUPPORT USE
BFC                F'0'      RESERVED FOR MP SUPPORT USE
C00    PFXCPDES    016       CPU DESCRIPTION ENTRY
C00                H         RESERVED
C02    PFXCPFAC    014       CPU FACILITY BIT MAP
C02    PFXCPF0     001       CPU FACILITY BIT MAP BYTE 0

         BITS DEFINED FOR PFXCPF0 BY HCPPCCBK PCCCPF0

C03    PFXCPF1     001       CPU FACILITY BIT MAP BYTE 1

         BITS DEFINED FOR PFXCPF1 BY HCPPCCBK PCCCPF1

C04    PFXCPF2     001       CPU FACILITY BIT MAP BYTE 2

         BITS DEFINED FOR PFXCPF2 BY HCPPCCBK PCCCPF2

C05                2X        NOT-YET-USED FACILITY BYTES
C07    PFXCPF5     001       CPU FACILITY BIT MAP BYTE 5

         BITS DEFINED FOR PFXCPF5 BY HCPPCCBK PCCCPF5

C08                8X        NOT-YET-USED FACILITY BYTES
C10    PFXTTPNT    004       TRACE TABLE PAGES FOR THIS CPU
C14    PFXLFRAM    004       LAST TRANSLATED FRAME ADDRESS
                             THE NEXT TWO FIELDS MUST BE TOGETHER ON A DOUBLEWORD
                             BOUNDARY.
C18    PFXLPAGE    004       LAST TRANSLATED PAGE
C1C    PFXLPSTD    004       LAST TRANSLATED PRIMARY SEGMENT TABLE
                             DESIGNATION
C20    PFXPRGSV    036       FLIH SAVEARE FOR HCPPRG
C20    PFXPRGRC    004       REGISTER 12 ON ENTRY TO HCPPRG
C24    PFXPRGRD    004       REGISTER 13 ON ENTRY TO HCPPRG
C28    PFXPRGRE    004       REGISTER 14 ON ENTRY TO HCPPRG
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C2C   PFXPRGRF   004      REGISTER 15 ON ENTRY TO HCPPRG
C30   PFXPRGR0   004      REGISTER  0 ON ENTRY TO HCPPRG
C34   PFXPRGR1   004      REGISTER  1 ON ENTRY TO HCPPRG
C38   PFXPRGR2   004      REGISTER  2 ON ENTRY TO HCPPRG
C3C   PFXPRGR3   004      REGISTER  3 ON ENTRY TO HCPPRG
C40   PFXPRGR4   004      REGISTER  4 ON ENTRY TO HCPPRG
C44   PFXTRCSV   020      TRACE INSTRUCTION SAVEAREA
C44   PFXTRCR0   004      SAVE REG 0 ACROSS TRACE INST
C48   PFXTRCR1   004      SAVE REG 1 ACROSS TRACE INST
C4C   PFXTRCR2   004      SAVE REG 2 ACROSS TRACE INST
C50   PFXTRCR3   004      SAVE REG 3 ACROSS TRACE INST
C54   PFXTRCR4   004      SAVE REG 4 ACROSS TRACE INST
C58   PFXRNHST   040      RUN HISTORY AREA FOR HCPSTP
C58   PFXRNH0    008
C58   PFXRNH00   004
C5C   PFXRNH04   004
C60   PFXRNH1    008      ....
C68   PFXRNH2    008      ....
C68   PFXRNH20   004
C6C   PFXRNH24   004
C70   PFXRNH3    008      ....
C78   PFXRNH4    008      ....
C80   PFXRVF0    008
C80   PFXRVF00   004
C84   PFXRVF04   004
C88   PFXRVF1    008      ....
C90   PFXRVF2    008      ....
C90   PFXRVF20   004
C94   PFXRVF24   004
C98   PFXRVF3    008      ....
CA0   PFXRVF4    008      ....
CA8   PFXVFSRT   004      SMOOTHED TOTAL VECTOR TIME (IN
                          QUARTER SECONDS)
CAC   PFXSTRN    004      SMOOTHED TOTAL RUN TIME (IN
                          QUARTER SECONDS)
CB0   PFXVECUS   004      VMDBK ADDRESS OF CURRENT VECTOR
                          USER
CB4   PFXINDEX   004      INDEX INTO FULLWORD ARRAY (I.E. MULTIPLE
                          OF 4) BASED ON LOGICAL CPU ADDRESS
CB8   PFXPLSBK   004      PLSBK ADDRESS FOR THIS PROCESSOR
CBC   PFXEVTBK   004      TRACE SERVICES LOCAL STORAGE
CC0   PFXSAPSW   008      SOFT ABEND PSW FOR ASYNCHRONOUS DUMP

CC8   PFXFMPB    004      FRAME MANAGEMENT PROCESSOR BLOCK
CC8   PFXPGIN    004      COUNT OF FASTPATH PGINS
CCC   PFXCLEAR   004      COUNT OF FASTPATH PAGE CLEARS
CD0   PFXFTO     004      SYSTEM FRAME TABLE ORIGIN
                          ..REPEATED HERE FOR PERFORMANCE
CD4   PFXLAVAN   004      LOCAL AVAILABLE LIST ANCHOR

                    EQUATES

      0A    PFXLAVMX      NUMBER OF FRAMES REQUIRED TO
                          ..REPLENISH LOCAL LIST

CD8   PFXPROCL   004      PROCESSED LIST ANCHOR
                          THE LOCK PFXPLLK MUST BE HELD
                          WHEN REMOVING AND PROCESSING
                          FRMTES ON THE PROCESSED LIST.
CDC   PFXPLLK    004      PROCESSED LIST LOCK.  HOLD THIS LOCK
                          WHEN UPDATING THE PROCESSED LIST
                          ANCHORED AT PFXPROCL.  HOLD THIS LOCK
                          WHEN PROCESSING FRMTES ON THE PROCESSED
                          LIST.  WHEN THE LOCK IS FREE, ITS VALUE
                          IS ZERO.  WHEN THE LOCK IS HELD, ITS
                          VALUE IS THE ADDRESS OF THE CODE
                          OBTAINING THE LOCK WITH THE HIGH ORDER
                          BIT SET TO ONE.

                    EQUATES

      18    PFXFMPBL      LENGTH OF BLOCK
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CE0    PFXPRGTR    004       TRACE PAGE FULL ROUTINE
CE4    PFXPRGGB    004       RETURN ADDRESS FOR CP PRG INT
CE8    PFXPRGCP    004       REGISTER HANDLING FOR CP PRG INT
D04    PFXSVRD     004       TRACE SERVICES R13 SAVE
D08    PFXWTCR6    004       COPY OF HOST CR6 PRESERVED WHILE
                             ..IN WAIT STATE.  THIS FIELD IS
                             ..ONLY SIGNIFICANT WHEN THE
                             ..PFXWFCR6 FLAG BIT IS SET.
D0C    PFXWTFLG    001       FLAGS RELATED TO WAIT-STATE
                             ..PROCESSING.

        BITS DEFINED IN PFXWTFLG (AT HEX DISPLACEMENT: D0C)

        80     PFXWFCR6      WHEN SET, HOST CR6 IS PRESERVED
                             ..IN PFXWTCR6.

D0D                3X'00'    RESERVED FOR FUTURE IBM USE
D10    PFXWTWRK    040       WAIT-STATE PROCESSING WORK AREA
D38    PFXFSTPX    004       COUNT OF FAST PATH PROCESSING OF
                             ..PARTIAL EXECUTION INTERCEPTS
D3C    PFXCACPG    004       ADDRESS OF INTEMEDIATE MINIDISK CACHE
                             BUFFER (FILLED IN BY HCPMDC).
D40                12F'0'    RESERVED FOR FUTURE IBM USE
D70    PFXSVCC0    004       DYNAMIC CALL ENTRY POINT
D74    PFXSVCC1    004       DYNAMIC CALL ENTRY POINT
D78    PFXSVCC2    004       DYNAMIC CALL ENTRY POINT
D7C    PFXSVCC3    004       DYNAMIC CALL ENTRY POINT
D80    PFXSVCC4    004       DYNAMIC CALL ENTRY POINT
D84    PFXSVCC5    004       DYNAMIC CALL ENTRY POINT
D88    PFXSVCC6    004       DYNAMIC CALL ENTRY POINT
D8C    PFXSVCC7    004       DYNAMIC CALL ENTRY POINT
D90    PFXSVCC8    004       DYNAMIC CALL ENTRY POINT
D94    PFXSVCC9    004       DYNAMIC CALL ENTRY POINT
D98    PFXSVCCA    004       DYNAMIC CALL ENTRY POINT
D9C    PFXSVCCB    004       DYNAMIC CALL ENTRY POINT
DA0    PFXSVCCC    004       DYNAMIC CALL ENTRY POINT
DA4    PFXSVCCD    004       DYNAMIC CALL ENTRY POINT
DA8    PFXSVCCE    004       DYNAMIC CALL ENTRY POINT
DAC    PFXSVCCF    004       DYNAMIC CALL ENTRY POINT
DB0    PFXSVCCL    004       DYNAMIC CALL ENTRY POINT
DB4    PFXSVCCX    004       DYNAMIC CALL ENTRY POINT
DB8    PFXDSPCS    004       COUNT OF FULL SELECT PATHS
                             THROUGH THE DISPATCHER
DBC    PFXDSPCT    004       COUNT OF ENTRIES TO DISPATCHER
DC0    PFXDSWCT    004       COUNT OF ENTRIES TO USER WORK
                             SELECT
DC4    PFXSTKCR    004       COUNT OF TIME-SLICE END REORDERS
DC8    PFXSTKPQ    004       COUNT OF DISPATCH LIST ADDS
DCC    PFXPTRCT    004       COUNT OF FAST PATH PAGE
                             TRANSLATIONS
DD0    PFXCTID     004       COUNT OF TIMES THE INTERRUPT
                             QUEUE LOCK REQUEST IS DEFERRED
DD4    PFXCTIG     004       COUNT OF TIMES THE INTERRUPT
                             QUEUE LOCK REQUEST IS GRANTED
DD8    PFXCTVD     004       COUNT OF TIMES THE V DEV LOCK
                             REQUEST IS DEFERRED
DDC    PFXCTVG     004       COUNT OF TIEMS THE VDEV LOCK
                             REQUEST IS GRANTED
DE0    PFXRUNCI    004       COUNT OF SIE INTERCEPTIONS
DE4    PFXRUNCP    004       COUNT OF SIE INSTRUCTION
                             EXECUTIONS
DE8    PFXRUNCR    004       COUNT OF TIMES GUEST'S WORK
                             IS DISPATCHED
DEC    PFXRUNPF    004       COUNT OF HOST PAGE FAULTS FOR
                             GUEST PAGES
DF0    PFXRUNPR    004       COUNT OF HOST PAGE FAULTS ON
                             RCP PAGES
DF4    PFXFSTSG    004       COUNT OF FAST PATH SIMULATIONS
                             ..OF SIGP EXTERNAL CALL
                             ..INSTRUCTIONS.
DF8    PFXFSTXC    004       COUNT OF FAST PATH REFLECTIONS
                             ..OF GUEST EXTERNAL CALL
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                        ..INTERRUPTS.
DFC   PFXFST44   004     COUNT OF FAST PATH SIMULATIONS
                        ..OF DIAGNOSE X'44' INSTRUCTIONS.

         REDEFINITION - PATCH AREA

E00   PFXPINST   002     ROOM FOR FE PATCHED INSTRUCTIONS
F88   PFXPSAVE   004     PROVIDE NAME FOR FE REGISTER SAVE

         REDEFINITION - DEFAULT INSTRUCTION
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PFXABEND	004	B80	PFXB20	001	AEB	PFXCPYRT	040	990
PFXABENM	003	B80	PFXB24	001	AEF	PFXCRCB0	001	970
PFXABENN	001	B83	PFXB240	001	AF7	PFXCRCB1	001	971
PFXACTTS	008	BB0	PFXB255	001	AFB	PFXCRCB2	001	972
PFXADCON	008	980	PFXB3	001	AC3	PFXCRCB3	001	973
PFXAVAIL	001	000	PFXB4	001	AC7	PFXCRDB0	001	974
PFXAZM	001	B74	PFXB5	001	ACB	PFXCRDB1	001	975
PFXAZMWD	004	B74	PFXB6	001	ACF	PFXCRDB2	001	976
PFXBALBP	004	704	PFXB60	001	AF3	PFXCRDB3	001	977
PFXBALCL	001	711	PFXB7	001	AD3	PFXCREB0	001	978
PFXBALFP	004	700	PFXB8	001	AD7	PFXCREB1	001	979
PFXBALRA	004	740	PFXB9	001	ADB	PFXCREB2	001	97A
PFXBALRB	004	744	PFXCACPG	004	D3C	PFXCREB3	001	97B
PFXBALRC	004	748	PFXCC2B1	007	011	PFXCRFB0	001	97C
PFXBALRD	004	74C	PFXCFMRD	004	9B8	PFXCRFB1	001	97D
PFXBALRE	004	750	PFXCHR0	001	AF7	PFXCRFB2	001	97E
PFXBALRF	004	754	PFXCLEAR	004	CCC	PFXCRFB3	001	97F
PFXBALRG	064	718	PFXCNTRL	008	B40	PFXCRLG	004	1C0
PFXBALR0	004	718	PFXCONST	008	A80	PFXCRLGL	001	040
PFXBALR1	004	71C	PFXCPCR	064	940	PFXCR0B0	001	940
PFXBALR2	004	720	PFXCPCRA	004	968	PFXCR0B1	001	941
PFXBALR3	004	724	PFXCPCRB	004	96C	PFXCR0B2	001	942
PFXBALR4	004	728	PFXCPCRC	004	970	PFXCR0B3	001	943
PFXBALR5	004	72C	PFXCPCRD	004	974	PFXCR1B0	001	944
PFXBALR6	004	730	PFXCPCRE	004	978	PFXCR1B1	001	945
PFXBALR7	004	734	PFXCPCRF	004	97C	PFXCR1B2	001	946
PFXBALR8	004	738	PFXCPCR0	004	940	PFXCR1B3	001	947
PFXBALR9	004	73C	PFXCPCR1	004	944	PFXCR2B0	001	948
PFXBALSC	001	710	PFXCPCR2	004	948	PFXCR2B1	001	949
PFXBALSV	128	700	PFXCPCR3	004	94C	PFXCR2B2	001	94A
PFXBALWK	040	758	PFXCPCR4	004	950	PFXCR2B3	001	94B
PFXBALW0	004	758	PFXCPCR5	004	954	PFXCR3B0	001	94C
PFXBALW1	004	75C	PFXCPCR6	004	958	PFXCR3B1	001	94D
PFXBALW2	004	760	PFXCPCR7	004	95C	PFXCR3B2	001	94E
PFXBALW3	004	764	PFXCPCR8	004	960	PFXCR3B3	001	94F
PFXBALW4	004	768	PFXCPCR9	004	964	PFXCR4B0	001	950
PFXBALW5	004	76C	PFXCPDES	016	C00	PFXCR4B1	001	951
PFXBALW6	004	770	PFXCPFAC	014	C02	PFXCR4B2	001	952
PFXBALW7	004	774	PFXCPF0	001	C02	PFXCR4B3	001	953
PFXBALW8	004	778	PFXCPF1	001	C03	PFXCR5B0	001	954
PFXBALW9	004	77C	PFXCPF2	001	C04	PFXCR5B1	001	955
PFXBLANK	008	AA8	PFXCPF5	001	C07	PFXCR5B2	001	956
PFXB0	001	AB8	PFXCPIOI	001	080	PFXCR5B3	001	957
PFXB1	001	ABB	PFXCPRQA	004	8F0	PFXCR6B0	001	958
PFXB10	001	ADF	PFXCPRQP	004	8F4	PFXCR6B1	001	959
PFXB15	001	AE3	PFXCPUAD	002	B84	PFXCR6B2	001	95A
PFXB16	001	AE7	PFXCPUID	008	B48	PFXCR6B3	001	95B
PFXB2	001	ABF	PFXCPULG	008	080	PFXCR7B0	001	95C

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PFXCR7B1	001	95D	PFXFREBP	004	804	PFXH2048	002	B0A
PFXCR7B2	001	95E	PFXFRECL	001	811	PFXH24	002	AEE
PFXCR7B3	001	95F	PFXFREE	004	9D0	PFXH240	002	AF6
PFXCR8B0	001	960	PFXFREFP	004	800	PFXH255	002	AFA
PFXCR8B1	001	961	PFXFRERA	004	840	PFXH256	002	AFE
PFXCR8B2	001	962	PFXFRERB	004	844	PFXH3	002	AC2
PFXCR8B3	001	963	PFXFRERC	004	848	PFXH4	002	AC6
PFXCR9B0	001	964	PFXFRERD	004	84C	PFXH4095	002	B0E
PFXCR9B1	001	965	PFXFRERE	004	850	PFXH4096	002	B12
PFXCR9B2	001	966	PFXFRERF	004	854	PFXH5	002	ACA
PFXCR9B3	001	967	PFXFRERG	064	818	PFXH512	002	B02
PFXCSTOP	001	037	PFXFRER0	004	818	PFXH6	002	ACE
PFXCTID	004	DD0	PFXFRER1	004	81C	PFXH60	002	AF2
PFXCTIG	004	DD4	PFXFRER2	004	820	PFXH7	002	AD2
PFXCTVD	004	DD8	PFXFRER3	004	824	PFXH8	002	AD6
PFXCTVG	004	DDC	PFXFRER4	004	828	PFXH9	002	ADA
PFXCVTBH	004	9BC	PFXFRER5	004	82C	PFXICCW1	008	008
PFXCVTDA	008	900	PFXFRER6	004	830	PFXICCW2	008	010
PFXCVTDT	004	9C0	PFXFRER7	004	834	PFXIDMDL	002	B4C
PFXCVTOD	004	9C4	PFXFRER8	004	838	PFXIDSER	003	B49
PFXDCBY1	001	0F5	PFXFRER9	004	83C	PFXIDVER	001	B48
PFXDETUP	001	BDB	PFXFRESC	001	810	PFXILPOI	004	004
PFXDNCZ	001	000	PFXFRESV	128	800	PFXILPO0	001	000
PFXDNEMS	001	0FF	PFXFRET	004	9D4	PFXILPO1	001	001
PFXDNRES	001	0EE	PFXFREWK	040	858	PFXILPO2	001	002
PFXDNRZ	001	000	PFXFREW0	004	858	PFXILPO3	001	003
PFXDNU	001	0DD	PFXFREW1	004	85C	PFXILPO4	001	004
PFXDOWN	001	0FF	PFXFREW2	004	860	PFXILPSW	008	000
PFXDOWNC	001	BD9	PFXFREW3	004	864	PFXINDEX	004	CB4
PFXDOWNR	001	BD8	PFXFREW4	004	868	PFXINISC	001	0C0
PFXDRFPT	001	01D	PFXFREW5	004	86C	PFXINPRM	004	0BC
PFXDSPCH	004	9C8	PFXFREW6	004	870	PFXINST1	004	A64
PFXDSPCS	004	DB8	PFXFREW7	004	874	PFXINST2	004	A68
PFXDSPCT	004	DBC	PFXFREW8	004	878	PFXINST3	004	A6C
PFXDSPRI	008	B58	PFXFREW9	004	87C	PFXINST4	004	A70
PFXDSPWK	004	B7C	PFXFSTPX	004	D38	PFXINTID	004	0C0
PFXDSWCT	004	DC0	PFXFSTSG	004	DF4	PFXIOCL0	001	080
PFXEMSAN	004	BD4	PFXFSTXC	004	DF8	PFXIOCL1	001	040
PFXEMSWK	001	020	PFXFST44	004	DFC	PFXIOCL2	001	020
PFXENDOP	004	A28	PFXFTBL	004	A1C	PFXIOCL3	001	010
PFXERMSG	004	9CC	PFXFTO	004	CD0	PFXIOCL4	001	008
PFXEVTBK	004	CBC	PFXFXLEN	001	010	PFXIOCL5	001	004
PFXEXTCD	001	087	PFXFXLOG	016	100	PFXIOCL6	001	002
PFXEXTCF	004	084	PFXGPRLG	004	180	PFXIOCL7	001	001
PFXEXTCL	001	086	PFXGSVC0	004	9D8	PFXIOINT	002	0B8
PFXEXTCP	002	084	PFXGSVC1	004	9DC	PFXIONP	008	078
PFXEXTDB	004	080	PFXGSVC2	004	9E0	PFXIOOP	008	038
PFXEXTIN	002	086	PFXGSVC3	004	9E4	PFXIOPNI	004	07C
PFXEXTNI	004	05C	PFXHABEN	001	008	PFXIOPN0	001	078
PFXEXTNP	008	058	PFXHALF	004	B14	PFXIOPN1	001	079
PFXEXTN0	001	058	PFXHDLAY	001	040	PFXIOPN2	001	07A
PFXEXTN1	001	059	PFXHINIT	001	040	PFXIOPN3	001	07B
PFXEXTN2	001	05A	PFXHLFPG	004	B20	PFXIOPN4	001	07C
PFXEXTN3	001	05B	PFXHRUN	001	040	PFXIOPOI	004	03C
PFXEXTN4	001	05C	PFXHRUNX	001	002	PFXIOPO0	001	038
PFXEXTOI	004	01C	PFXHSFLG	001	B87	PFXIOPO1	001	039
PFXEXTOP	008	018	PFXHSIE	001	004	PFXIOPO2	001	03A
PFXEXTO0	001	018	PFXHSTAT	001	B78	PFXIOPO3	001	03B
PFXEXTO1	001	019	PFXHSYS	001	020	PFXIOPO4	001	03C
PFXEXTO2	001	01A	PFXHUSER	001	010	PFXIORET	004	B64
PFXEXTO3	001	01B	PFXHWAIT	001	080	PFXIORNM	002	0BA
PFXEXTO4	001	01C	PFXH0	002	AB8	PFXIOSID	004	0B8
PFXFEIBM	016	980	PFXH1	002	ABA	PFXIOSRQ	004	9EC
PFXFFS	008	AB0	PFXH10	002	ADE	PFXIRPSV	016	880
PFXFLAGS	004	B78	PFXH15	002	AE2	PFXIRP12	004	880
PFXFMPB	004	CC8	PFXH16	002	AE6	PFXIRP13	004	884
PFXFMPBL	001	018	PFXH2	002	ABE	PFXIRP14	004	888
PFXFPIOI	001	040	PFXH20	002	AEA	PFXIRP15	004	88C
PFXFPRLG	008	160	PFXH2047	002	B06	PFXISCPT	001	015

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PFXLAPND	001	200	PFXPGNUM	004	B1C	PFXPTRR7	004	7B4
PFXLAVAN	004	CD4	PFXPINST	002	E00	PFXPTRR8	004	7B8
PFXLAVMX	001	00A	PFXPLDV	004	B44	PFXPTRR9	004	7BC
PFXLCPUA	004	BC8	PFXPLLK	004	CDC	PFXPTRSC	001	790
PFXLFRAM	004	C14	PFXPLSBK	004	CB8	PFXPTRSV	128	780
PFXLGOFF	001	042	PFXPRBTM	008	B98	PFXPTRWK	040	7D8
PFXLNKSV	016	890	PFXPREMF	001	000	PFXPTRW0	004	7D8
PFXLNK12	004	890	PFXPREMT	001	B43	PFXPTRW1	004	7DC
PFXLNK13	004	894	PFXPRERQ	001	0FF	PFXPTRW2	004	7E0
PFXLNK14	004	898	PFXPRESP	001	000	PFXPTRW3	004	7E4
PFXLNK15	004	89C	PFXPRFIX	004	A48	PFXPTRW4	004	7E8
PFXLPAGE	004	C18	PFXPRGCF	004	08C	PFXPTRW5	004	7EC
PFXLPSTD	004	C1C	PFXPRGCP	004	CE8	PFXPTRW6	004	7F0
PFXLRC	004	8E8	PFXPRGGB	004	CE4	PFXPTRW7	004	7F4
PFXLRQ	004	8EC	PFXPRGIC	001	08F	PFXPTRW8	004	7F8
PFXLUSER	004	A44	PFXPRGIL	002	08C	PFXPTRW9	004	7FC
PFXMACHN	008	000	PFXPRGIN	002	08E	PFXQCNWT	004	A00
PFXMALFM	004	BCC	PFXPRGNI	004	06C	PFXRCVFG	001	B7A
PFXMALFP	001	040	PFXPRGNP	008	068	PFXRCVWK	001	B7C
PFXMALFW	001	080	PFXPRGN0	001	068	PFXRMSZ	004	B6C
PFXMASTR	001	014	PFXPRGN1	001	069	PFXRNHST	040	C58
PFXMCFSA	004	0F8	PFXPRGN2	001	06A	PFXRNH0	008	C58
PFXMCHA	004	A5C	PFXPRGN3	001	06B	PFXRNH00	004	C58
PFXMCHDC	004	0F4	PFXPRGN4	001	06C	PFXRNH04	004	C5C
PFXMCHIN	008	0E8	PFXPRGOI	004	02C	PFXRNH1	008	C60
PFXMCHI0	001	0E8	PFXPRGOP	008	028	PFXRNH2	008	C68
PFXMCHI1	001	0E9	PFXPRGO0	001	028	PFXRNH20	004	C68
PFXMCHI2	001	0EA	PFXPRGO1	001	029	PFXRNH24	004	C6C
PFXMCHI3	001	0EB	PFXPRGO2	001	02A	PFXRNH3	008	C70
PFXMCHI4	001	0EC	PFXPRGO3	001	02B	PFXRNH4	008	C78
PFXMCHI5	001	0ED	PFXPRGO4	001	02C	PFXRNPSW	008	B50
PFXMCHI6	002	0EE	PFXPRGRC	004	C20	PFXRNUSR	004	B68
PFXMCHNI	004	074	PFXPRGRD	004	C24	PFXRQUIS	001	016
PFXMCHNP	008	070	PFXPRGRE	004	C28	PFXRSTOP	008	008
PFXMCHN0	001	070	PFXPRGRF	004	C2C	PFXRUNCI	004	DE0
PFXMCHN1	001	071	PFXPRGR0	004	C30	PFXRUNCP	004	DE4
PFXMCHN2	001	072	PFXPRGR1	004	C34	PFXRUNCR	004	DE8
PFXMCHN3	001	073	PFXPRGR2	004	C38	PFXRUNPF	004	DEC
PFXMCHN4	001	074	PFXPRGR3	004	C3C	PFXRUNPR	004	DF0
PFXMCHOI	004	034	PFXPRGR4	004	C40	PFXRUNU	004	A24
PFXMCHOP	008	030	PFXPRGSV	036	C20	PFXRUNXT	004	A04
PFXMCHO0	001	030	PFXPRGTR	004	CE0	PFXRVF0	008	C80
PFXMCHO1	001	031	PFXPROCL	004	CD8	PFXRVF00	004	C80
PFXMCHO2	001	032	PFXPRUNR	001	0CC	PFXRVF04	004	C84
PFXMCHO3	001	033	PFXPSAVE	004	F88	PFXRVF1	008	C88
PFXMCHO4	001	034	PFXPTEMK	004	B1C	PFXRVF2	008	C90
PFXMCHRD	004	0FC	PFXPTFLK	004	9F4	PFXRVF20	004	C90
PFXMCHWK	001	010	PFXPTFUL	004	9F8	PFXRVF24	004	C94
PFXMCKCP	008	0E0	PFXPTLBT	008	908	PFXRVF3	008	C98
PFXMCPUT	008	0D8	PFXPTRAB	004	9FC	PFXRVF4	008	CA0
PFXMCVBK	004	A60	PFXPTRAN	004	9F0	PFXSAPSW	008	CC0
PFXMM0	004	A30	PFXPTRBP	004	784	PFXSAVES	008	600
PFXMM5	004	A34	PFXPTRCL	001	791	PFXSCCFD	004	A14
PFXMNCLS	002	094	PFXPTRCT	004	DCC	PFXSCITS	008	BB8
PFXMNCOD	004	09C	PFXPTRFP	004	780	PFXSFIPL	001	020
PFXMPCNT	001	BE0	PFXPTRRA	004	7C0	PFXSGPCP	002	016
PFXMPFLG	001	BDF	PFXPTRRB	004	7C4	PFXSGPGD	001	0FF
PFXMPSET	001	080	PFXPTRRC	004	7C8	PFXSGPND	001	010
PFXNEWCP	001	082	PFXPTRRD	004	7CC	PFXSGPNG	001	0EE
PFXNOADD	004	B2C	PFXPTRRE	004	7D0	PFXSHRLK	001	080
PFXNOCPU	001	06E	PFXPTRRF	004	7D4	PFXSPARE	008	200
PFXNOVRY	001	000	PFXPTRRG	064	798	PFXSPIEA	004	A50
PFXNXTPF	004	A4C	PFXPTRR0	004	798	PFXSPIEM	004	A54
PFXPAGCP	004	A3C	PFXPTRR1	004	79C	PFXSPINC	004	BD0
PFXPATCH	008	E00	PFXPTRR2	004	7A0	PFXSPINT	008	BC0
PFXPERAD	004	098	PFXPTRR3	004	7A4	PFXSSABK	004	8F8
PFXPERCD	002	096	PFXPTRR4	004	7A8	PFXSTATE	001	BDC
PFXPG	001	000	PFXPTRR5	004	7AC	PFXSTDBK	004	A58
PFXPGIN	004	CC8	PFXPTRR6	004	7B0	PFXSTEMK	004	B24

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PFXSTKCP	004	A08	PFXTMPRF	004	654	PFXWRKRA	004	6C0
PFXSTKCR	004	DC4	PFXTMPRG	064	618	PFXWRKRB	004	6C4
PFXSTKGT	004	A0C	PFXTMPR0	004	618	PFXWRKRC	004	6C8
PFXSTKIO	004	A10	PFXTMPR1	004	61C	PFXWRKRD	004	6CC
PFXSTKPQ	004	DC8	PFXTMPR2	004	620	PFXWRKRE	004	6D0
PFXSTMDL	004	10C	PFXTMPR3	004	624	PFXWRKRF	004	6D4
PFXSTOMK	004	B1C	PFXTMPR4	004	628	PFXWRKRG	064	698
PFXSTPFX	004	108	PFXTMPR5	004	62C	PFXWRKR0	004	698
PFXSTPSW	008	100	PFXTMPR6	004	630	PFXWRKR1	004	69C
PFXSTRN	004	CAC	PFXTMPR7	004	634	PFXWRKR2	004	6A0
PFXSVC	004	8E0	PFXTMPR8	004	638	PFXWRKR3	004	6A4
PFXSVCCA	004	D98	PFXTMPR9	004	63C	PFXWRKR4	004	6A8
PFXSVCCB	004	D9C	PFXTMPSC	001	610	PFXWRKR5	004	6AC
PFXSVCCC	004	DA0	PFXTMPSV	128	600	PFXWRKR6	004	6B0
PFXSVCCD	004	DA4	PFXTMPWK	040	658	PFXWRKR7	004	6B4
PFXSVCCE	004	DA8	PFXTMPW0	004	658	PFXWRKR8	004	6B8
PFXSVCCF	004	DAC	PFXTMPW1	004	65C	PFXWRKR9	004	6BC
PFXSVCCL	004	DB0	PFXTMPW2	004	660	PFXWRKSC	001	690
PFXSVCCX	004	DB4	PFXTMPW3	004	664	PFXWRKSV	128	680
PFXSVCC0	004	D70	PFXTMPW4	004	668	PFXWRKWK	040	6D8
PFXSVCC1	004	D74	PFXTMPW5	004	66C	PFXWRKW0	004	6D8
PFXSVCC2	004	D78	PFXTMPW6	004	670	PFXWRKW1	004	6DC
PFXSVCC3	004	D7C	PFXTMPW7	004	674	PFXWRKW2	004	6E0
PFXSVCC4	004	D80	PFXTMPW8	004	678	PFXWRKW3	004	6E4
PFXSVCC5	004	D84	PFXTMPW9	004	67C	PFXWRKW4	004	6E8
PFXSVCC6	004	D88	PFXTMRUN	008	910	PFXWRKW5	004	6EC
PFXSVCC7	004	D8C	PFXTMSYS	008	BA0	PFXWRKW6	004	6F0
PFXSVCC8	004	D90	PFXTMUDS	008	928	PFXWRKW7	004	6F4
PFXSVCC9	004	D94	PFXTMURN	008	918	PFXWRKW8	004	6F8
PFXSVCGS	004	A38	PFXTNDLK	001	B79	PFXWRKW9	004	6FC
PFXSVCIC	001	08B	PFXTODH0	004	900	PFXWTCR6	004	D08
PFXSVCIF	004	088	PFXTODST	001	BDD	PFXWTFLG	001	D0C
PFXSVCIL	002	088	PFXTOTWT	008	B90	PFXWTWRK	040	D10
PFXSVCLC	004	8E4	PFXTRCR0	004	C44	PFXZEROS	008	A80
PFXSVCNI	004	064	PFXTRCR1	004	C48	PFXZNMSK	001	B72
PFXSVCNP	008	060	PFXTRCR2	004	C4C	PFXZNNUM	002	B70
PFXSVCN0	001	060	PFXTRCR3	004	C50	PFX0	004	A80
PFXSVCN1	001	061	PFXTRCR4	004	C54	PFX00FFS	004	B18
PFXSVCN2	001	062	PFXTRCSV	020	C44	PFX1	004	AB8
PFXSVCN3	001	063	PFXTRMCD	004	B80	PFX10	004	ADC
PFXSVCN4	001	064	PFXTRPON	001	002	PFX15	004	AE0
PFXSVCOI	004	024	PFXTRXAD	004	090	PFX16	004	AE4
PFXSVCOP	008	020	PFXTTATB	004	9E8	PFX2	004	ABC
PFXSVCO0	001	020	PFXTTPNT	004	C10	PFX20	004	AE8
PFXSVCO1	001	021	PFXTYDED	001	01E	PFX2047	004	B04
PFXSVCO2	001	022	PFXTYOFL	001	000	PFX2048	004	B08
PFXSVCO3	001	023	PFXTYPE	001	BDA	PFX24	004	AEC
PFXSVCO4	001	024	PFXTYPS	001	BDE	PFX240	004	AF4
PFXSVCRS	004	A40	PFXTYSLV	001	028	PFX255	004	AF8
PFXSVCSV	064	8A0	PFXUDED	004	B60	PFX256	004	AFC
PFXSVCSW	004	A2C	PFXUNKNO	001	0EE	PFX3	004	AC0
PFXSVRD	004	D04	PFXUTIME	008	BA8	PFX4	004	AC4
PFXSVR13	004	8FC	PFXVECUS	004	CB0	PFX4095	004	B0C
PFXSYS	004	A18	PFXVFNI	001	000	PFX4096	004	B10
PFXSYSVM	004	A20	PFXVFOFF	004	BE4	PFX5	004	AC8
PFXTESTP	001	0FF	PFXVFOFL	001	080	PFX512	004	B00
PFXTIMES	008	900	PFXVFOP	001	020	PFX6	004	ACC
PFXTINIT	001	004	PFXVFSBY	001	040	PFX60	004	AF0
PFXTMDSP	008	920	PFXVFSRT	004	CA8	PFX7	004	AD0
PFXTMMAX	008	B88	PFXVFST	001	B7B	PFX7FFFS	004	B88
PFXTMOUT	001	011	PFXVRIOI	001	040	PFX8	004	AD4
PFXTMPBP	004	604	PFXVRREP	001	008	PFX8000S	004	B28
PFXTMPCL	001	611	PFXVRYOF	001	0FF	PFX9	004	AD8
PFXTMPFP	004	600	PFXVTDSP	008	930			
PFXTMPRA	004	640	PFXVWAIT	001	02C			
PFXTMPRB	004	644	PFXWFCR6	001	080			
PFXTMPRC	004	648	PFXWRKBP	004	684			
PFXTMPRD	004	64C	PFXWRKCL	001	691			
PFXTMPRE	004	650	PFXWRKFP	004	680			

HCPPGMBK— PAGE MANAGEMENT BLOCK

DSECT NAME: PGMBK

DESCRIPTIVE NAME: PAGE MANAGEMENT BLOCK

FUNCTION: THE PAGE MANAGEMENT BLOCK DESCRIBES 1 MEGABYTE OF VIRTUAL STORAGE. IT CONTAINS THE PAGE TABLE, THE PAGE STATUS TABLE, THE AUXILIARY STORAGE ADDRESS TABLE, AND THE RCP BACKUP INFORMATION, FOR THE MEGABYTE. THE PGMBK IS A 4K ALIGNED 4K BLOCK.

LOCATED BY:

SEGENTRY	FIELD OF HCPSEGTB (BITS 1 THROUGH 19) THE PAGE TABLE POINTER IN SEGENTRY IS ARCHITECTED TO BE BITS 1 THROUGH 25 BUT VM/XA MIGRATION AID USES 4K ALIGNED 4K BLOCKS. SEE HCPSEGTE.
FRMPTE	THE FRAME TABLE ENTRY POINTS TO A PAGE TABLE ENTRY WITHIN THE PAGE TABLE. THE PGMBK ADDRESS CAN BE FOUND BY ZEROING THE DISPLACEMENT OF THE PAGE TABLE ENTRY'S ADDRESS SINCE THE PAGE TABLE IS LOCATED AT THE BEGINNING OF THE PGMBK.

CREATED BY:

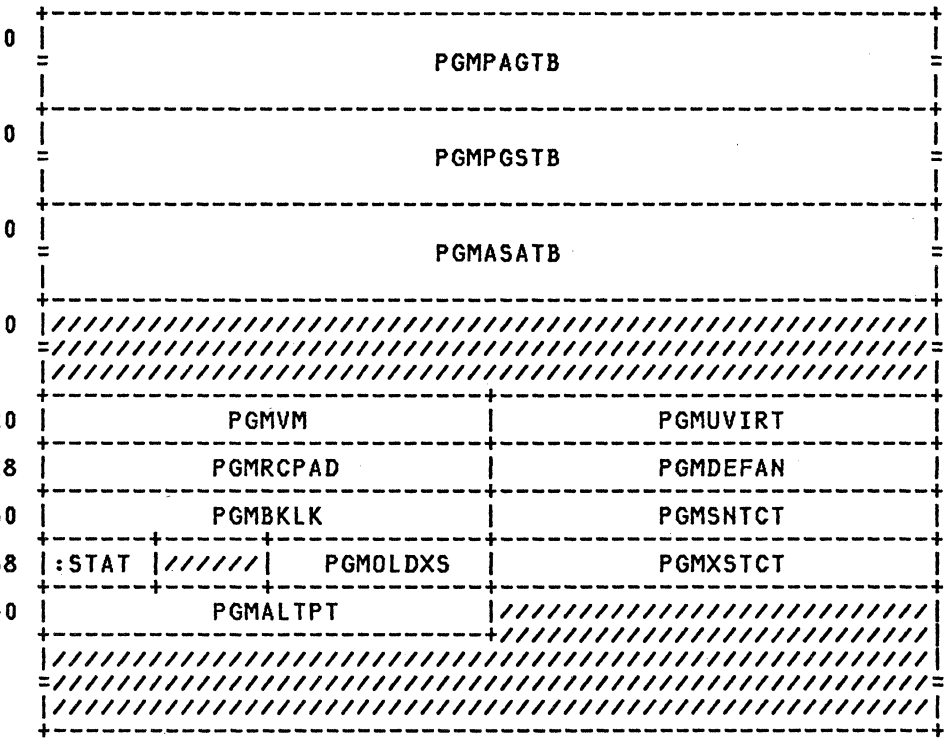
HCPBPBCU
HCPBPBIE
HCPBPBIM
HCPBPBSL

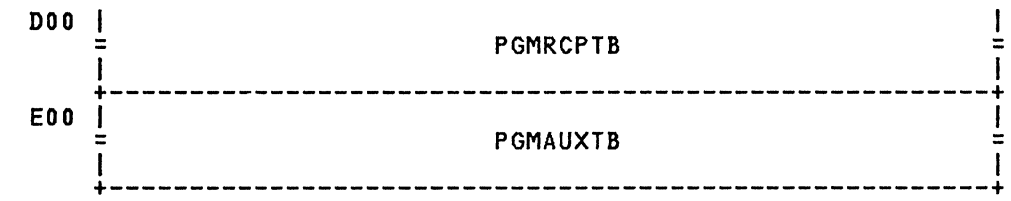
DELETED BY:

HCPRCIRL
HCPRPBPA
HCPRPBPS
HCPRPBRM
HCPRPBSL

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

PGMBK - PAGE MANAGEMENT BLOCK





disp	name	length	description
000	PGMPAGTB	004	PAGE TABLE-CONTAINS 256 4 BYTE ENTRIES. EACH ENTRY IS USED TO DESCRIBE 4K OF VIRTUAL STORAGE. THE COMPLETE 256-ENTRY TABLE WILL DESCRIBE 1 MEGABYTE OF GUEST ABSOLUTE STORAGE, OR 1 MEGABYTE OF SYSTEM STORAGE AREA. THE ARCHITECTED DEFINITION OF ONE ENTRY IS CONTAINED IN THE HCPPAGTE COPY FILE.
			EQUATES
	04	PGMPTELN	LENGTH OF A PAGE TABLE ENTRY IN THE PGMPAGTB (IN BYTES)
	04	PGMPTBP1	OFFSET OF THE 2ND ENTRY IN THE PAGTB, USED FOR AN MVC TO COPY THE FIRST ENTRY THRU THE REST OF THE FIRST QUARTER OF THE PAGTB
	00	PGMPTBP2	THE SECOND QUARTER OF THE PAGTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMPTBP3	THE THIRD QUARTER OF THE PAGTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMPTBP4	THE FOURTH QUARTER OF THE PAGTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMOFPAG	OFFSET OF PAGTB IN PGMBK
400	PGMPGSTB	004	PAGE STATUS TABLE. 256 ENTRIES, 4 BYTES IN EACH ENTRY. EACH ENTRY DESCRIBES THE STATUS OF THE VIRTUAL STORAGE. THE DEFINITION OF ONE ENTRY IS CONTAINED IN THE HCPPGSTE COPY FILE.
			EQUATES
	04	PGMPGSLN	LENGTH OF A PAGE STATUS TABLE ENTRY IN THE PGMPAGTB (IN BYTES)
	04	PGMPSTP1	OFFSET OF THE 2ND ENTRY IN THE PGSTB, USED FOR AN MVC TO COPY THE FIRST ENTRY THRU THE REST OF THE FIRST QUARTER OF THE PGSTB
	00	PGMPSTP2	THE SECOND QUARTER OF THE PGSTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMPSTP3	THE THIRD QUARTER OF THE PAGTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMPSTP4	THE FOURTH QUARTER OF THE PGSTB STARTS AT THIS OFFSET INTO THE PGMBK
	00	PGMOFPGS	OFFSET OF PGSTB IN PGMBK

800	PGMASATB	004	AUXILIARY STORAGE ADDRESS TABLE. 256 ENTRIES, 4 BYTES IN EACH ENTRY. EACH ENTRY IS THE LOCATION ON AUXILIARY STORAGE WHERE THE VIRTUAL STORAGE IS BACKED UP. THE DEFINITION OF ONE ENTRY IS CONTAINED IN THE HCPASATE COPY FILE.

EQUATES

00	PGMOFASA	OFFSET OF ASATB IN PGMBK

C00		4D	RESERVED FOR FUTURE IBM USE
C20	PGMVM	004	VMDBK ADDRESS OF PGMBK OWNER (OR SNTBK ADDRESS FOR A SHARED SEGMENT OR SYSTEM)
C24	PGMUVIRT	004	VIRTUAL ADDRESS OF STORAGE DESCRIBED BY THIS BLOCK
C28	PGMRCPAD	004	ADDRESS OF THE RCP AREA. THIS FIELD WILL CONTAIN ZEROS IF THE RCP DATA RESIDES IN THE PGSTE. IF NOT, THIS FIELD WILL CONTAIN THE ADDRESS OF THE RCP DATA WITHIN THE RCP PAGE IF THE PAGE IS RESIDENT, OR THE ADDRESS OF PGMRCPTB IF THE DATA HAS BEEN BACKED UP
C2C	PGMDEFAN	004	DEFERRED PAGE TRANSLATIONS QUEUE ANCHOR (POINTS TO CPEBK OR 0)
C30	PGMBKLK	004	PGMBK LOCK. THIS LOCK IS HELD WHEN PAGE SERIALIZATION IS OBTAINED AND RELEASED. IT ALSO GOVERNS THE PGMBK PAGE DEFER QUEUE BASED AT PGMDEFAN. IT CONTAINS 0 WHEN THE LOCK IS AVAILABLE, OR THE ADDRESS OF THE CS LOOP THAT OBTAINED AND CURRENTLY HOLDS THE LOCK.
C34	PGMSNTCT	004	COUNT OF USERS SHARING THIS MEGABYTE
C38	PGMSTAT	001	STATUS INDICATORS

BITS DEFINED IN PGMSTAT (AT HEX DISPLACEMENT: C38)

80	PGMSVSEG	PGMBK REPRESENTS STORAGE FOR A SAVED SEGMENT

C39		X	RESERVED FOR FUTURE IBM USE
C3A	PGMOLDXS	002	AGE OF OLDEST XSTORE BLK
C3C	PGMXSTCT	004	COUNT OF XSTORE PTE'S
C40	PGMALTPT	004	POINTER TO THE AN ALTERNATIVE PAGE TABLE THAT MAPS THIS PAGE
C44		47F	RESERVED FOR FUTURE IBM USE
D00	PGMRCPTB	001	RCP BACK-UP AREA, ONE BYTE FOR EACH 4K PAGE. THIS AREA IS USED TO CONTAIN RCP DATA WHEN THE ACTUAL RCP PAGE IS NOT RESIDENT. AN ENTRY IS DESCRIBED BY THE HCPRCPTE COPY FILE. THE DATA IN THIS AREA IS FOR BACKUP PURPOSES ONLY. IT IS SERIALIZED VIA THE VMDRCPLK SPIN LOCK.

EQUATES

00	PGMLNRCP	LENGTH OF RCP BACKUP TABLE
00	PGMOFRCP	OFFSET OF RCPTB IN PGMBK

E00	PGMAUXTB	002	AUXILIARY TABLE. CONTAINS 256 HW TIME STAMP ENTRIES THAT

CORRESPOND TO THE TIME THE
PAGE WAS MOVED TO XSTORE.

EQUATES

00	PGMBKLEN	SIZE OF PGM BLOCK IN BYTES
00	PGMBKSIZ	SIZE OF PGM BLOCK IN DOUBLEWORDS
		THE FOLLOWING EQUATES ENSURE THAT THE LENGTH OF A PGMBK IS EXACTLY 4096 BYTES (ONE 4K PAGE).
FF	PGMLCHK1	LENGTH CHECK 1
FF	PGMLCHK2	LENGTH CHECK 2
		(GIVES ASSEMBLY ERROR IF NOT A FULL-PAGE LENGTH)

CROSS REFERENCE

Name	Len	Val/Disp
PGMALTPT	004	C40
PGMASATB	004	800
PGMAUXTB	002	E00
PGMBK	001	000
PGMBKLEN	001	000
PGMBKLK	004	C30
PGMBKSIZ	001	200
PGMDEFAN	004	C2C
PGMLCHK1	001	FFF
PGMLCHK2	001	FFF
PGMLNRCP	001	100
PGMOFASA	004	800
PGMOFPAG	004	000
PGMOFPGS	004	400
PGMOFRCP	001	D00
PGMOLDXS	002	C3A
PGMPAGTB	004	000
PGMPGSLN	001	004
PGMPGSTB	004	400
PGMPSTP1	004	404
PGMPSTP2	004	500
PGMPSTP3	004	600
PGMPSTP4	004	700
PGMPTBP1	004	004
PGMPTBP2	004	100
PGMPTBP3	004	200
PGMPTBP4	004	300
PGMPTELN	001	004
PGMRCPAD	004	C28
PGMRCPTB	001	D00
PGMSNTCT	004	C34
PGMSTAT	001	C38
PGMSVSEG	001	080
PGMUVIRT	004	C24
PGMVM	004	C20
PGMXSTCT	004	C3C

HCPPGSTE— PAGE STATUS TABLE ENTRY

DSECT NAME: PGSTE

DESCRIPTIVE NAME: PAGE STATUS TABLE ENTRY

FUNCTION: THE PGSTE DESCRIBES VARIOUS TYPES OF STATUS OF ONE PAGE OF VIRTUAL STORAGE.

LOCATED BY:

PGMPGSTB FIELD OF HCPPGMBK + (PAGE OFFSET
VPGPGSTE IN A VPGBK USING A PAGTE ADDRESS
A PAGE STATUS TABLE RESIDES IN A
PAGE MANAGEMENT BLOCK ASSOCIATED WITH A MEGABYTE
OF VIRTUAL STORAGE AND IS POINTED TO BY PGMPGSTB.
THERE ARE 256 CONTIGUOUS PAGE STATUS TABLE
ENTRIES (PGSTE'S) CONTAINED IN THE PGMPGSTB.
ANY SPECIFIC PGS TABLE ENTRY CAN BE OBTAINED BY
EXTRACTING THE PAGE NUMBER (BITS 12-19) FROM A
VIRTUAL ADDRESS MULTIPLYING THE PAGE NUMBER TIMES 4
AND ADDING THE OFFSET OBTAINED TO PGMPGSTB.
ALSO, USING THE ADDRESS OF A PAGTE AS THE ADDRESS
OF A VPGBK THE CORRESPONDING PGSTE CAN BE FOUND
BY ADDRESSING FIELD VPGPGSTE IN THE VPGBK.

CREATED BY:

HCPBPBCU
HCPBPBIE
HCPBPBIM
HCPBPBSL
A PAGE STATUS TABLE IS IMBEDDED IN A PAGE
MANAGEMENT BLOCK AND CONSEQUENTLY SPACE
IS CREATED FOR IT WHEN THE PGMBK IS CREATED.

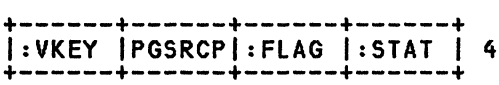
DELETED BY:

HCPRCIRL
HCPRPBPA
HCPRPBPS
HCPRPBRM

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

PGSTE - PAGE STATUS TABLE

REDEFINITION - VIRTUAL PAGE STATUS



disp	name	length	description
000	PGSENTRY	004	VIRTUAL PAGE STATUS ENTRY

EQUATES

04	PGSLENTH	LENGTH OF ONE STATUS TABLE ENTRY

004	PGSNEXT	004	NEXT PAGE STATUS TABLE ENTRY

REDEFINITION - VIRTUAL PAGE STATUS

000	PGSVKEY	001	GUEST STORAGE KEY BITS 0-4
001	PGSRCP	001	ARCHITECTED AREA FOR RCP BYTE IF THE STORAGE KEY ASSIST IS BEING UTILIZED, OR THE PAGE BELONGS TO THE SYSTEM

BITS DEFINED IN PGSRCP (AT HEX DISPLACEMENT: 1)

002	PGSFLAG	001	VIRTUAL PAGE FLAGS

BITS DEFINED IN PGSFLAG (AT HEX DISPLACEMENT: 2)

80	PGSINVAL	NO AUXILIARY STORAGE ASSIGNED
40	PGSSHARE	PAGE IS A SHARED PAGE
20	PGS1READ	ASA MAY BE READ ONLY ONCE. USED FOR SHARED PAGES. AFTER THE FIRST READ, THIS SDF (SYSTEM DATA FILE) ASA IS TO BE IGNORED AND THE PAGE LEFT AS CHANGED. WHEN THE PAGE IS FIRST WRITTEN, IT WILL GO TO A PAGING SPACE ASA AND THIS FLAG WILL BE TURNED OFF. PGS1READ ON IMPLIES THAT PAGE IS READ ONLY FOR THE USER.
10	PGSSYSTM	SYSTEM VIRTUAL PAGE ADDRESS
08	PGSFIXED	STORAGE SLOT PERMANENTLY ASSIGNED
06	PGSXSREP	MASK FOR THE TWO BITS OF THE XSTORE BLOCK NUMBER THAT ARE KEPT IN THE PGSTE INSTEAD OF THE PAGTE. (THE PAGTE ALWAYS CONTAINS THE TRUE INVALID AND PAGE PROTECT BITS.)
01	PGSREADO	STORAGE SLOT (DASD) IS READ ONLY

003	PGSSTAT	001	VIRTUAL PAGE STATUS BITS

BITS DEFINED IN PGSSTAT (AT HEX DISPLACEMENT: 3)

80	PGSALTPT	PAGE IS DEFINED IN AN ALTERNATE PAGE TABLE POINTED FROM PGMALTPT
40	PGSTRANS	PAGE IS SERIALIZED IN LONG TERM
10	PGSVMSLK	VIRTUAL MACHINE STORAGE LOCK MODE
08	PGSXSTOR	PAGE IS IN XSTORE - THE BLOCK NUMBER IS IN THE PAGTE WITH BITS 21 & 22 REPLACED WITH THOSE BITS FROM THE PGSTE (PGSXSREP)
04	PGSBLOCK	THIS PAGE IS ONE PAGE IN A BLOCK OF PAGES
02	PGSRABI	THIS PAGE WAS READ IN AS PART OF A BLOCK OF PAGES.
01	PGSERROR	PAGE IS IN ERROR. A STORAGE ERROR WAS DETECTED IN THIS PAGE AND THE PAGE COULD NOT BE RECOVERED

MORE EQUATES

080	PGSPCL	PAGE CONTROL LOCK
040	PGSRCPHR	HOST BACKUP REFERENCE BIT USED FOR SYSTEM PAGES
020	PGSRCPHC	HOST BACKUP CHANGE BIT USED FOR SYSTEM PAGES

CROSS REFERENCE

Name	Len	Val/Disp
PGSALTPT	001	080
PGSBLOCK	001	004
PGSENTRY	004	000
PGSERROR	001	001
PGSFIXED	001	008
PGSFLAG	001	002
PGSINVAL	001	080
PGSLENTH	001	004
PGSNEXT	004	004
PGSPCL	001	080
PGSRABI	001	002
PGSRCP	001	001
PGSRCPHC	001	020
PGSRCPHR	001	040
PGSREADO	001	001
PGSSHARE	001	040
PGSSTAT	001	003
PGSSYSTM	001	010
PGSTE	001	000
PGSTRANS	001	040
PGSVKEY	001	000
PGSVMSLK	001	010
PGSXSREP	001	006
PGSXSTOR	001	008
PGS1READ	001	020

HCPPIOBK— PAGING I/O CCW PACKAGES.

DSECT NAME: PIOBK

DESCRIPTIVE NAME: PAGING I/O CCW PACKAGES.

FUNCTION: A PIOBK CONTAINS THE NECESSARY CCW STRINGS TO DO PAGING I/O OPERATIONS TO DRUMS AND DASD.

LOCATED BY:

IORCPA - CONTAINS THE POINTER TO THE FIRST ACTIVE PIOBK.
EXPSCCWP - CONTAINS THE POINTER TO THE LAST PIOBK THAT CONTAINS THE SUSPENDED CCW STRING.

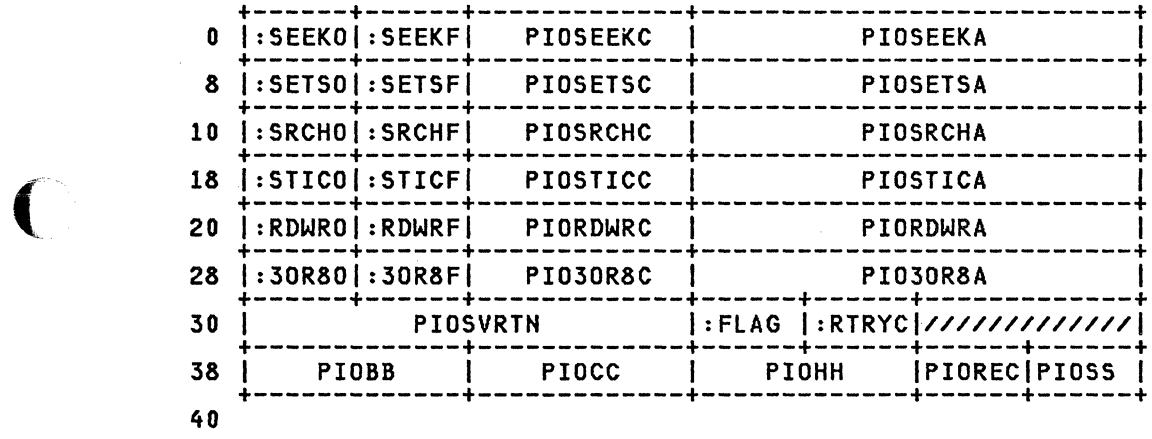
CREATED BY:

HCPRDAAT AS PART OF INITIALIZATION OR DURING ATTACH TIME FOR CP-OWNED VOLUMES

DELETED BY:

HCPRDADT RELEASED IF THE CP OWNED VOLUME IS DETACHED

PIOBK - PAGING I/O MANAGMENT BLOCK



disp	name	length	description
000	PIOSEEK	008	- SEEK CCW -
000	PIOSEEKW	004	- 1ST WORD OF CCW.
000	PIOSEEKO	001	'07' - SEEK CCW OP CODE
001	PIOSEEKF	001	CCWCC - SEEK CCW FLAG FIELD
002	PIOSEEKC	002	'0006' - SEEK CCW BYTE COUNT
004	PIOSEEKA	004	PIOSKDAT - SEEK CCW DATA ADDRESS
008	PIOSETS	008	- SET SECTOR CCW -
008	PIOSETSO	001	'23' - SET SECTOR CCW OP CODE
009	PIOSETSF	001	CCWCC - SET SECTOR CCW FLAG FIELD
00A	PIOSETSC	002	'0001' - SET SECTOR CCW BYTE COUNT
00C	PIOSETSA	004	PIOSS - SET SECTOR CCW DATA ADDRESS
010	PIOSRCH	008	- SEARCH ID EQUAL CCW -
010	PIOSRCHO	001	'31' - SEARCH ID CCW OP CODE
011	PIOSRCHF	001	CCWCC - SEARCH ID CCW FLAG FIELD
012	PIOSRCHC	002	'0005' - SEARCH ID CCW BYTE COUNT
014	PIOSRCHA	004	PIOCC - SEARCH ID CCW DATA ADDRESS
018	PIOSTIC	008	- TIC CCW TO SEARCH -
018	PIOSTICO	001	'08' - TIC CCW OP CODE
019	PIOSTICF	001	ZEROES - TIC CCW MUST BE ZEROES
01A	PIOSTICC	002	ZEROES - TIC CCW MUST BE ZEROES
01C	PIOSTICA	004	PIOSRCH - TIC CCW TIC TO SEARCH ADDRESS
020	PIORDWR	008	- READ OR WRITE CCW -
020	PIORDWRO	001	'06'/'05' - READ OR WRITE CCW OP CODE

```
021   PIORDWRF   001      CCWCC      - READ OR WRITE CCW FLAG FIELD
022   PIORDWRC   002      '1000'     - READ OR WRITE CCW COUNT
024   PIORDWRA   004      - READ OR WRITE CCW DATA ADDRESS
028   PIO3OR8    008      - NOP OR TIC CCW -
028   PIO3OR8W   004      - 1ST WORD OF CCW THAT WILL BE CHANGED
                          WITH A TIC CCW.
028   PIO3OR8O   001      '03/08'      - NOP OR TIC OP CODE
029   PIO3OR8F   001      CCWUSPN / 0  - NOP OR TIC FLAGS
02A   PIO3OR8C   002      '0000'       - NOP OR TIC COUNT
02C   PIO3OR8A   004      - NOP OR TIC ADDRESS FIELD
                          CONTAINS POINTER TO NEXT CCW
030   PIOWORKA   008      - WORK AREA FOR HCPPAG -
030   PIOSVRTN   004      ADDRESS OF SAVEARA OR RETURN ADDRESS (MW)
034   PIOFLAG    001      - FLAGS

        BITS DEFINED IN PIOFLAG  (AT HEX DISPLACEMENT: 34)

        04    PIOIOERR    INDICATES AN I/O ERROR HAS OCCURRED FOR
                          THIS CCW PACKAGE FOR AN INCORRECT LENGTH
                          PROBLEM AND A NO RECORD FOUND ON A MISS
                          FOR N+1.
        02    PIOMRPCI    INDICATES THE FIRST RECORD OF MULTI READ
                          REQUIRES A PCI.
        01    PIOMULTI    INDICATES A MULTIPLE WRITE OR READ CCW
                          PACKAGE.
        07    PIOALLFG    ALL FLAGS FOR RESET

035   PIORTRYC   001      ZEROES     - RETRY COUNT FOR ERROR RECOVERY
036              H        RESERVED FOR IBM USE.
038   PIOSKDAT   008      - SEEK ARGUMENT -
038   PIOBB      002      - BB BIN NUMBER
03A   PIOCCHH    004      - PICKS UP BOTH FIELDS BELOW
03A   PIOCC      002      - CC CYLINDER NUMBER
03C   PIOHH      002      - HH HEAD NUMBER
03E   PIOREC     001      - R  RECORD NUMBER
03F   PIOSS      001      - SS SET SECTOR NUMBER

                    MORE EQUATES

        0E0   PIOFINIS    INDICATES THAT THE PIOBK HAS BEEN
                          PROCESSED  IF PIORDWRO = READS X'E6'
                          WRITE X'E5'
        0F0   PIOINERR    INDICATES THAT THE PIOBK HAS AN ERRO
                          PROCESSED  IF PIORDWRO = READS X'F6'
                          WRITE X'F5'
                          NOTE: THESE EQUATES ARE NEITHER BITS NOR CODES.  THEY ARE
                          TURNED ON IN THE TOP HALF BYTE OF THE OPCODE (WHICH NEVER
                          USES THOSE BITS).  THE 'E' AND 'F' VALUES ARE USED TO MAKE
                          THE READ/WRITE OPCODE OF THE PIOBK STAND OUT IN A DUMP OR
                          DISPLAY OF STORAGE, AS THEY RESULT IN PRINTABLE EBCDIC
                          CHARACTERS.
        040   PIOBSIZE    SIZE OF ONE CCW PACKAGE IN BYTES
        008   PIOSIZE     SIZE OF ONE CCW PACKAGE IN
                          DOUBLE-WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PIOALLFG	001	007	PIOCC	002	03A	PIOHH	002	03C
PIOBB	002	038	PIOCCHH	004	03A	PIOINERR	001	0F0
PIOBK	001	000	PIOFINIS	001	0E0	PIOIOERR	001	004
PIOBSIZE	001	040	PIOFLAG	001	034	PIOMRPCI	001	002

Name	Len	Val/Disp
PIOMULTI	001	001
PIORDWR	008	020
PIORDWRA	004	024
PIORDWRC	002	022
PIORDWRF	001	021
PIORDWRO	001	020
PIOREC	001	03E
PIORTRYC	001	035
PIOSEEK	008	000
PIOSEEKA	004	004
PIOSEEKC	002	002
PIOSEEKF	001	001
PIOSEEKO	001	000
PIOSEEKW	004	000
PIOSETS	008	008
PIOSETSA	004	00C
PIOSETSC	002	00A
PIOSETSF	001	009
PIOSETSO	001	008
PIOSIZE	001	008
PIOSKDAT	008	038
PIOSRCH	008	010
PIOSRCHA	004	014
PIOSRCHC	002	012
PIOSRCHF	001	011
PIOSRCHO	001	010
PIOSS	001	03F
PIOSTIC	008	018
PIOSTICA	004	01C
PIOSTICC	002	01A
PIOSTICF	001	019
PIOSTICO	001	018
PIOSVRTN	004	030
PIOWORKA	008	030
PIO30R8	008	028
PIO30R8A	004	02C
PIO30R8C	002	02A
PIO30R8F	001	029
PIO30R8O	001	028
PIO30R8W	004	028

HCPPLSBK— PROCESSOR LOCAL STORAGE BLOCK

DSECT NAME: PLSBK

DESCRIPTIVE NAME: PROCESSOR LOCAL STORAGE BLOCK

FUNCTION: THE PLSBK IS A COMMON AREA TO HOLD DATA ITEMS. IT IS DIVIDED INTO 16 SECTIONS WITH 256 BYTES PER SECTION. EACH SUBSYSTEM WILL OWN A SECTION OF THE PLSBK.

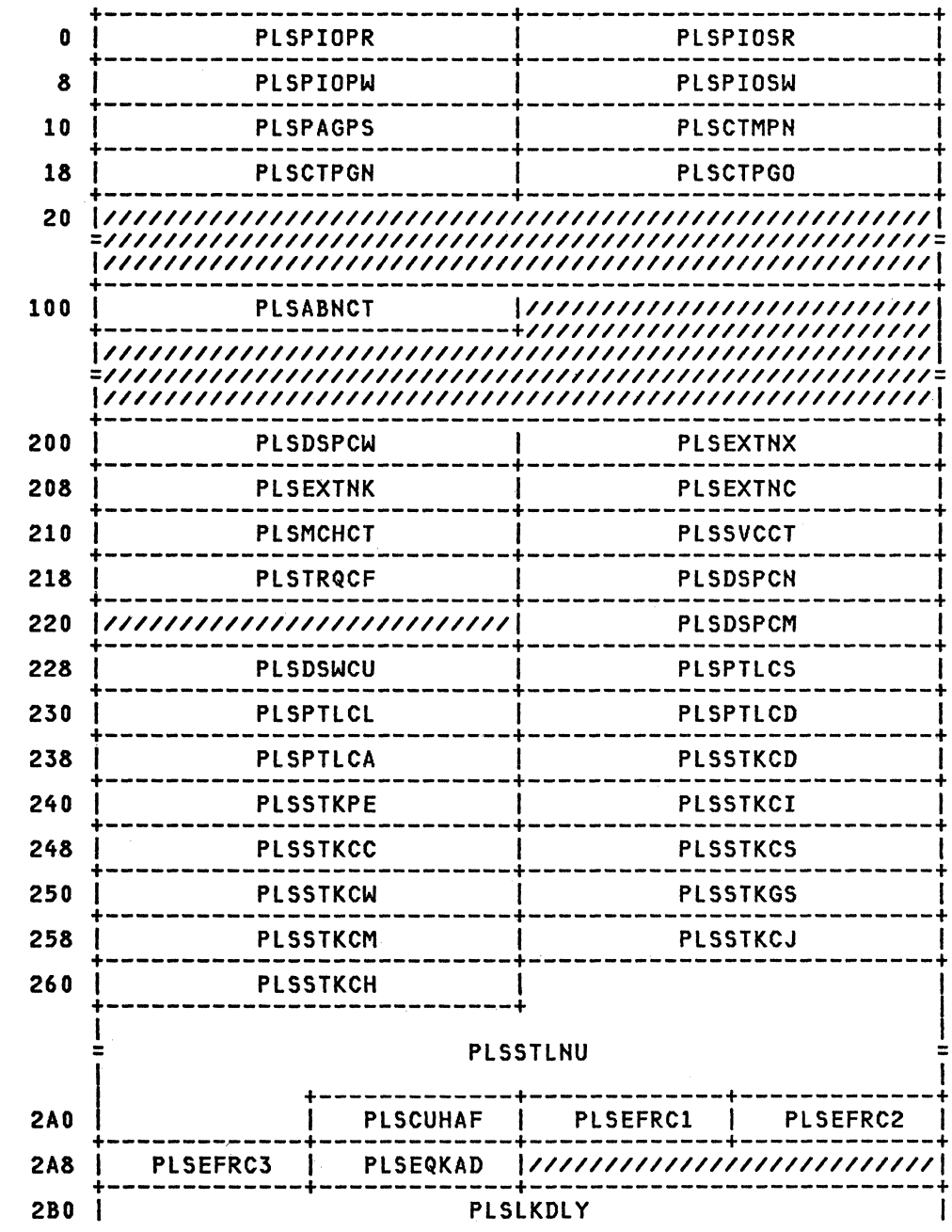
LOCATED BY:

PFXPLSBK

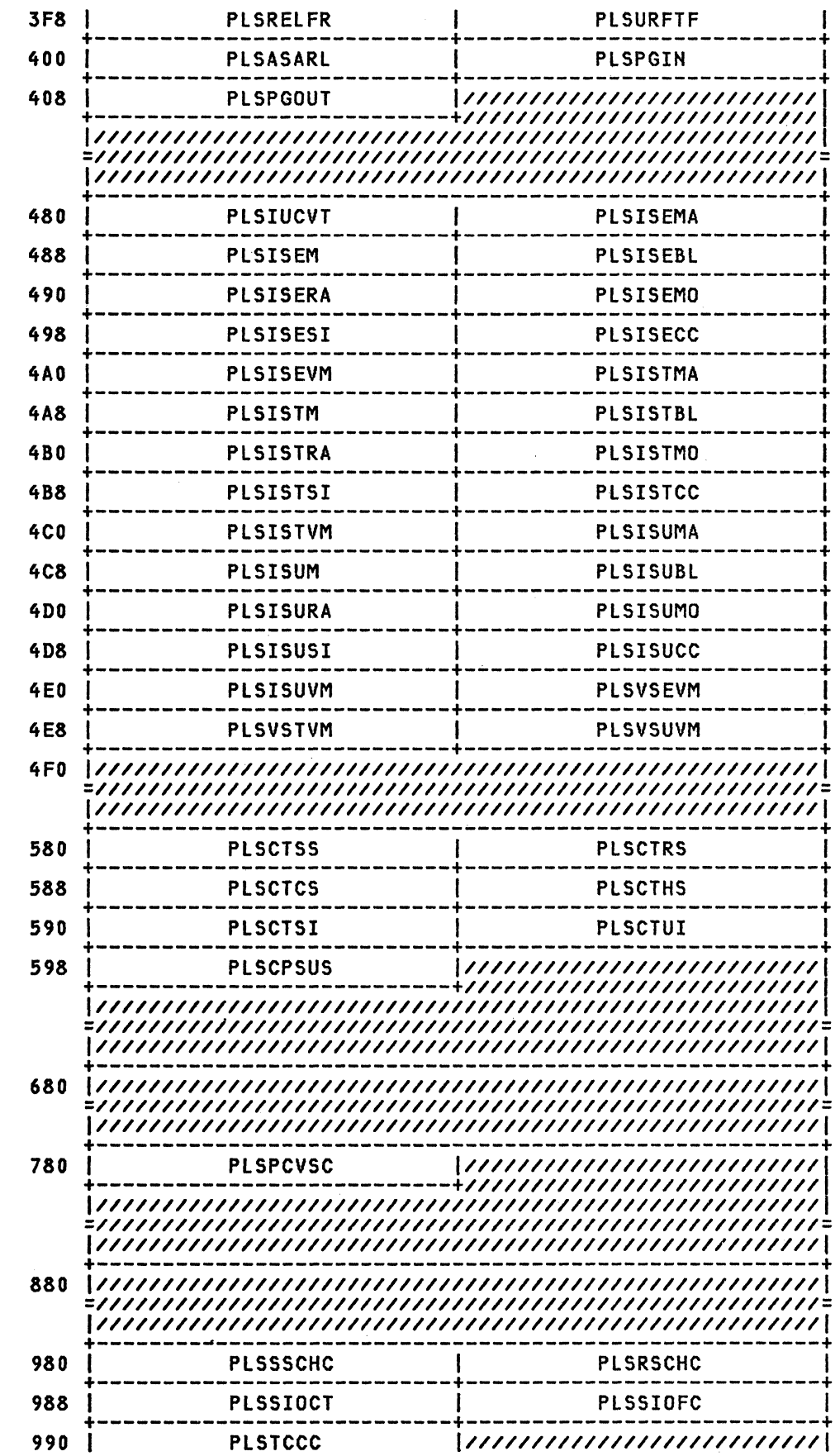
CREATED BY:

HCPMPS

PLSBK - PROCESSOR LOCAL STORAGE BLOCK



2B8	PLSLKDIO	
2C0	PLSLKMAX	PLSLKVMD
2C8	PLSLKMOD	PLSLKOFS
2D0	//////////	
300	//////////	
308	PLSSTLWT	//////////
310	PLSALNCT	PLSALEMP
318	PLSRETFR	PLSLTD1
320	PLSLTD2	PLSREORD
328	PLSTRMWT	PLSTDFCT
330	PLSTEFCT	PLSTRDCT
338	PLSTRECT	PLSDORM1
340	PLSSYS1	PLSSHAR1
348	PLSELIG1	PLSDISP1
350	PLSDORM2	PLSELIG2
358	PLSDISP2	PLSSHARE
360	PLSDORME	PLSELIGE
368	PLSSYSE	PLSDISPE
370	PLSNOCMP	PLSLTDP1
378	PLSDRMP1	PLSELGP1
380	PLSDSPP1	PLSSHRP1
388	PLSSYSP1	PLSLTDP2
390	PLSDRMP2	PLSELGP2
398	PLSDSPP2	PLSSHRP2
3A0	PLSSYSP2	PLSLTDPE
3A8	PLSDRMPE	PLSELGPE
3B0	PLSDSPPE	PLSSHRPE
3B8	PLSSYSPE	PLSSTLFR
3C0	PLSPGXTD	PLSFRECT
3C8	PLSFSPCT	//////////
3D0	PLSFVRCT	PLSDXFRE
3D8	PLSFRET	PLSFVRRQ
3E0	PLSFVRLS	PLSPRQDF
3E8	PLSPNEW	PLSPREAD
3F0	PLSSHRRD	PLSRELES



998	PLSIORCT	
A80	PLSDGX00	PLSDGX04
A88	PLSDGX08	PLSDGX0C
A90	PLSDGX10	PLSDGX14
A98	PLSDGX18	PLSDGX1C
AA0	PLSDGX20	PLSDGX24
AA8	PLSDGX28	PLSDGX2C
AB0	PLSDGX30	PLSDGX34
AB8	PLSDGX38	PLSDGX3C
AC0	PLSDGX40	PLSDGX44
AC8	PLSDGX48	PLSDGX4C
AD0	PLSDGX50	PLSDGX54
AD8	PLSDGX58	PLSDGX5C
AE0	PLSDGX60	PLSDGX64
AE8	PLSDGX68	PLSDGX6C
AF0	PLSDGX70	PLSDGX74
AF8	PLSDGX78	PLSDGX7C
B00	PLSDGX80	PLSDGX84
B08	PLSDGX88	PLSDGX8C
B10	PLSDGX90	PLSDGX94
B18	PLSDGX98	PLSDGX9C
B20	PLSDGXA0	PLSDGXA4
B28	PLSDGXA8	PLSDGXAC
B30	PLSDGXB0	PLSDGXB4
B38	PLSDGXB8	PLSDGXBC
B40	PLSDGXC0	PLSDGXC4
B48	PLSDGXC8	PLSDGXCC
B50	PLSDGXD0	PLSDGXD4
B58	PLSDGXD8	PLSDGXDC
B60	PLSDGXE0	PLSDGXE4
B68	PLSDGXE8	PLSDGXEC
B70	PLSDGXF0	PLSDGXF4
B78	PLSDGXF8	PLSDGXFC
B80	PLSVIXLD	PLSVIXIU

B88	PLSVIXVM	PLSCFMCK
B90	//////////////////////////	//////////////////////////
B98	PLSWRUCI	PLSWRUCP
BA0	PLSVATCL	PLSVATCA
BA8	PLSTMRCE	PLSVOPFT
BB0	PLSVOPST	PLSVOPIF
BB8	PLSVIXEX	PLSMCVMC
BC0	PLSGIRPG	PLSPRVSC
BC8	PLSTMRCO	PLSVIPRC
BD0	PLSVIPRS	PLSPRVIS
BD8	PLSBISCP	PLSBISAS
BE0	PLSBISBT	PLSBISPB
BE8	PLSBISSI	PLSBISTE
BF0	PLSBISXE	PLSBISXS
BF8	PLSBISIU	PLSKEYIE
C00	PLSKEYIK	PLSKEYRE
C08	PLSKEYRR	PLSKEYSE
C10	PLSKEYSK	PLSPRVGP
C18	PLSPRVLC	PLSPRVLP
C20	PLSPRVMN	PLSPRVMO
C28	PLSPRVMS	PLSPRVSV
C30	PLSPRVTC	PLSPRVTP
C38	PLSPRVVN	PLSVPTNV
C40	PLSXPGIN	PLSXPGOU
C48	PLSVFVTM	
C50	PLSVFOTM	
C58	PLSAISRV	PLSAISVC
C60	PLSVFLOD	PLSVFLDR
C68	PLSVFSVR	PLSVOPFR
C70	PLSVOPSR	PLSALERT
C78	PLSALETP	//////////////////////////
C80	PLSUNKMC	PLSHFDAT
C88	PLSHFLCK	//////////////////////////
	//////////////////////////	//////////////////////////
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	//////////////////////////	
D80	PLSDIAGT	//////////////////////////
	//////////////////////////	//////////////////////////
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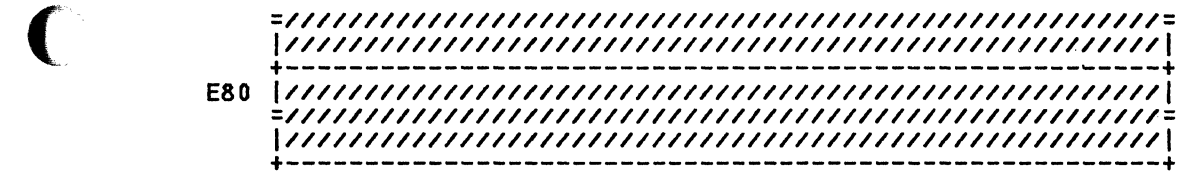

disp	name	length	description
000	PLSPIOPR	004	COUNT OF PAGING READ REQUESTS
004	PLSPIOSR	004	COUNT OF SPOOLING READ REQUESTS
008	PLSPIOPW	004	COUNT OF PAGING WRITE REQUESTS
00C	PLSPIOSW	004	COUNT OF SPOOLING WRITE REQUESTS
010	PLSPAGPS	004	COUNT OF SSCH REQUESTS FOR PAGING AND SPOOLING REQUESTS
014	PLSCTMPN	004	COUNT OF PAGINS EXECUTED WHEN MIGRATING PAGES FROM XSTORE TO DASD
018	PLSCTPGN	004	PAGEIN RATE BETWEEN REAL STORAGE AND EXPANDED STORAGE.
01C	PLSCTPGO	004	PAGEOUT RATE BETWEEN REAL STORAGE AND EXPANDED STORAGE.
020		56F	RESERVED FOR IBM USE
100	PLSABNCT	004	COUNT OF SOFT ABENDS
104		63F	RESERVED FOR IBM USE
200	PLSDSPCW	004	ENTRIES TO WAIT STATE ON CPU
204	PLSEXTNX	004	EXTERNAL INTERRUPTS ON CPU
208	PLSEXTNK	004	CLOCK COMPARATOR INTERRUPTS WITH REQUIRED CPU SWITCH
20C	PLSEXTNC	004	SIGP EXTERNAL CALL INTERRUPTS ON CPU
210	PLSMCHCT	004	PRIMARY MACHINE-CHECKS ON CPU
214	PLSSVCCT	004	CP SVCS ON CPU
218	PLSTRQCF	004	FALSE CLOCK COMPARATOR INTERRUPTS DUE CKC SET TO TRQBK ALREADY DEQUEUED ON ANOTHER CPU
21C	PLSDSPCN	004	WINDOWS TO WAIT FOR LOCK ON CPU
220		F	RESERVED FOR FUTURE USE
224	PLSDSPCM	004	MASTER-ONLY FORCED SELECTS
228	PLSDSWCU	004	USER WORK SELECT SLOW PATHS
22C	PLSPTLCS	004	COUNT OF CALLS ON A PROCESSOR TO PURGE THE TLB ON ALL PROCESSORS
230	PLSPTLCL	004	COUT OF CALLS TO PURGE THE TLB ON LOCAL PROCESSOR
234	PLSPTLCD	004	COUNT OF CALLS TO SET A PENDING HOST TLB FOR A USER
238	PLSPTLCA	004	COUNT OF CALLS TO SET A PENDING HOST TLB FOR A USER (NOT THE CURRENT USER)
23C	PLSSTKCD	004	COUNT OF CALLS TO UPDATE USER SCHEDULING STATUS
240	PLSSTKPE	004	ELAPSED TIME SLICE DROPS
244	PLSSTKCI	004	IORBKS STACKED
248	PLSSTKCC	004	CPEBKS STACKED
24C	PLSSTKCS	004	SPECIAL CPEBK CALLS
250	PLSSTKCW	004	WORK BIT STACK CALLS
254	PLSSTKGS	004	SIGPS TO DROP MP ADJUNCT
258	PLSSTKCM	004	WAKEUP BY PROXY ON MASTER CPU
25C	PLSSTKCJ	004	COUNT OF DORMAN ADDS AFTER HOT SHOT
260	PLSSTKCH	004	COUNT OF ADDS FOR HOT SHOT
264	PLSSTLNU	002	COUNT OF USERS 'STOLEN' FROM ANOTHER PLDV
2A2	PLSCUHAF	002	COUNT OF USERS DISPATCHED WITH ..HARD AFFINITY (DEDICATED)
			FOLLOWING ARE VARIOUS EVENT COUNTERS FOR MONITOR

EQUATES

	02	PLSETBEL	SIZE OF EVENT TABLE ENTRIES - THESE ARE HALFWORDS
	00	PLSEVNT1	INDEX TO THE E-1 CLASS ENTRIES
	02	PLSEVNT2	INDEX TO THE E-2 CLASS ENTRIES
	04	PLSEVNT3	INDEX TO THE E-3 CLASS ENTRIES
			NUMBER OF TIMES A USER WAS 'FORCED' INTO THE DISPATCH LIST BECAUSE IT WAS BEHIND SCHEDULE, EVEN THOUGH IT WOULD NOT FIT.
2A4	PLSEFRC1	002	- E1
2A6	PLSEFRC2	002	- E2
2A8	PLSEFRC3	002	- E3
2AA	PLSEQKAD	002	QUICKDSP USER ADDED COUNT
2AC		1F	RESERVED FOR IBM USE
2B0	PLSLKDLY	008	CUMULATIVE DELAYS ATTRIBUTABLE TO WAITS FOR DEFER LOCKS MANAGED BY HCPLOC AND HCPLCK. UNITS ARE MICROSECONDS (SLDL 12 TO GET TOD).
2B8	PLSLKDIO	008	CUMULATIVE DELAYS ATTRIBUTABLE TO WAITS FOR DEFER LOCKS MANAGED BY HCPIOL. UNITS ARE MICROSECONDS (SLDL 12 TO GET TOD).
2C0	PLSLKMAX	004	MAXIMUM TIME THAT THIS CPU EVER SAW ANY TASK HOLD A LOCK WHILE SOMEONE ELSE WAS WAITING TO GET IT. (FOR LOCKS MANAGED BY HCPLOC OR HCPLCK.) UNITS ARE TOD FORMAT WITH BITS 32-63 DISCARDED.
2C4	PLSLKVMD	004	ADDRESS OF THE VMDBK THAT CAUSED PLSLKMAX TO BE SET.
2C8	PLSLKMOD	006	NAME OF MODULE MANIPULATING (RELEASING) THE LOCK THAT CAUSED PLSLKMAX TO BE SET.
2CE	PLSLKOFS	002	OFFSET TO THE "GUILTY" CALL IN THE MODULE NAMED BY PLSLKMOD.
2D0		12F	RESERVED FOR IBM USE
300		2F	
308	PLSSTLWT	004	COUNT OF FRAME REPLACEMENT PAGE I/O WRITE REQUESTS
30C		F	
310	PLSALNCT	004	COUNT OF TIMES A NEW FRAME WAS NEEDED FROM AVAILABLE LIST
314	PLSALEMP	004	COUNT OF TIMES AVAILABLE LIST WAS EMPTY
318	PLSRETFR	004	COUNT OF FRAMES RETURNED TO THE AVAILABLE LIST
31C	PLSLTD1	004	NUMBER OF TIMES DEMAND SCAN ..COMPLETED AFTER PASS 1 WHILE ..SCANNING LONG TERM DORMANT USERS
320	PLSLTD2	004	NUMBER OF TIMES DEMAND SCAN ..COMPLETED AFTER PASS 2 WHILE ..SCANNING LONG TERM DORMANT USERS
324	PLSREORD	004	NUMBER OF VIRTUAL SYSTEM OR SHARED ..FRAME LIST REORDERS.
328	PLSTRMWT	004	COUNT OF FRAME REPLACEMENT WRITES ..PENDING THAT ARE REQUESTED BY ..THE TRIM FROM DORMANT AND ..ELIGIBLE LIST USER SCANS
32C	PLSTDFCT	004	TRIM DORMANT FRAME COUNT
330	PLSTEFCT	004	TRIM ELIGIBLE FRAME COUNT
334	PLSTRDCT	004	TRIM DORMANT USER INVOCATION COUNT
338	PLSTRECT	004	TRIM ELIGIBLE USER INVOCATION COUNT
33C	PLSDORM1	004	COUNT OF TIMES THE DEMAND SCAN COMPLETED AFTER THE FIRST PASS OF


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                                THE DORMANT LIST
340   PLSSYS1     004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE FIRST SCAN OF
                                THE SYSTEM VMDBK
344   PLSSHAR1    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE FIRST SCAN OF
                                SHARED STORAGE
348   PLSELIG1    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE FIRST SCAN OF
                                THE ELIGIBLE LIST
34C   PLSDISP1    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE FIRST SCAN OF
                                THE DISPATCH LIST
350   PLSDORM2    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE SECOND PASS OF
                                THE DORMANT LIST
354   PLSELIG2    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE SECOND SCAN OF
                                THE ELIGIBLE LIST
358   PLSDISP2    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER THE SECOND SCAN OF
                                THE DISPATCH LIST
35C   PLSSHARE    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER EMERGENCY SCAN OF
                                SHARED STORAGE
360   PLSDORME    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER EMERGENCY PASS OF
                                THE DORMANT LIST
364   PLSELIGE    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER EMERGENCY SCAN OF
                                THE ELIGIBLE LIST
368   PLSSYSE     004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER EMERGENCY SCAN OF
                                THE SYSTEM VMDBK
36C   PLSDISPE    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED AFTER EMERGENCY SCAN OF
                                THE DISPATCH LIST
370   PLSNOCMP    004           COUNT OF TIMES THE DEMAND SCAN
                                COMPLETED WITHOUT SATISFYING THE
                                DEMAND FOR FRAMES
374   PLSDSTST    004           START OF TABLE
374   PLSPASS1    004
374   PLSLTDP1    004           LONG TERM DORMANT PASS 1
378   PLSDRMP1    004           DORMANT PASS 1
37C   PLSELGP1    004           ELIGIBLE LIST PASS 1
380   PLSDSPP1    004           DISPATCH LIST PASS 1
384   PLSSHRP1    004           SHARED STORAGE PASS 1
388   PLSSYSP1    004           SYSTEM STORAGE PASS 1

                      EQUATES

        18     PLSP1END         END OF PASS 1 ACCUMULATORS

38C   PLSPASS2    004
38C   PLSLTDP2    004           LONG TERM DORMANT PASS 2
390   PLSDRMP2    004           DORMANT PASS 2
394   PLSELGP2    004           ELIGIBLE LIST PASS 2
398   PLSDSPP2    004           DISPATCH LIST PASS 2
39C   PLSSHRP2    004           SHARED STORAGE PASS 2
3A0   PLSSYSP2    004           SYSTEM STORAGE PASS 2

                      EQUATES

        18     PLSP2END         END OF PASS 2 ACCUMULATORS

3A4   PLSPASSE    004
3A4   PLSLTDPE    004           LONG TERM DORMANT  EMERGENCY PASS
3A8   PLSDRMPE    004           DORMANT  EMERGENCY PASS
3AC   PLSELGPE    004           ELIGIBLE LIST  EMERGENCY PASS
3B0   PLSDSPPE    004           DISPATCH LIST  EMERGENCY PASS
3B4   PLSSHRPE    004           SHARED STORAGE EMERGENCY PASS
3B8   PLSSYSPE    004           SYSTEM STORAGE EMERGENCY PASS
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EQUATES

18 PLSPEEND END OF EMERGENCY PASS ACCUMULATORS

3BC	PLSSTLFR	004	COUNT OF FRAMES TAKEN FOR FREE STORAGE BY THE FRAME TABLE SCAN
3C0	PLSPGXTD	004	COUNT OF FREE STORAGE FRAME REQUESTS
3C4	PLSFRECT	004	COUNT OF CALLS FOR FREE STORAGE
3C8	PLSFSPCT	004	COUNT OF REQUESTS SATISFIED BY REGULAR FREE STORAGE SUBPOOLS
3CC		F	RESERVED FOR FUTURE IBM USE
3D0	PLSFVRCT	004	COUNT OF REQUESTS SATISFIED BY V=R SUBPOOLS
3D4	PLSDXFRE	004	TOTAL NUMBER OF DISEXTEND FRAMES ..RETURNED
3D8	PLSFRET	004	NUMBER OF FREE STORAGE RETURNS BY ..THE SYSTEM
3DC	PLSFVRRQ	004	TOTAL NUMBER OF V=R FREE STORAGE ..REQUESTS
3E0	PLSFVRLS	004	NUMBER OF V=R REQUESTS SATISFIED ..FROM V=R FREE STORAGE, BUT NOT ..FROM V=R SUBPOOLS
3E4	PLSPRQDF	004	TOTAL COUNT OF PAGE REQUESTS DEFERRED
3E8	PLSPNEW	004	NUMBER OF PAGE TRANSLATIONS FOR A ..FIRST TIME REFERENCED PAGE.
3EC	PLSPREAD	004	NUMBER OF PAGE TRANSLATIONS THAT ..RESULTED IN A PAGE READ
3F0	PLSSHRRD	004	TOTAL NUMBER OF PAGE READS AND ..PAGINS FOR SHARED PAGES
3F4	PLSRELES	004	NUMBER OF TIMES ANY RELEASE ..FUNCTION WAS PERFORMED. THIS ..INCLUDES RELEASING ANY RANGE OF ..VIRTUAL SYSTEM PAGES AS WELL AS ..SHARED PAGES.
3F8	PLSRELFR	004	NUMBER OF FRAMES THAT ARE RETURNED ..BY ANY RELEASE FUNCTION.

EQUATES

88 PLSDSTLN

3FC	PLSURFTF	004	COUNT OF TIMES GUEST FAULTED ON A ..FRAME FOR 1ST TIME BUT DID NOT ..MODIFY IT.
400	PLSASARL	004	COUNT OF ASA'S RELEASED BECAUSE ..THAT PAGE IS CURRENTLY IN MAIN ..STORAGE AND HAS BEEN CHANGED
404	PLSPGIN	004	COUNT OF LONGPATH PGINS
408	PLSPGOUT	004	COUNT OF LONGPATH PGOUTS
40C		29F	RESERVED FOR IBM USE
480	PLSIUCVT	004	TOTAL COUNT OF IUCV FUNCTIONS
484	PLSSRCSS	004	SOURCE CP SYSTEM SERVICE COUNTS THE FOLLOWING FIELDS INDICATE THE TOTAL NUMBER OF SUCCESSFUL IUCV DATA TRANSFERS BY:
484	PLSISEMA	004	CP SYSTEM SERVICE *MSGALL
488	PLSISEM	004	CP SYSTEM SERVICE *MSG
48C	PLSISEBL	004	CP SYSTEM SERVICE *BLOCKIO
490	PLSISERA	004	CP SYSTEM SERVICE *RPI
494	PLSISEMO	004	CP SYSTEM SERVICE *MONITOR
498	PLSISESI	004	CP SYSTEM SERVICE *SIGNAL
49C	PLSISECC	004	CP SYSTEM SERVICE *CCS
4A0	PLSISEVM	004	A VIRTUAL MACHINE
4A4	PLSTRCSS	004	TARGET CP SYSTEM SERVICE COUNTS THE FOLLOWING FIELDS INDICATE THE TOTAL NUMBER OF SUCCESSFUL IUCV DATA TRANSFERS TO:
4A4	PLSISTMA	004	CP SYSTEM SERVICE *MSGALL
4A8	PLSISTM	004	CP SYSTEM SERVICE *MSG
4AC	PLSISTBL	004	CP SYSTEM SERVICE *BLOCKIO

4B0	PLSISTRA	004	CP SYSTEM SERVICE *RPI
4B4	PLSISTMO	004	CP SYSTEM SERVICE *MONITOR
4B8	PLSISTSI	004	CP SYSTEM SERVICE *SIGNAL
4BC	PLSISTCC	004	CP SYSTEM SERVICE *CCS
4C0	PLSISTVM	004	A VIRTUAL MACHINE
4C4	PLSUNCSS	004	THE FOLLOWING FIELDS INDICATE THE TOTAL NUMBER OF UNSUCCESSFUL IUCV DATA TRANSFERS BY:
4C4	PLSISUMA	004	CP SYSTEM SERVICE *MSGALL
4C8	PLSISUM	004	CP SYSTEM SERVICE *MSG
4CC	PLSISUBL	004	CP SYSTEM SERVICE *BLOCKIO
4D0	PLSISURA	004	CP SYSTEM SERVICE *RPI
4D4	PLSISUMO	004	CP SYSTEM SERVICE *MONITOR
4D8	PLSISUSI	004	CP SYSTEM SERVICE *SIGNAL
4DC	PLSISUCC	004	CP SYSTEM SERVICE *CCS
4E0	PLSISUVM	004	A VIRTUAL MACHINE THE FOLLOWING FIELDS INDICATE THE TOTAL NUMBER OF SUCCESSFUL VMCF DATA TRANSFERS :
4E4	PLSVSEVM	004	BY VIRTUAL MACHINE (VM IS SOURCE)
4E8	PLSVSTVM	004	TO VIRTUAL MACHINE (VM IS TARGET)
4EC	PLSVSUVM	004	TOTAL NUMBER OF UNSUCCESSFUL VMCF DATA TRANSFERS TO A VIRT MACH
4F0		36F	RESERVED FOR IBM USE
580	PLSCTSS	004	COUNT OF REAL SSCHS EXECUTED
584	PLSCTRS	004	COUNT OF REAL RSCHS EXECUTED
588	PLSCTCS	004	COUNT OF REAL CSCHS EXECUTED
58C	PLSCTHS	004	COUNT OF REAL HSCHS EXECUTED
590	PLSCTSI	004	I/O SOLICITED INTERRUPTS
594	PLSCTUI	004	I/O UNSOLICITED INTERRUPTS
598	PLSCPSUS	004	INVOCATIONS OF IORSUSNS EXIT
59C		57F	RESERVED FOR IBM USE
680		64F	RESERVED FOR IBM USE
780	PLSPCVSC	004	COUNT OF SERVC (B220) INSTR
784		63F	RESERVED FOR IBM USE
880		64F	RESERVED FOR IBM USE
980	PLSSSCHC	004	COUNT OF VIRTUAL SSCHS EXECUTED
984	PLSRSCHC	004	COUNT OF VIRTUAL RSCHS EXECUTED
988	PLSSIOCT	004	COUNT OF VIRTUAL SIOS EXECUTED
98C	PLSSIOFC	004	COUNT OF VIRTUAL SIOFS EXECUTED
990	PLSTCCC	004	COUNT OF VIRTUAL TEST CHANNELS AND CLEAR CHANNELS (TCCCS) EXECUTED
994		F	RESERVED FOR IBM USE TO VIRTUAL MACHINES
998	PLSIORCT	004	COUNT OF IORBKS PROCESSED
99C		57F	RESERVED FOR IBM USE
A80	PLSDIAG	004	TABLE OF DIAGNOSE COUNTERS
A80	PLSDGX00	004	COUNT OF DIAGNOSE X'00'
A84	PLSDGX04	004	COUNT OF DIAGNOSE X'04'
A88	PLSDGX08	004	COUNT OF DIAGNOSE X'08'
A8C	PLSDGX0C	004	COUNT OF DIAGNOSE X'0C'
A90	PLSDGX10	004	COUNT OF DIAGNOSE X'10'
A94	PLSDGX14	004	COUNT OF DIAGNOSE X'14'
A98	PLSDGX18	004	COUNT OF DIAGNOSE X'18'
A9C	PLSDGX1C	004	COUNT OF DIAGNOSE X'1C'
AA0	PLSDGX20	004	COUNT OF DIAGNOSE X'20'
AA4	PLSDGX24	004	COUNT OF DIAGNOSE X'24'
AA8	PLSDGX28	004	COUNT OF DIAGNOSE X'28'
AAC	PLSDGX2C	004	COUNT OF DIAGNOSE X'2C'
AB0	PLSDGX30	004	COUNT OF DIAGNOSE X'30'
AB4	PLSDGX34	004	COUNT OF DIAGNOSE X'34'
AB8	PLSDGX38	004	COUNT OF DIAGNOSE X'38'
ABC	PLSDGX3C	004	COUNT OF DIAGNOSE X'3C'
AC0	PLSDGX40	004	COUNT OF DIAGNOSE X'40'
AC4	PLSDGX44	004	COUNT OF DIAGNOSE X'44'
AC8	PLSDGX48	004	COUNT OF DIAGNOSE X'48'
ACC	PLSDGX4C	004	COUNT OF DIAGNOSE X'4C'
AD0	PLSDGX50	004	COUNT OF DIAGNOSE X'50'
AD4	PLSDGX54	004	COUNT OF DIAGNOSE X'54'
AD8	PLSDGX58	004	COUNT OF DIAGNOSE X'58'
ADC	PLSDGX5C	004	COUNT OF DIAGNOSE X'5C'

AE0	PLSDGX60	004	COUNT OF DIAGNOSE X'60'
AE4	PLSDGX64	004	COUNT OF DIAGNOSE X'64'
AE8	PLSDGX68	004	COUNT OF DIAGNOSE X'68'
AEC	PLSDGX6C	004	COUNT OF DIAGNOSE X'6C'
AF0	PLSDGX70	004	COUNT OF DIAGNOSE X'70'
AF4	PLSDGX74	004	COUNT OF DIAGNOSE X'74'
AF8	PLSDGX78	004	COUNT OF DIAGNOSE X'78'
AFC	PLSDGX7C	004	COUNT OF DIAGNOSE X'7C'
B00	PLSDGX80	004	COUNT OF DIAGNOSE X'80'
B04	PLSDGX84	004	COUNT OF DIAGNOSE X'84'
B08	PLSDGX88	004	COUNT OF DIAGNOSE X'88'
B0C	PLSDGX8C	004	COUNT OF DIAGNOSE X'8C'
B10	PLSDGX90	004	COUNT OF DIAGNOSE X'90'
B14	PLSDGX94	004	COUNT OF DIAGNOSE X'94'
B18	PLSDGX98	004	COUNT OF DIAGNOSE X'98'
B1C	PLSDGX9C	004	COUNT OF DIAGNOSE X'9C'
B20	PLSDGXA0	004	COUNT OF DIAGNOSE X'A0'
B24	PLSDGXA4	004	COUNT OF DIAGNOSE X'A4'
B28	PLSDGXA8	004	COUNT OF DIAGNOSE X'A8'
B2C	PLSDGXAC	004	COUNT OF DIAGNOSE X'AC'
B30	PLSDGXB0	004	COUNT OF DIAGNOSE X'B0'
B34	PLSDGXB4	004	COUNT OF DIAGNOSE X'B4'
B38	PLSDGXB8	004	COUNT OF DIAGNOSE X'B8'
B3C	PLSDGXBC	004	COUNT OF DIAGNOSE X'BC'
B40	PLSDGXC0	004	COUNT OF DIAGNOSE X'C0'
B44	PLSDGXC4	004	COUNT OF DIAGNOSE X'C4'
B48	PLSDGXC8	004	COUNT OF DIAGNOSE X'C8'
B4C	PLSDGXCC	004	COUNT OF DIAGNOSE X'CC'
B50	PLSDGXD0	004	COUNT OF DIAGNOSE X'D0'
B54	PLSDGXD4	004	COUNT OF DIAGNOSE X'D4'
B58	PLSDGXD8	004	COUNT OF DIAGNOSE X'D8'
B5C	PLSDGXDC	004	COUNT OF DIAGNOSE X'DC'
B60	PLSDGXE0	004	COUNT OF DIAGNOSE X'E0'
B64	PLSDGXE4	004	COUNT OF DIAGNOSE X'E4'
B68	PLSDGXE8	004	COUNT OF DIAGNOSE X'E8'
B6C	PLSDGXEC	004	COUNT OF DIAGNOSE X'EC'
B70	PLSDGXF0	004	COUNT OF DIAGNOSE X'F0'
B74	PLSDGXF4	004	COUNT OF DIAGNOSE X'F4'
B78	PLSDGXF8	004	COUNT OF DIAGNOSE X'F8'
B7C	PLSDGXFC	004	COUNT OF DIAGNOSE X'FC'

EQUATES

80	PLSDIAGE		END OF DIAGNOSE COUNTERS
B80	PLSVIXLD	004	TOTAL COUNT OF GUEST EXTERNAL INTERRUPT X'2402'
B84	PLSVIXIU	004	TOTAL COUNT OF GUEST EXTERNAL INTERRUPT X'4000'
B88	PLSVIXVM	004	TOTAL COUNT OF GUEST EXTERNAL INTERRUPT X'4001'
B8C	PLSCFMCK	004	COUNT OF CALL-FROM-CFM CPEBKS UNSTACKED AND EXECUTED
B90		F	RESERVED FOR FUTURE USE
B94		F	RESERVED FOR FUTURE USE
B98	PLSWRUCI	004	COUNT OF SIE INTERCEPTIONS WHILE SIMULATING THE SIE INSTRUCTION
B9C	PLSWRUCP	004	COUNT OF SIE INSTRUCTION EXECUTIONS WHILE SIMULATING THE SIE INSTRUCTION
BA0	PLSVATCL	004	COUNT OF GUEST VIRTUAL TO HOST REAL ADDRESS TRANSLATIONS
BA4	PLSVATCA	004	COUNT OF GUEST VIRTUAL TO GUEST REAL ADDRESS TRANSLATIONS
BA8	PLSTMRCE	004	COUNT OF GUEST ENTRIES TO AN ENABLED WAIT STATE
BAC	PLSVOPFT	004	COUNT OF OPERAND FETCHES
BB0	PLSVOPST	004	COUNT OF OPERAND STORES
BB4	PLSVOPIF	004	COUNT OF INSTRUCTION FETCHES
BB8	PLSVIXEX	004	COUNT OF EXTERNAL INTERRUPTS REFLECTED TO VIRTUAL MACHINES
BBC	PLSMCVMC	004	COUNT OF MACHINE CHECK INTERRUPTS

			REFLECTED TO VIRTUAL MACHINES
BC0	PLSGIRPG	004	COUNT OF PROGRAM INTERRUPTS REFLECTED TO VIRTUAL MACHINES
BC4	PLSPRVSC	004	COUNT OF SVC INTERRUPTS REFLECTED TO VIRTUAL MACHINES
BC8	PLSTMRCO	004	COUNT OF GUEST TIMER UPDATES WHEN LEAVING GUEST WAIT STATE
BCC	PLSVIPRC	004	COUNT OF PAGE FAULTS RECOGNIZED FOR A PAGEX GUEST
BD0	PLSVIPRS	004	COUNT OF PAGE FAULTS RECOGNIZED FOR A PAGEX GUEST
BD4	PLSPRVIS	004	COUNT OF NON-FAST-PATH GUEST INSTRUCTION SIMULATIONS PERFORMED ON THIS PROCESSOR.
BD8	PLSBISCP	004	STIDP (B202)
BDC	PLSBISAS	004	STAP (B212)
BE0	PLSBISBT	004	TB (B22C)
BE4	PLSBISPB	004	PTLB (B20D)
BE8	PLSBISSI	004	SIE (B214)
BEC	PLSBISTE	004	SCK (B204)
BF0	PLSBISXE	004	SPX (B210)
BF4	PLSBISXS	004	STPX (B211)
BF8	PLSBISIU	004	IUCV (B2F0)
BFC	PLSKEYIE	004	ISKE (B229)
C00	PLSKEYIK	004	ISK (09)
C04	PLSKEYRE	004	RRBE (B22A)
C08	PLSKEYRR	004	RRB (B213)
C0C	PLSKEYSE	004	SSKE (B22B)
C10	PLSKEYSK	004	SSK (08)
C14	PLSPRVGP	004	SIGP (AE)
C18	PLSPRVLC	004	LCTL (B7)
C1C	PLSPRVLP	004	LPSW (82)
C20	PLSPRVMN	004	STNSM (AC)
C24	PLSPRVMO	004	STOSM (AD)
C28	PLSPRVMS	004	SSM (80)
C2C	PLSPRVSV	004	SVC (0A)
C30	PLSPRVTC	004	STCTL (B6)
C34	PLSPRVTP	004	TPROT (E501)
C38	PLSPRVVN	004	GUEST SVC 76'S REFLECTED
C3C	PLSVPTNV	004	IPTE (B221)
C40	PLSXPGIN	004	PGIN (B22E)
C44	PLSXPGOU	004	PGOUT (B22F)
C48	PLSVFVTM	008	TOTAL VIRTUAL VECTOR TIME
C50	PLSVFOTM	008	TOTAL REAL VECTOR TIME
C58	PLSAISRV	004	COUNT OF RESTORE VAC INSTRUCTIONS
C5C	PLSAISVC	004	COUNT OF VECTOR CHANGE CONTROL INTERCEPTS
C60	PLSVFLOD	004	NUMBER OF VECTOR LOAD OPERATIONS
C64	PLSVFLDR	004	NUMBER OF VECTOR REG PAIRS LOADED
C68	PLSVFSVR	004	NUMBER OF VECTOR REG PAIRS SAVED
C6C	PLSVOPFR	004	COUNT OF CALLS TO HCPVOPFR
C70	PLSVOPSR	004	COUNT OF CALLS TO HCPVOPSR
C74	PLSALERT	004	COUNT OF ALERT INTERCEPTIONS
C78	PLSALETP	004	COUNT OF TPZI INDICATIONS OF I/O
C7C		F	RESERVED FOR IBM USE
C80	PLSUNKMC	004	COUNT OF TIMES AN UNRECOGNIZED MONITOR CALL (MC) INSTRUCTION (UNRECOGNIZED CLASS OR CODE) WAS INVOKED. UNRECOGNIZED CODES ARE NOT DETECTED IN THE USER AND I/O DOMAINS FOR USERS OR DEVICES THAT ARE NOT BEING MONITORED.
C84	PLSHFDAT	004	POINTER TO PROCESSOR-DOMAIN HIGH-FREQUENCY DATA AREA (HCPHFPBK)
C88	PLSHFLCK	004	LOCKWORD TO SERIALIZE THE USE OF PLSHFDAT AND HCPHFPBK
C8C		61F	RESERVED FOR IBM USE
D80	PLSDIAGT	004	COUNT OF ALL DIAGNOSE OPERATIONS
D84		63F	RESERVED FOR IBM USE
E80		96F	RESERVED FOR IBM USE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
PLSABNCT	004	100	PLSDGX18	004	A98	PLSELIGE	004	364
PLSAISRV	004	C58	PLSDGX2C	004	AAC	PLSELIG1	004	348
PLSAISVC	004	C5C	PLSDGX20	004	AA0	PLSELIG2	004	354
PLSALEMP	004	314	PLSDGX24	004	AA4	PLSEQKAD	002	2AA
PLSALERT	004	C74	PLSDGX28	004	AA8	PLSETBEL	001	002
PLSALETP	004	C78	PLSDGX3C	004	ABC	PLSEVNT1	001	000
PLSALNCT	004	310	PLSDGX30	004	AB0	PLSEVNT2	001	002
PLSASARL	004	400	PLSDGX34	004	AB4	PLSEVNT3	001	004
PLSBISAS	004	BDC	PLSDGX38	004	AB8	PLSEXTNC	004	20C
PLSBISBT	004	BE0	PLSDGX4C	004	ACC	PLSEXTNK	004	208
PLSBISCP	004	BD8	PLSDGX40	004	AC0	PLSEXTNX	004	204
PLSBISIU	004	BF8	PLSDGX44	004	AC4	PLSFRECT	004	3C4
PLSBISPB	004	BE4	PLSDGX48	004	AC8	PLSFRET	004	3D8
PLSBISSI	004	BE8	PLSDGX5C	004	ADC	PLSFSPCT	004	3C8
PLSBISTE	004	BEC	PLSDGX50	004	AD0	PLSFVRCT	004	3D0
PLSBISXE	004	BF0	PLSDGX54	004	AD4	PLSFVRLS	004	3E0
PLSBISXS	004	BF4	PLSDGX58	004	AD8	PLSFVRRQ	004	3DC
PLSBK	001	000	PLSDGX6C	004	AEC	PLSGIRPG	004	BC0
PLSCFMCK	004	B8C	PLSDGX60	004	AE0	PLSHFDAT	004	C84
PLSCPSUS	004	598	PLSDGX64	004	AE4	PLSHFLCK	004	C88
PLSCTCS	004	588	PLSDGX68	004	AE8	PLSIORCT	004	998
PLSCTHS	004	58C	PLSDGX7C	004	AFC	PLSISEBL	004	48C
PLSCTMPN	004	014	PLSDGX70	004	AF0	PLSISECC	004	49C
PLSCTPGN	004	018	PLSDGX74	004	AF4	PLSISEM	004	488
PLSCTPGO	004	01C	PLSDGX78	004	AF8	PLSISEMA	004	484
PLSCTRS	004	584	PLSDGX8C	004	B0C	PLSISEMO	004	494
PLSCTSI	004	590	PLSDGX80	004	B00	PLSISERA	004	490
PLSCTSS	004	580	PLSDGX84	004	B04	PLSISESI	004	498
PLSCTUI	004	594	PLSDGX88	004	B08	PLSISEVM	004	4A0
PLSCUHAF	002	2A2	PLSDGX9C	004	B1C	PLSISTBL	004	4AC
PLSDGXAC	004	B2C	PLSDGX90	004	B10	PLSISTCC	004	4BC
PLSDGXA0	004	B20	PLSDGX94	004	B14	PLSISTM	004	4A8
PLSDGXA4	004	B24	PLSDGX98	004	B18	PLSISTMA	004	4A4
PLSDGXA8	004	B28	PLSDIAG	004	A80	PLSISTMO	004	4B4
PLSDGXBC	004	B3C	PLSDIAGE	001	B80	PLSISTRA	004	4B0
PLSDGXB0	004	B30	PLSDIAGT	004	D80	PLSISTSI	004	4B8
PLSDGXB4	004	B34	PLSDISPE	004	36C	PLSISTVM	004	4C0
PLSDGXB8	004	B38	PLSDISP1	004	34C	PLSISUBL	004	4CC
PLSDGXCC	004	B4C	PLSDISP2	004	358	PLSISUCC	004	4DC
PLSDGXC0	004	B40	PLSDORME	004	360	PLSISUM	004	4C8
PLSDGXC4	004	B44	PLSDORM1	004	33C	PLSISUMA	004	4C4
PLSDGXC8	004	B48	PLSDORM2	004	350	PLSISUMO	004	4D4
PLSDGXDC	004	B5C	PLSDRMPE	004	3A8	PLSISURA	004	4D0
PLSDGXD0	004	B50	PLSDRMP1	004	378	PLSISUSI	004	4D8
PLSDGXD4	004	B54	PLSDRMP2	004	390	PLSISUVM	004	4E0
PLSDGXD8	004	B58	PLSDSPCM	004	224	PLSIUCVT	004	480
PLSDGXEC	004	B6C	PLSDSPCN	004	21C	PLSKEYIE	004	BFC
PLSDGXE0	004	B60	PLSDSPCW	004	200	PLSKEYIK	004	C00
PLSDGXE4	004	B64	PLSDSPPE	004	3B0	PLSKEYRE	004	C04
PLSDGXE8	004	B68	PLSDSPP1	004	380	PLSKEYRR	004	C08
PLSDGXFC	004	B7C	PLSDSPP2	004	398	PLSKEYSE	004	C0C
PLSDGXF0	004	B70	PLSDSTLN	001	088	PLSKEYSK	004	C10
PLSDGXF4	004	B74	PLSDSTST	004	374	PLSLKDIO	008	2B8
PLSDGXF8	004	B78	PLSDSWCU	004	228	PLSLKDLY	008	2B0
PLSDGX0C	004	A8C	PLSDXFRE	004	3D4	PLSLKMAX	004	2C0
PLSDGX00	004	A80	PLSEFRC1	002	2A4	PLSLKMOD	006	2C8
PLSDGX04	004	A84	PLSEFRC2	002	2A6	PLSLKOFS	002	2CE
PLSDGX08	004	A88	PLSEFRC3	002	2A8	PLSLKVMD	004	2C4
PLSDGX1C	004	A9C	PLSELGPE	004	3AC	PLSLTDPE	004	3A4
PLSDGX10	004	A90	PLSELGP1	004	37C	PLSLTDP1	004	374
PLSDGX14	004	A94	PLSELGP2	004	394	PLSLTDP2	004	38C

Name	Len	Val/Disp
PLSLTD1	004	31C
PLSLTD2	004	320
PLSMCHCT	004	210
PLSMCVMC	004	BBC
PLSNOCMP	004	370
PLSPAGPS	004	010
PLSPASSE	004	3A4
PLSPASS1	004	374
PLSPASS2	004	38C
PLSPCVSC	004	780
PLSPEEND	001	018
PLSPGIN	004	404
PLSPGOUT	004	408
PLSPGXTD	004	3C0
PLSPIOPR	004	000
PLSPIOPW	004	008
PLSPIOSR	004	004
PLSPIOSW	004	00C
PLSPNEW	004	3E8
PLSPREAD	004	3EC
PLSPRQDF	004	3E4
PLSPRVGP	004	C14
PLSPRVIS	004	BD4
PLSPRVLC	004	C18
PLSPRVLP	004	C1C
PLSPRVMN	004	C20
PLSPRVMO	004	C24
PLSPRVMS	004	C28
PLSPRVSC	004	BC4
PLSPRVSV	004	C2C
PLSPRVTC	004	C30
PLSPRVTP	004	C34
PLSPRVVN	004	C38
PLSPTLCA	004	238
PLSPTLCD	004	234
PLSPTLCL	004	230
PLSPTLCS	004	22C
PLSP1END	001	018
PLSP2END	001	018
PLSRELES	004	3F4
PLSRELFR	004	3F8
PLSREORD	004	324
PLSRETFR	004	318
PLSRSCHC	004	984
PLSSHARE	004	35C
PLSSHAR1	004	344
PLSSHRPE	004	3B4
PLSSHRP1	004	384
PLSSHRP2	004	39C
PLSSHRRD	004	3F0
PLSSIOCT	004	988
PLSSIOFC	004	98C
PLSSRCSS	004	484
PLSSSCHC	004	980
PLSSTKCC	004	248
PLSSTKCD	004	23C
PLSSTKCH	004	260
PLSSTKCI	004	244
PLSSTKCJ	004	25C
PLSSTKCM	004	258
PLSSTKCS	004	24C
PLSSTKCW	004	250
PLSSTKGS	004	254
PLSSTKPE	004	240
PLSSTLFR	004	3BC
PLSSTLNU	002	264
PLSSTLWT	004	308
PLSSVCCT	004	214
PLSSYSE	004	368
PLSSYSPE	004	3B8
PLSSYSP1	004	388
PLSSYSP2	004	3A0
PLSSYS1	004	340
PLSTCCC	004	990
PLSTDFCT	004	32C
PLSTEFCT	004	330
PLSTMRCE	004	BA8
PLSTMRCO	004	BC8
PLSTRCSS	004	4A4
PLSTRDCT	004	334
PLSTRECT	004	338
PLSTRMWT	004	328
PLSTRQCF	004	218
PLSUNCSS	004	4C4
PLSUNKMC	004	C80
PLSURFTF	004	3FC
PLSVATCA	004	BA4
PLSVATCL	004	BA0
PLSVFLDR	004	C64
PLSVFLOD	004	C60
PLSVFOTM	008	C50
PLSVFSVR	004	C68
PLSVFVTM	008	C48
PLSVIPRC	004	BCC
PLSVIPRS	004	BD0
PLSVIXEX	004	BB8
PLSVIXIU	004	B84
PLSVIXLD	004	B80
PLSVIXVM	004	B88
PLSVOPFR	004	C6C
PLSVOPFT	004	BAC
PLSVOPIF	004	BB4
PLSVOPSR	004	C70
PLSVOPST	004	BB0
PLSVPTNV	004	C3C
PLSVSEVM	004	4E4
PLSVSTVM	004	4E8
PLSVSUVM	004	4EC
PLSWRUCI	004	B98
PLSWRUCP	004	B9C
PLSXPGIN	004	C40
PLSXPGOU	004	C44

HCPPPFBK— PSEUDO PAGE FAULT STACK BLOCK

DSECT NAME: PPFBK

DESCRIPTIVE NAME: PSEUDO PAGE FAULT STACK BLOCK

FUNCTION: A PPFBK REPRESENTS AN INSTANCE OF A PSEUDO PAGE FAULT. THESE BLOCKS ARE CONNECTED TO ONE OF TWO CHAINS FROM THE VMDBK. THE CHAIN ANCHORED BY VMDPPFLT IS ALL PPFBKS REPRESENTING ALL UNRESOLVED HOST PAGE FAULTS FOR GUEST PAGES. THE BLOCKS ARE REMOVED FROM THIS CHAIN WHEN THE PAGE FAULT HAS BEEN RESOLVED THE CHAIN ANCHORED BY VMDPPFPT IS ALL PPFBKS REPRESENTING RESOLVED PSEUDO PAGE FAULTS WHICH HAS NOT COMPLETE REFLECTION TO THE GUEST

LOCATED BY:

PPFPNT - CHAIN OF PPFBKS
VMDPPFPT - FIELD OF HCPVMDBK (PENDING INTERRUPTS)
VMDPPFLT - FIELD OF HCPVMDBK (UNRESOLVED PAGES)

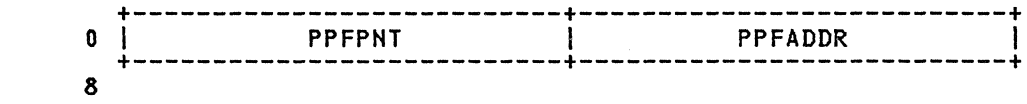
CREATED BY:

HCPVIP

DELETED BY:

HCPPPF, HCPVIP

PPFBK - PSEUDO PAGE FAULT STACK BLOCK



disp	name	length	description
000	PPFPNT	004	POINTER TO NEXT PPFBLOK ON STACK
004	PPFADDR	004	VIRTUAL PAGE FAULT ADDRESS

EQUATES

01	PPFBSIZE	PPF BLOCK SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
PPFADDR	004	004
PPFBK	001	000
PPFBSIZE	001	001
PPFPNT	004	000

HCPPPIBK— PAG/PAH INTERFACE BLOCK

DSECT NAME: PPIBK

DESCRIPTIVE NAME: PAG/PAH INTERFACE BLOCK

FUNCTION: THE PAG/PAH INTERFACE BLOCK REDEFINES THE WORK AREA USED TO PASS INFORMATION BETWEEN MODULE HCPPAG AND HCPPAH. THIS SET OF EQUATES IS USED TO GIVE MORE MEANINGFUL NAMES TO THE DATA THAT IS SHARED BY THE TWO MODULES.

LOCATED BY:

NOT APPLICABLE
THIS COPY FILE IS NOT A DSECT,
AND CONSISTS ONLY OF COMMENTS
AND ASSEMBLER EQUATE (EQU)
STATEMENTS.

CREATED BY:

NOT APPLICABLE

DELETED BY:

NOT APPLICABLE

PPIBK - PTR/PAG INTERFACE BLOCK

0

Value	Name	Description
00000000	PPIFWDPT	FORWARD POINTER
00000004	PPIBCKPT	BACKWARD POINTER NOTE: BITS DEFINED FOR PPIESCHC BY HCPSAVBK SAVESCHC
00000054	PPIRCODE	RETURN CODE FROM READ OPERATION
00000058	PPIWRK0	AVAILABLE FOR USE BY HCPPAGSR
00000058	PPIPGHH	HEAD NUMBER USED ONLY WHEN DEFER
0000005A	PPIRLREC	RELATIVE RECORD NUMBER ON TRACK
0000005C	PPICCPV	THE CCPV
0000005C	PPICC	REPRESENTS THE CYLINDER NUMBER.
0000005E	PPIREC	REPRESENTS THE PAGE NUMBER.
00000060	PPIPGFG0	FLAG BYTE FOR HCPPAG
00000064	PPIFRMa	ADDRESS OF THE FRAME THAT THE PAGE IS TO BE READ INTO
00000068	PPIFTEa	ADDRESS OF THE FRAME TABLE ENTRY CORRESPONDING TO THE FRAME TO BE READ INTO
0000006C	PPIPTEa	ADDRESS OF THE PAGE TABLE ENTRY CORRESPONDING TO THE PAGE TO BE READ
00000001	PPISGWRT	INDICATES SINGLE WRITE OPERATION
00000002	PPIMUWRT	INDICATES MULTIPLE WRITE OPERATION
00000004	PPISNGRD	INDICATES SINGLE READ OPERATION.
00000008	PPIMULRD	INDICATES MULTIPLE READ OPERATION.
00000010	PPIORGSV	INDICATES ORIGINAL SAVEAREA
00000020	PPISPLSL	INDICATES A SPOOLING SLOT
00000040	PPIMRDRV	INDICATES MULTI OPERATION REDRIVE

HCPPRLOG— LAYOUT FOR PROLOG AT BEGINNING OF MODULE

DSECT NAME: PRLOG

DESCRIPTIVE NAME: LAYOUT FOR PROLOG AT BEGINNING OF MODULE

FUNCTION: ALLOWS FIELDS WITHIN THE PROLOG TO BE REFERENCED BY NAME

LOCATED BY:

THE MODULE BASE REGISTER (R12) POINTS TO THE HCPPRLOG WHICH RESIDES AT LOCATION 0 IN THE MODULE.

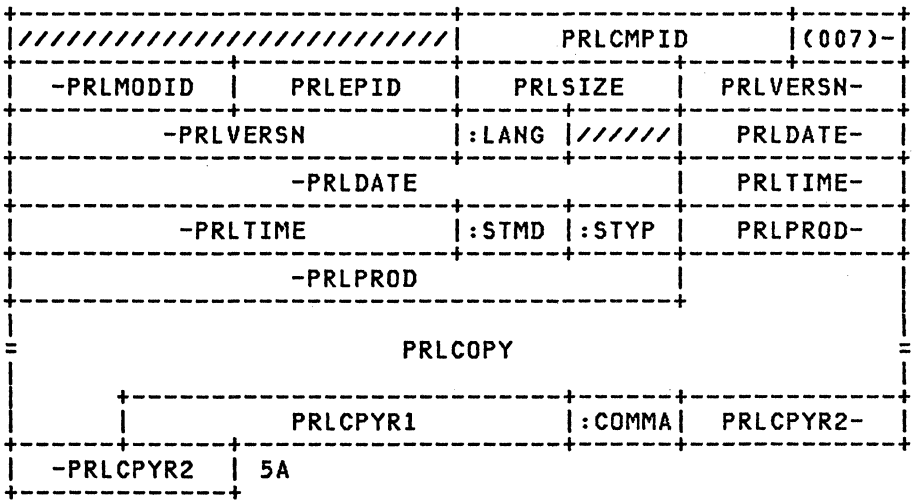
CREATED BY:

THE HCPPROLG MACRO AT ASSEMBLY TIME

DELETED BY:

NONE

PRLOG - LAYOUT FOR PROLOG AT BEGINNING OF MODULE



disp	name	length	description
000		CL4	BRANCH AROUND PROLOGUE
004	PRLFLNAM	008	FULL NAME OF ENTITY
004	PRLMODNM	006	NAME OF MODULE
004	PRLCMPID	003	COMPONENT ID
007	PRLMODID	003	MODULE ID
00A	PRLEPID	002	ENTRY POINT IDENTIFIER, IF APPRO
00C	PRLSIZE	002	SIZE OF MODULE IN DOUBLEWORDS
00E	PRLVERSN	006	VERSION OF SYSTEM (AS SET BY HCPOPTNS)
014	PRLLANG	001	LANGUAGE USED
	CODES DEFINED IN PRLLANG (AT HEX DISPLACEMENT: 14)		
	C1 PRLASM		C'A' - ASSEMBLER LANGUAGE
	C8 PRLHLL		C'H' - HIGHER LEVEL LANGUAGE
015		XL1	RESERVED FOR FUTURE IBM USE
016	PRLDATE	008	DATE OF ASSEMBLY (MM/DD/YY)
01E	PRLTIME	006	TIME OF ASSEMBLY (:HH.MM)
024	PRLSTMD	001	STORAGE MODE
	CODES DEFINED IN PRLSTMD (AT HEX DISPLACEMENT: 24)		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          C9     PRLINIT     C'I' - INITIALIZATION MODULE
          D9     PRLRES      C'R' - RESIDENT MODULE
          D7     PRLPAG      C'P' - PAGABLE MODULE

025     PRLSTYP     001       STORAGE TYPE

          CODES DEFINED IN PRLSTYP  (AT HEX DISPLACEMENT: 25)

          C5     PRLREENT    C'E' - REENTERABLE MODULE
          E2     PRLREUSE    C'S' - REUSEABLE MODULE
          D5     PRLNONRU    C'N' - NONREUSEABLE MODULE
          C6     PRLRFRSH    C'F' - REFRESHABLE MODULE

026     PRLPROD     008       PRODUCT NUMBER
02E     PRLCOPY     035       - (C) COPYRIGHT IBM CORPORATION - '
                              COPYRIGHT STATEMENT
051     PRLCPYR1    004       YEAR FIRST COPYRIGHTED

                      EQUATES

          0B     PRLSIZE1    SIZE OF PRLOG IF ONLY 1 YEAR

055     PRLCOMMA    001       COMMA (ONLY IF THERE IS A
                              SECOND YEAR)
056     PRLCPYR2    004       YEAR LAST COPYRIGHTED (NOT
                              NECESSARY IF SAME AS PRLCPYR1)

                      EQUATES

          0C     PRLSIZE2    SIZE OF PRLOG WITH 2 YEARS
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
PRLASM	001	0C1	PRLTIME	006	01E
PRLCMPID	003	004	PRLVERSN	006	00E
PRLCOMMA	001	055			
PRLCOPY	035	02E			
PRLCPYR1	004	051			
PRLCPYR2	004	056			
PRLDATE	008	016			
PRLEPID	002	00A			
PRLFLNAM	008	004			
PRLHLL	001	0C8			
PRLINIT	001	0C9			
PRLLANG	001	014			
PRLMODID	003	007			
PRLMODNM	006	004			
PRLNONRU	001	0D5			
PRLOG	001	000			
PRLPAG	001	0D7			
PRLPROD	008	026			
PRLREENT	001	0C5			
PRLRES	001	0D9			
PRLREUSE	001	0E2			
PRLRFRSH	001	0C6			
PRLSIZE	002	00C			
PRLSIZE1	001	00B			
PRLSIZE2	001	00C			
PRLSTMD	001	024			
PRLSTYP	001	025			

HCPPROBK— PROTECT BLOCK

DSECT NAME: PROBK

DESCRIPTIVE NAME: PROTECT BLOCK

FUNCTION: USED TO DEFINE ERROR(S) FROM WHICH A VIRTUAL MACHINE IN PROTECTED APPLICATION ENVIRONMENT HAS BEEN SHIELDED.

LOCATED BY:

VMDPROBK FIELD IN USER'S VMDBK

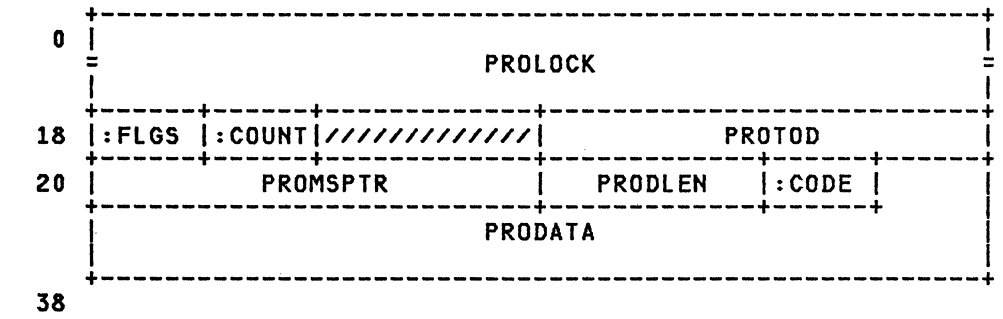
CREATED BY:

HCPREIPB
HCPREIPQ

DELETED BY:

HCPCNCRL

PROBK - PROTECT BLOCK



disp	name	length	description
000	PROLOCK	008	LOCK FOR UPDATING AND ACCESSING THIS PROTECT BLOCK
018	PROFLGS	001	PROTECT BLOCK STATUS FLAGS
	BITS DEFINED IN PROFLGS (AT HEX DISPLACEMENT: 18)		
	80 PROIPL		IPL HAS NOT OCCURRED SINCE THE ERROR HAS BEEN RECORDED
019	PROCOUNT	001	NUMBER OF ATTEMPTED IPLS SINCE PROTECTED APPLICATION ENVIRONMENT ESTABLISHED
	EQUATES		
	0A PROIPLMT		LIMIT FOR NUMBER OF RE-IPL ATTEMPTS
01A		H	RESERVED FOR IBM USE
01C	PROTOD	004	TIME-OF-DAY OF LAST ATTEMPTED RE-IPL FOR USER (HIGH-ORDER PART OF CLOCK ONLY)
020	PROMSPTR	004	POINTER TO QUEUE OF ERROR MSG BUFFERS
			THE FOLLOWING FIELDS CONTAIN INFORMATION RETURNED BY DIAG X'B0'
024	PRODLEN	002	LENGTH OF VARIABLE ERROR DATA
026	PROCODE	001	ERROR CODE
027	PRODATA	017	VARIABLE ERROR DATA
	EQUATES		
	07 PROSIZE		PRO BLOCK SIZE IN DW'S
	38 PROLEN		PRO BLOCK SIZE IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp
PROBK	001	000
PROCODE	001	026
PROCOUNT	001	019
PRODATA	017	027
PRODLEN	002	024
PROFLGS	001	018
PROIPL	001	080
PROIPLMT	001	00A
PROLEN	001	038
PROLOCK	008	000
PROMSPTR	004	020
PROSIZE	001	007
PROTOD	004	01C

HCPQSFBK— QUERY SPOOL FILES DESCRIPTOR BLOCK

DSECT NAME: QSFBK

DESCRIPTIVE NAME: QUERY SPOOL FILES DESCRIPTOR BLOCK

FUNCTION: TO CONTAIN QUERY CHARACTERISTICS FOR QUERY FILES, RDR, PRT, PUN, NSS, IMG, UCR, TRF, AND NLS COMMANDS

LOCATED BY:

HCPCQF - QUERY COMMAND PARSING
HCPCQP - QUERY RESPONSE HEADINGS
HCPSRQ - QUERY COMMAND PROCESSING

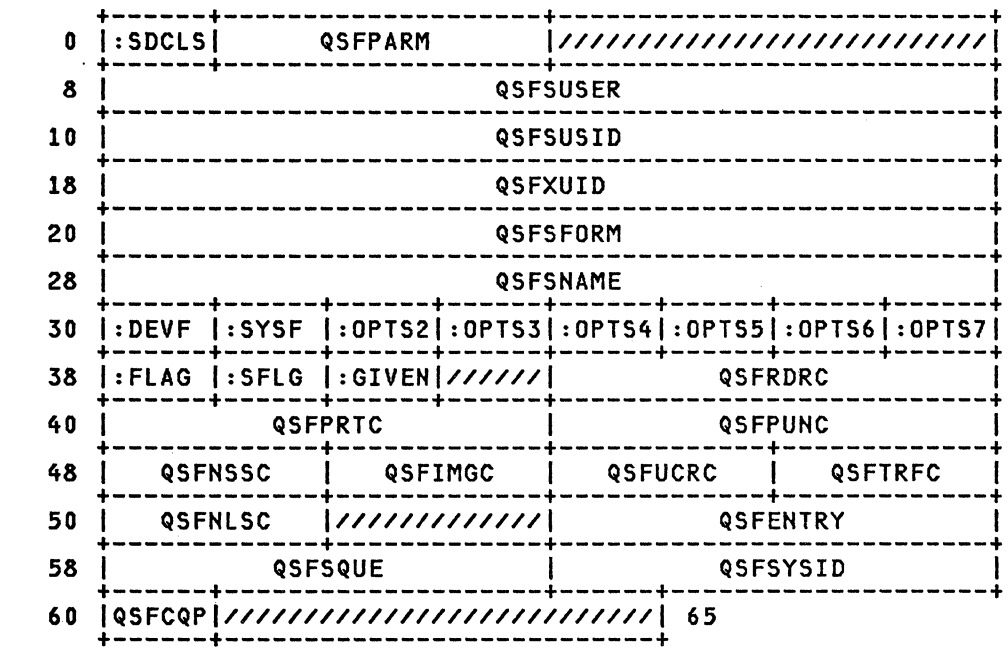
CREATED BY:

HCPCQF.BLDQSFBK - CALL HCPFREE TO ALLOCATE
WORK SPACE FOR COMMAND PROCESSING.

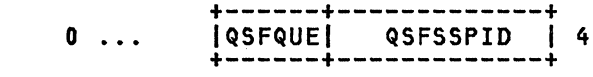
DELETED BY:

HCPCQF.SEARCHQ - RELEASE THE ALLOCATED STORAGE

QSFBK - QUERY SPOOL FILES DESCRIPTOR BLOCK



REDEFINITION -



disp	name	length	description
000	QSFSDCLS	001	SAVED DISTRIBUTION CLASS
001	QSFPARM	001	PARAMETERS FOR HCPSCS
004		F	RESERVED
008	QSFSUSER	008	SAVED USERID
010	QSFSUSID	008	SAVE THE ISSUER'S USERID
018	QSFXUID	008	SAVED XFERRED USERID

```
020   QSFSFORM   008      SAVED FORM NAME OR NUMBER
028   QSFSNAME   008      SAVED FILENAME
030   QSFDEVF    001

        BITS DEFINED IN QSFDEVF  (AT HEX DISPLACEMENT: 30)

        80    QSFPRT      QUERY PRT SPECIFIED
        40    QSFRDR      QUERY RDR SPECIFIED
        20    QSFPUN      QUERY PUN SPECIFIED
        10    QSFFILE     QUERY FILES SPECIFIED

031   QSFSYSF    001

        BITS DEFINED IN QSFSYSF  (AT HEX DISPLACEMENT: 31)

        80    QSFIMG      QUERY IMG SPECIFIED
        40    QSFNSS      QUERY NSS SPECIFIED
        20    QSFUCR      QUERY UCR SPECIFIED
        10    QSFSDF      QUERY SDF SPECIFIED
        08    QSFTRF      QUERY TRF SPECIFIED
        04    QSFNLS      QUERY NLS SPECIFIED
        FC    QSFDATA     DATA FILES

032   QSFOPTS2   001

        BITS DEFINED IN QSFOPTS2 (AT HEX DISPLACEMENT: 32)

        80    QSFUID      SPECIFIED USERID
        40    QSFSYS      SYSTEM REQUEST(DEFAULT CLASS D)
        20    QSFSPLAT    LOOKING FOR OWN USERID
        E0    QSFOPT2     OPTIONS2

033   QSFOPTS3   001

        BITS DEFINED IN QSFOPTS3 (AT HEX DISPLACEMENT: 33)

        80    QSFCLASS    LOOKING FOR MATCHING CLASS
        40    QSFFORM     LOOKING FOR FORMNAME
        20    QSFSPID     LOOKING FOR SPOOLID
        10    QSFSDFA     SDF FILES WITH 'ALL'
        08    QSFNAME     LOOKING FOR FILENAME
        04    QSFMAYBE    POSSIBLE SPOOLID
        F8    QSFOPT3

034   QSFOPTS4   001

        BITS DEFINED IN QSFOPTS4 (AT HEX DISPLACEMENT: 34)

        80    QSFHLDY     LOOKING FOR HELD FILES
        40    QSFHLDN     LOOKING FOR NOT-HELD FILES
        20    QSFSYSY     LOOKING FOR SYSTEM HELD FILES
        10    QSFUSERY    LOOKING FOR USER HELD FILES
        F0    QSFOPT4     OPTIONS4

035   QSFOPTS5   001

        BITS DEFINED IN QSFOPTS5 (AT HEX DISPLACEMENT: 35)

        80    QSFEXP      GIVE EXPANDED INFORMATION
        40    QSFXFER     LOOKING FOR XFERRED FILES
        20    QSFONE      FOUND AN OPTION
        10    QSFHDR      A HEADER HAS BEEN SENT
        08    QSFEHDR     EXPANDED HDR HAS BEEN SENT
        04    QSFALL      LOOKING FOR ALL SPOOL FILES
        02    QSFAVAIL    AVAILABLE FILES ONLY

036   QSFOPTS6   001

        BITS DEFINED IN QSFOPTS6 (AT HEX DISPLACEMENT: 36)

        80    QSFXUSER    COUNT XFERRED FILES TO USERID
        40    QSFXALL     LOOKING FOR ALL XFERRED FILES
```

```
037   QSFOPTS7   001

        BITS DEFINED IN QSFOPTS7 (AT HEX DISPLACEMENT: 37)

        80     QSFMAP      MAP OPERAND SPECIFIED
        40     QSFCOUNT    COUNT OPERAND SPECIFIED

038   QSFFLAG    001       QUEUE INDICATOR

        BITS DEFINED IN QSFFLAG  (AT HEX DISPLACEMENT: 38)

        80     QSFALLU     SYSTEM QUEUES

039   QSFSFLG    001       SEARCHQ INDICATOR

        BITS DEFINED IN QSFSFLG  (AT HEX DISPLACEMENT: 39)

        80     QSFSON      RETURN TO SEARCHQ
        40     QSFERR      SEND ERROR RESPONSE

03A   QSFGIVEN   001       OPTION PREVIOUSLY GIVEN FOR
                           CHECKING CONFLICTING OPTIONS
03B              X         RESERVED
03C   QSFRDRC    004       COUNT OF READER FILES
040   QSFPRTC    004       COUNT OF PRINT FILES
044   QSFPUNC    004       COUNT OF PUNCH FILES
048   QSFNSSC    002       COUNT OF NSS FILES
04A   QSFIMGC    002       COUNT OF IMG FILES
04C   QSFUCRC    002       COUNT OF UCR FILES
04E   QSFTRFC    002       COUNT OF TRFILES
050   QSFNLSC    002       COUNT OF NLS FILES
052              H         RESERVED
054   QSFENTRY   004       USER'S FILID TABLE ENTRY
058   QSFSQUE    004       ADDRESS OF SYSTEM QUEUE
05C   QSFSYSID   004       SYSTEM SPOOLID FOR SCAN
060   QSFCQP     001       PARAMETERS TO HCPCQP
061              4X        RESERVED

                    EQUATES

        0D     QSFSIZE     SIZE OF QSFBK IN DBLWORDS


         REDEFINITION -

001   QSFQUE     001       FILE QUEUE FLAGS
002   QSFSSPID   002       SAVED SPOOLID
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
QSFALL	001	004	QSFEXP	001	080	QSFNAME	001	008
QSFALLU	001	080	QSFFILE	001	010	QSFNLS	001	004
QSFAVAIL	001	002	QSFFLAG	001	038	QSFNLSC	002	050
QSFBK	001	000	QSFFORM	001	040	QSFNSS	001	040
QSFCLASS	001	080	QSFGIVEN	001	03A	QSFNSSC	002	048
QSFCOUNT	001	040	QSFHDR	001	010	QSFONE	001	020
QSFCQP	001	060	QSFHLDN	001	040	QSFOPTS2	001	032
QSFDATA	001	0FC	QSFHLDY	001	080	QSFOPTS3	001	033
QSFDEVF	001	030	QSFIMG	001	080	QSFOPTS4	001	034
QSFEHDR	001	008	QSFIMGC	002	04A	QSFOPTS5	001	035
QSFENTRY	004	054	QSFMAP	001	080	QSFOPTS6	001	036
QSFERR	001	040	QSFMAYBE	001	004	QSFOPTS7	001	037

Name	Len	Val/Disp
QSFOPT2	001	0E0
QSFOPT3	001	0F8
QSFOPT4	001	0F0
QSFPARM	001	001
QSFPRT	001	080
QSFPRTC	004	040
QSFPUN	001	020
QSFPUNC	004	044
QSFQUE	001	001
QSFRDR	001	040
QSFRDRC	004	03C
QSFSDCLS	001	000
QSFSDF	001	010
QSFSDFA	001	010
QSFSFLG	001	039
QSFSFORM	008	020
QSFSIZE	001	00D
QSFSNAME	008	028
QSFSON	001	080
QSFSPID	001	020
QSFSPLAT	001	020
QSFSQUE	004	058
QSFSSPID	002	002
QSFSUSER	008	008
QSFSUSID	008	010
QSFSYS	001	040
QSFSYSF	001	031
QSFSYSID	004	05C
QSFSYSY	001	020
QSFTRF	001	008
QSFTRFC	002	04E
QSFUCR	001	020
QSFUCRC	002	04C
QSFUID	001	080
QSFUSERY	001	010
QSFXALL	001	040
QSFXFER	001	040
QSFXUID	008	018
QSFXUSER	001	080

HCPRCCBK— RCPU DATA AREA MAPPING

DSECT NAME: RCCBK

DESCRIPTIVE NAME: RCPU DATA AREA MAPPING

FUNCTION: THIS CONTROL BLOCK MAPS THE RCPU DATA AREA AND DEFINES CONSTANTS USED BY THE RCPU SUBSYSTEM.

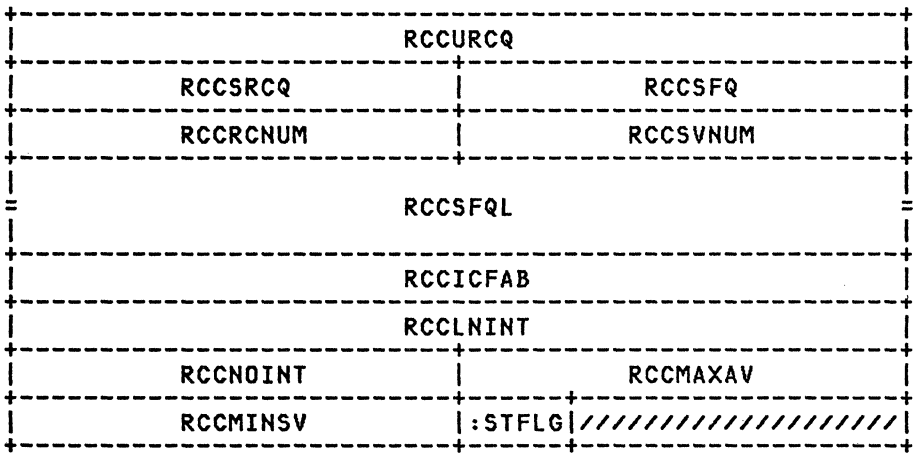
CREATED BY:

SYSTEM INITIALIZATION

DELETED BY:

SYSTEM TERMINATION

RCCBK - RCPU DATA MAPPING AREA



disp	name	length	description
000	RCCURCQ	008	SAVBK RECLAIM QUEUE (UNSORTED)
008	RCCSRCQ	004	SAVBK RECLAIM QUEUE (SORTED)
00C	RCCSFQ	004	SAVE FRAME QUEUE
010	RCCRCNUM	004	NUMBER OF SAVBKS BEING RECLAIMED
014	RCCSVNUM	004	NUMBER OF SAVBKS ALLOCATED
018	RCCSFQL	008	SAVE FRAME QUEUE LOCK
030	RCCICFAB	008	INCOMPLETE FRAME RECLAIM TIME LIMIT
038	RCCLNINT	008	SAMPLING PERIOD, 30 SECONDS
040	RCCNOINT	004	NUMBER OF INTERVALS TO AVERAGE
			EQUATES
	08 RCCMXAVS		SCALING FACTOR FOR BELOW &VX1NASG
044	RCCMAXAV	004	MAXIMUM PERCENTAGE OF BUFFERS AVAILABLE
048	RCCMINSV	004	MINIMUM NUMBER OF SAVEAREAS PER PROCESSOR
04C	RCCSTFLG	001	FREE STORAGE AVAILABILITY FLAGS
			BITS DEFINED IN RCCSTFLG (AT HEX DISPLACEMENT: 4C)
	80 RCCSAVL		FREE STORAGE AVAILABLE FOR SAVBKS
04D		3X	RESERVED FOR FUTURE IBM USE

CROSS REFERENCE

Name	Len	Val/Disp
RCCBK	001	000
RCCICFAB	008	030
RCCLNINT	008	038
RCCMAXAV	004	044
RCCMINSV	004	048
RCCMXAVS	001	008
RCCNOINT	004	040
RCCRCNUM	004	010
RCCSAVL	001	080
RCCSFQ	004	00C
RCCSFQL	008	018
RCCSRCQ	004	008
RCCSTFLG	001	04C
RCCSVNUM	004	014
RCCURCQ	008	000

HCPRCPTE— REFERENCE AND CHANGE PRESERVATION TABLE ENTRY

DSECT NAME: RCPTE

DESCRIPTIVE NAME: REFERENCE AND CHANGE PRESERVATION TABLE ENTRY

FUNCTION: A REFERENCE AND CHANGE PRESERVATION TABLE ENTRY IS USED TO KEEP TRACK OF THE REFERENCE AND CHANGE BITS FOR A 4K PAGE OF VIRTUAL STORAGE.

LOCATED BY:

THERE ARE NO POINTERS TO RCP TABLE ENTRIES IN THE SYSTEM. THESE ENTRIES MAY RESIDE IN ONE OF THREE PLACES:
1) A RESIDENT RCP PAGE (MAPPED THROUGH THE HOST VIRTUAL ADDRESS SPACE),
2) THE RCP BACKUP AREA IN THE PGMBK, OR
3) THE PGSTES CORRESPONDING TO THE PAGES THE RCP DATA REPRESENTS.

CREATED BY:

IF THE STORAGE KEY ASSIST IS NOT BEING UTILIZED:
HCPPTRCP - RCP PAGES ARE BUILT WHEN SIE PAGE FAULTS ON AN RCP PAGE.
HCPRCIRS - MOVES RCP DATA FROM THE RCP PAGE TO THE RCP BACKUP AREA.
IF THE STORAGE KEY ASSIST IS BEING UTILIZED:
HCPBPBCU - CREATES A PGMBK AND THEREFORE PGSTES THAT WILL CONTAIN RCPTES.

DELETED BY:

HCPRPBPA - THE RCP AREA IS CLEARED WHEN THE VIRTUAL STORAGE IS RESET. AN RCP PAGE MAY BE STOLEN BUT THE ACTUAL RCP TABLE WILL EXIST UNTIL THE PGMBK IS RELEASED. WHEN AN RCP PAGE IS STOLEN, THE BYTES ARE BACKED UP IN THE CORRESPONDING PGMBKS BY HCPRCISA.

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

RCPTE - REFERENCE AND CHANGE TABLE ENTRY

disp	name	length	description
000	RCPBYTE	001	HARDWARE RCP BYTE FOR ONE 4K PAGE THE RCP (REFERENCE AND CHANGE PRESERVATION) AREA IS USED TO ALLOW THE HARDWARE REFERENCE AND CHANGE BITS FOR A SINGLE REAL PAGE TO RECORD REFERENCE AND CHANGE INFORMATION FOR USE BY BOTH THE GUEST AND BY THE HOST. WHENEVER THE HARDWARE EMULATES A GUEST SET STORAGE KEY (SSK) INSTRUCTION, THE OLD VALUE OF THE R/C BITS FROM THE REAL PAGE ARE OR'ED INTO THE HOST R/C BITS IN THE RCP AREA, THEN THE REAL R/C BITS ARE SET TO ZERO, AND THE NEW GUEST R/C BITS ARE PLACED IN THE RCP BYTE GUEST R/C BITS. WHEN THE HARDWARE EMULATES A GUEST RESET REFERENCE BIT (RRB) INSTRUCTION, THE CONDITION CODE IS DETERMINED FROM THE LOGICAL OR OF THE R/C BITS IN THE REAL PAGE WITH THE GUEST R/C BITS FROM THE RCP AREA BYTE FOR THAT PAGE. THE OLD VALUE OF THE REFERENCE BIT IN THE REAL PAGE IS OR'ED INTO THE HOST BACKUP REFERENCE BIT IN THE RCP AREA BYTE, AND

THE REAL PAGE REFERENCE BIT PLUS THE GUEST BACKUP REFERENCE BIT IN THE RCP BYTE ARE SET TO ZERO.

WHEN THE HARDWARE EMULATES A GUEST INSERT STORAGE KEY INSTRUCTION, THE GUEST IS GIVEN THE KEY FROM REAL STORAGE, PLUS THE R/C BITS FROM THE REAL PAGE OR'ED WITH THE GUEST BACKUP R/C BITS FROM THE RCP AREA BYTE FOR THAT PAGE.

WHEN SOFTWARE MODIFIES THE R/C BITS IN REAL STORAGE WHICH REPRESENTS A GUEST PAGE, THE SOFTWARE WILL LOGICALLY OR THE R/C BITS FROM REAL STORAGE INTO THE GUEST BACKUP R/C BITS FOR THAT PAGE PRIOR TO MODIFYING THE REAL STORAGE R/C BITS.

IN ORDER THAT ONLY ONE CPU IS ACCESSING A PARTICULAR RCP AREA BYTE AT A TIME (EITHER BY EMULATION HARDWARE OR BY SOFTWARE SIMULATION), A LOCK BIT IS DEFINED IN THE RCP AREA BYTE. PRIOR TO STARTING ANY OPERATION INVOLVING THE RCP AREA, A LOCK IS OBTAINED ON THE RCP AREA BYTE BY ATTEMPTING TO COMPARE-AND-SWAP THE LOCK BIT ON. IF THE HARDWARE EMULATION FACILITY IS UNABLE TO OBTAIN THE LOCK, THE INSTRUCTION WILL BE PRESENTED TO SOFTWARE AS AN INSTRUCTION INTERCEPTION.

BITS DEFINED IN RCPBYTE (AT HEX DISPLACEMENT: 0)

80	RCPLOCK	RCP LOCK HELD
40	RCPHREF	HOST BACKUP REFERENCE BIT
20	RCPHCH	HOST BACKUP CHANGE BIT
60	RCPHOST	MASK FOR HOST BITS
04	RCPGREF	GUEST BACKUP REFERENCE BIT
02	RCPGCH	GUEST BACKUP CHANGE BIT
06	RCPGUEST	MASK FOR GUEST BITS

001 RCPNEXT 001 NEXT RCP BYTE (ONLY TO BE USED IF THE STORAGE KEY ASSIST IS NOT BEING UTILIZED)

CROSS REFERENCE

Name	Len	Val/Disp
RCPBYTE	001	000
RCPGCH	001	002
RCPGREF	001	004
RCPGUEST	001	006
RCPHCH	001	020
RCPHOST	001	060
RCPHREF	001	040
RCPLOCK	001	080
RCPNEXT	001	001
RCPTE	001	000

HCPRDCBK— REAL DEVICE CHARACTERISTICS BLOCK

DSECT NAME: RDCBK

DESCRIPTIVE NAME: REAL DEVICE CHARACTERISTICS BLOCK

FUNCTION: THE REAL DEVICE BLOCK IS USED TO MANAGE THE REAL DEVICE.

LOCATED BY:

RDEVRDCA FIELD OF RDEV - ADDRESS OF THE RDCBK ENTRY FOR SPECIFIED DEVICE TYPE.

CREATED BY:

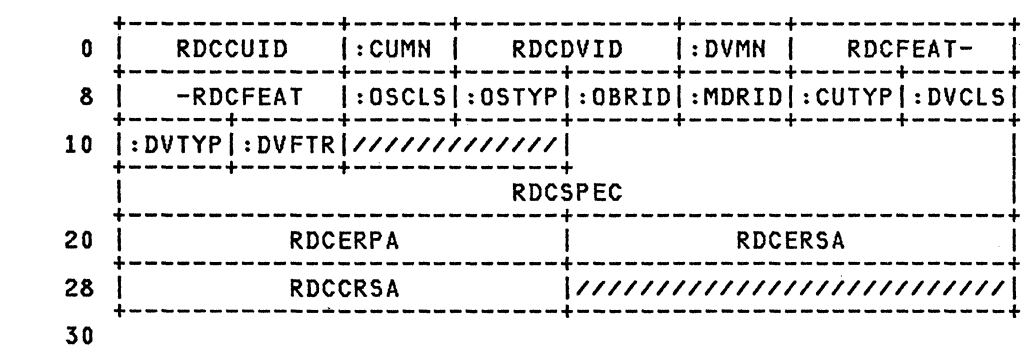
RDCBK'S ARE STATIC AND ARE PART OF THE FOLLOWING MODULES:

HCPIDA - DASD DEVICE TYPE CONVERSION TABLE.
HCPIGR - GRAF DEVICE TYPE CONVERSION TABLE.
HCPISP - SPOOL DEVICE TYPE CONVERSION TABLE.
HCPITP - TAPE DEVICE TYPE CONVERSION TABLE.
HCPISL - SPEC DEVICE TYPE CONVERSION TABLE.

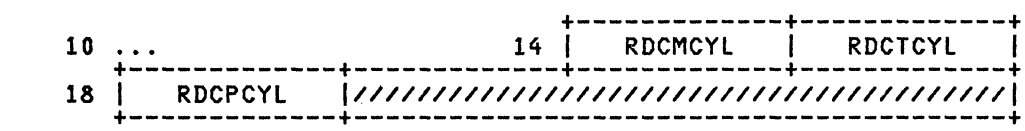
DELETED BY:

RDCBK'S ARE STATIC AND ARE NEVER DELETED. SEE CREATED BY FOR MODULE LIST.

RDCBK - REAL DEVICE CHARACTERISTICS BLOCK



REDEFINITION - DASD SPECIFIC AREA



disp	name	length	description
000	RDCCUID	002	CONTROL UNIT IDENTIFIER
002	RDCCUMN	001	CONTROL UNIT MODEL
003	RDCDVID	002	DEVICE IDENTIFIER
005	RDCDVMN	001	DEVICE MODEL
006	RDCFEAT	004	DEVICE FEATURES
00A	RDCOSCOD	002	OS DEVICE CODES
00A	RDCOSCLS	001	OS DEVICE CLASS CODE
00B	RDCOSTYP	001	OS DEVICE TYPE CODE THE NEXT THREE BYTES MATCH BYTES 40-42 OF THE 'READ DEVICE CHARACTERISTICS' RESPONSE.
00C	RDCOBRID	001	OBR IDENTIFIER
00D	RDCMDRID	001	MDR IDENTIFIER
00E	RDCCUTYP	001	CONTROL UNIT TYPE CODE

```
                                VM/XA INTERNAL DEVICE TYPE CODES
00F   RDCDVCLS    001           VM/XA DEVICE CLASS CODE
010   RDCDVTYP    001           VM/XA DEVICE TYPE CODE
011   RDCDVFTR    001           VM/XA DEVICE FEATURE CODE
012               XL2           RESERVED FOR FUTURE IBM USE
                                DEVICE SPECIFIC AREA
014   RDCSPEC     012           DEVICE SPECIFIC AREA
                                ERROR RECOVERY AREA
020   RDCERPA     004           ERROR RECOVERY PROCEDURE ADDRESS
024   RDCERSA     004           ERROR RECOVERY SPECIFIC. ADDRESS
028   RDCCRSA     004           CHANNEL ERROR RECOVERY SPEC. ADDR
02C               AL4           RESERVED FOR FUTURE IBM USE
```

EQUATES

```
  30     RDCLEN       LENGTH OF THE RDCBK IN BYTES
  06     RDCSIZE      LENGTH OF THE RDCBK IN DOUBLEWORDS
```

REDEFINITION - DASD SPECIFIC AREA

```
014   RDCMCYL     002           DASD - NUMBER OF PRIMARY CYL.
016   RDCTCYL     002           DASD - TOTAL NUMBER OF CYLINDERS
018   RDCPCYL     002           DASD - NUMBER OF PAGES/CYLINDER
01A               XL6           RESERVED FOR FUTURE IBM USE
```

CROSS REFERENCE

Name	Len	Val/Disp
RDCBK	001	000
RDCCRSA	004	028
RDCCUID	002	000
RDCCUMN	001	002
RDCCUTYP	001	00E
RDCDVCLS	001	00F
RDCDVFTR	001	011
RDCDVID	002	003
RDCDVMN	001	005
RDCDVTYP	001	010
RDCERPA	004	020
RDCERSA	004	024
RDCFEAT	004	006
RDCLEN	001	030
RDCMCYL	002	014
RDCMDRID	001	00D
RDCOBRID	001	00C
RDCOSCLS	001	00A
RDCOSCOD	002	00A
RDCOSTYP	001	00B
RDCPCYL	002	018
RDCSIZE	001	006
RDCSPEC	012	014
RDCTCYL	002	016

HCPRDEV— REAL DEVICE CONTROL BLOCK

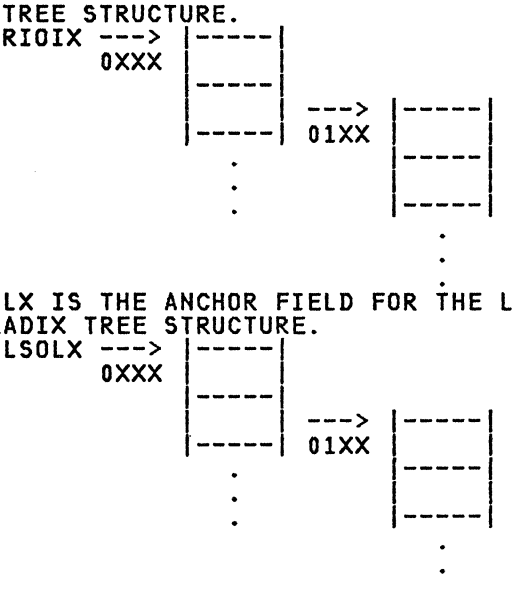
DSECT NAME: RDEV

DESCRIPTIVE NAME: REAL DEVICE CONTROL BLOCK

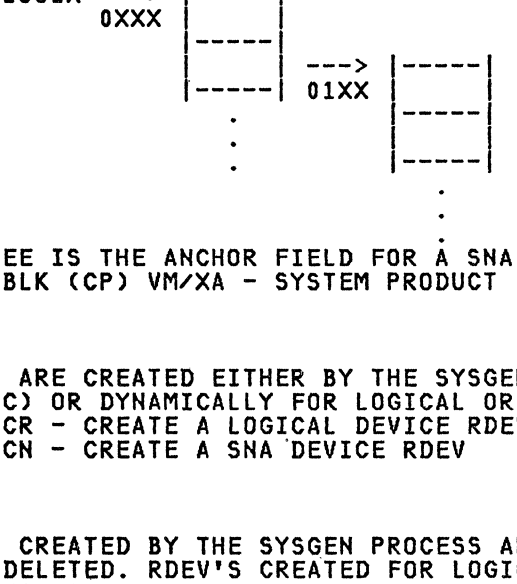
FUNCTION: THE REAL DEVICE BLOCK IS USED TO MANAGE THE REAL DEVICE.

LOCATED BY:

HCPRIOIX IS THE ANCHOR FIELD FOR THE RDEV
RADIX TREE STRUCTURE.



HCPLSOLX IS THE ANCHOR FIELD FOR THE LOGICAL DEVICE
RDEV RADIX TREE STRUCTURE.



VSMRTREE IS THE ANCHOR FIELD FOR A SNA DEVICE RDEV

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

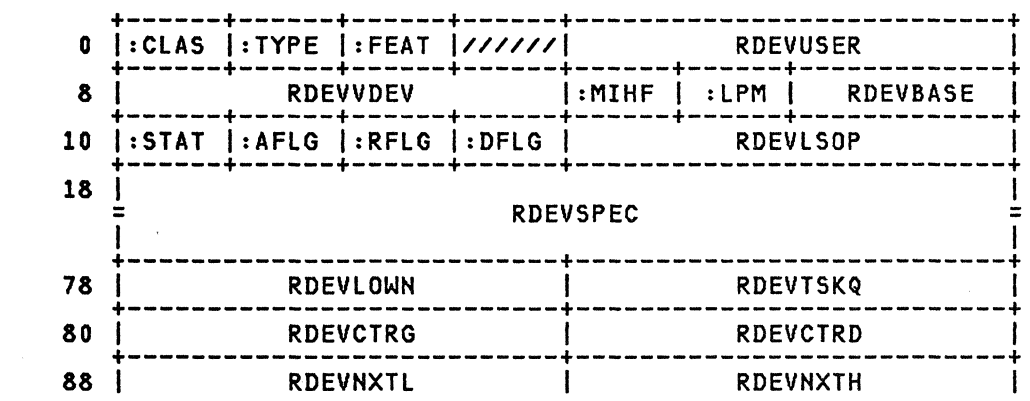
CREATED BY:

RDEV'S ARE CREATED EITHER BY THE SYSGEN PROCESS
(STATIC) OR DYNAMICALLY FOR LOGICAL OR SNA DEVICES.
HCPLSOCR - CREATE A LOGICAL DEVICE RDEV
HCPVCTCN - CREATE A SNA DEVICE RDEV

DELETED BY:

RDEV'S CREATED BY THE SYSGEN PROCESS ARE STATIC AND ARE
NEVER DELETED. RDEV'S CREATED FOR LOGICAL OR SNA DEVICE
ARE DYNAMIC AND ARE DELETED WHEN NO LONGER REQUIRED.
HCPLSODD - DESTROY A LOGICAL DEVICE RDEV
HCPVCZRL - DESTROY A SNA DEVICE RDEV
HCPVCZRS - DESTROY A SNA DEVICE RDEV

RDEV - REAL DEVICE CONTROL BLOCK



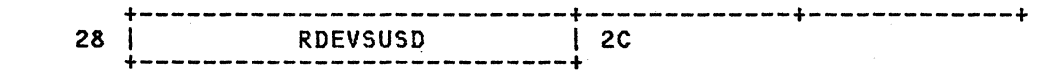

```
    +-------------------------+-------------------------+
 90 |        RDEVNXTI         |        RDEVNXTW         |
    +-------------------------+------+------+-----------+
 98 |        RDEVAIOR         |:SID0 |:SID1 |  RDEVSUB  |
    +-----------+-------------+------+------+-----------+
 A0 |  RDEVDEV  |  RDEVMBI    |        RDEVMBLK         |
    +-----------+------+------+-----------+------+------+
 A8 |  RDEVCUID |:CUMN |:IDFL |  RDEVDVID |:DVMN |//////|
    +-----------+------+------+-----------+------+------+
 B0 |        RDEVERPA         |        RDEVMIH          |
    +-------------------------+-------------------------+
 B8 |        RDEVSDR          |        RDEVWTDV         |
    +-------------------------+-------------------------+
 C0 |        RDEVCTIO         |        RDEVCTRS         |
    +-------------------------+-------------------------+
 C8 |        RDEVCTRU         |        RDEVCTSN         |
    +-------------------------+-------------------------+
 D0 |        RDEVCTSS         |        RDEVCTSR         |
    +-------------------------+-------------------------+
 D8 |        RDEVCTSI         |        RDEVCTUI         |
    +-------------------------+-------------------------+
 E0 |        RDEVRCWH         |        RDEVRCWP         |
    +-------------------------+-------------------------+
 E8 |                      RDEVRTPD                     |
    +-------------------------+-------------------------+
 F0 |        RDEVMICT         |        RDEVSKCT         |
    +-------------------------+-------------------------+
 F8 |        RDEVSKSM         |        RDEVHFSD         |
    +-------------------------+------+------------------+
100 |        RDEVHFLK         |:MONS |//////////////////|
    +-------------------------+------+------+------+-----+
108 |        RDEVRDCA         |:CHP0 |:CHP1 |:CHP2 |:CHP3|
    +------+------+------+-----+------+------+------+-----+
110 |:CHP4 |:CHP5 |:CHP6 |:CHP7|RDEVDP| :PAM |:RVPT | :LPO|
    +------+------+------+-----+------+------+------+-----+
118 | :PIM |:PFLG | :OBS |//////////////////////////////|
    +------+------+------+------+-----------------------+
120 |        RDEVSNA         |        RDEVTRC          |
    +-------------------------+-------------------------+
128
```

REDEFINITION - DIRECT ACCESS STORAGE DEVICES

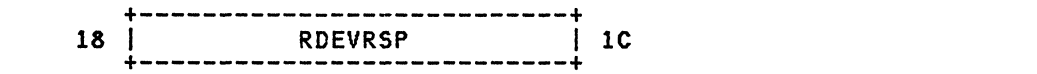
```
    +-------------------------+-------------------------+
 18 |        RDEVMDSK         |        RDEVVOL          |
    +-------------------------+-----------+-------------+
 20 |              RDEVSER                |  RDEVCYL    |
    +-------------+-----------+-----------+-------------+
 28 |  RDEVHRCT   |///////////|  RDEVFCYL |  RDEVMCYL   |
    +-------------+-----------+-----------+-------------+
 30 |  RDEVPCYL   |  RDEVLCNT |////////////////////////|
    +-------------+-----------+------------------------+
 38 |        RDEVPIOL         |        RDEVRSVQ         |
    +-------------------------+-----------+-------------+
 40 |        RDEVRTRQ         |  RDEVTCYL |///////////  |
    +-------------------------+-----------+-------------+
 48 |        RDEVCMAP         |////////////////////////|
    +-------------------------+////////////////////////|
    |////////////////////////////////////////////////////|
    =////////////////////////////////////////////////////=
    |////////////////////////////////////////////////////|
    +----------------------------------------------------+
 78
```

REDEFINITION - TAPE DRIVES

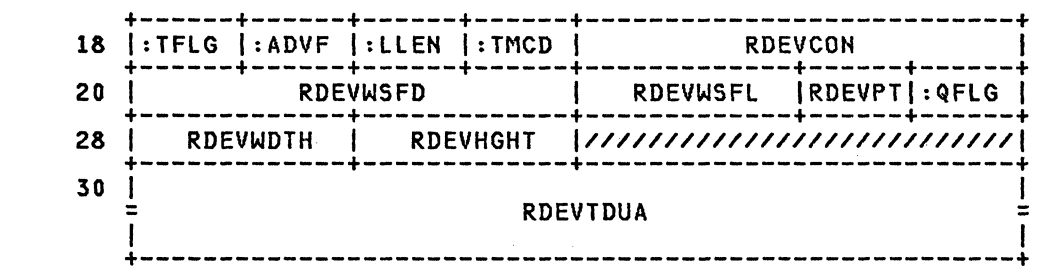
```
    +-------------------------+------+------+-----------+
 18 |        RDEVSPT          |:TPFG |//////|///////////|
    +-------------------------+------+------+-----------+
 20 |              RDEVSERT              |///////////////|
```



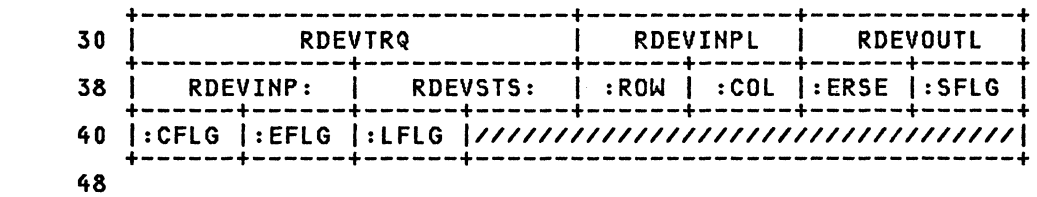
REDEFINITION - REAL SPOOLING POINTERS



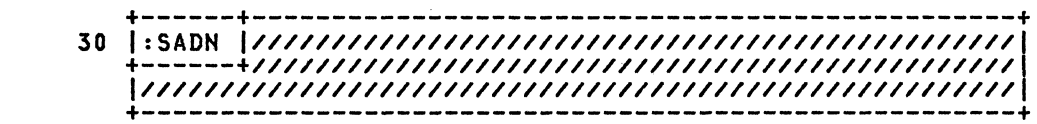
REDEFINITION - COMMON TERMINAL SPECIFIC AREA



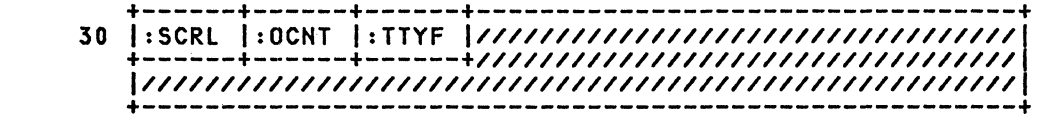
REDEFINITION - 3270 LOGICAL/LOCAL UNIQUE AREA



REDEFINITION - START/STOP TERMINAL UNIQUE AREA



REDEFINITION - TTY UNIQUE AREA



disp	name	length	description
000	RDEVDEFN	004	DEVICE DEFINITION FIELDS
000	RDEVCODE	002	DEVICE IDENTIFICATION CODE
000	RDEVCLAS	001	DEVICE CLASS

BITS DEFINED FOR RDEVCLAS BY HCPDVTYP DEVCLAS

001	RDEVTYPE	001	DEVICE TYPE

BITS DEFINED FOR RDEVTYPE BY HCPDVTYP DEVTYPE

002	RDEVFEAT	001	DEVICE FEATURES

BITS DEFINED FOR RDEVFEAT BY HCPDVTYP DEVFEAT

003		X	RESERVED FOR IBM USE
004	RDEVUSER	004	POINTER TO CONTROLLING VMDBLOCK
008	RDEVVSCH	004	OLD AND HISTORICAL NAME
008	RDEVVDEV	004	POINTER TO DEDICATED DEVICE VDEV
00C	RDEVMIHF	001	USED BY HCPMIH FOR DETECTION OF MISSING INTERRUPTION CONDITIONS.
00D	RDEVLPM	001	LOGICAL PATH MASK
00E	RDEVBASE	002	370X-EP NATIVE DEVICE ADDRESS
010	RDEVFLGS	004	DEVICE STATUS FLAGS
010	RDEVSTAT	001	DEVICE OPERATION STATUS FLAG

BITS DEFINED IN RDEVSTAT (AT HEX DISPLACEMENT: 10)

80	RDEVALID	VALID DEVICE ASSOCIATED WITH SUBCH
20	RDEVHOT	HOT I/O DEVICE
10	RDEVINRQ	DEVICE IS INTERVENTION REQUIRED
08	RDEVLOFF	OWNER IS IN LOGOFF PROCESSING
04	RDEVEXOF	OPERATOR VARIED DEVICE OFFLINE
02	RDEVVPOF	VARY PATH VARIED THE DEVICE OFFLINE

011	RDEVAFLG	001	DEVICE ALLOCATION CONTROL FLAG

BITS DEFINED IN RDEVAFLG (AT HEX DISPLACEMENT: 11)

80	RDEVOFFL	DEVICE IS OFFLINE
40	RDEVSYS	DEVICE ATTACHED TO SYSTEM
20	RDEVFREE	DEVICE IS NOT IN USE
10	RDEVCPVL	CP VOLUME IS ATTACHED (RDEVVOL)
08	RDEVDED	DEVICE ATTACHED TO USER (RDEVUSER)
04	RDEVSPL	DEVICE FOR SPOOLING (RDEVRSP)
02	RDEVMNT	VOLUME IS MOUNTED BUT NOT ATTACHED
01	RDEVXVOL	XVOLID SPECIFIED FOR DASD OR TAPE

012	RDEVRFLG	001	DEVICE ERROR RECOVERY CTL FLAG

BITS DEFINED IN RDEVRFLG (AT HEX DISPLACEMENT: 12)

80	RDEVWTDE	MESSAGE HANDLER WAIT FOR DEVICE END
40	RDEVIRM	INTENSIVE RECORDING MODE ACTIVE
20	RDEVINTR	DEVICE INTERVENTION REQUIRED WAIT
10	RDEVRSET	DEVICE IS BEING RESET
08	RDEVCONC	CONTINGENT CONNECTION FOR SENSE
04	RDEVRSVD	DEVICE HAS BEEN RESERVED
02	RDEVUDEI	UNSOLICITED DEVICE END IN ERP
01	RDEVMIHM	MISSING INTERRUPT MESSAGE SENT

013	RDEVDFLG	001	DEVICE DEVICE DEPENDENT STATUS

BITS DEFINED IN RDEVDFLG (AT HEX DISPLACEMENT: 13)

80	RDEVAUTO	370X - AUTO LOAD/DUMP ACTIVE
80	RDEVSKUP	DASD - SEEK DIRECTION FOR DASD
20	RDEVHELD	DASD - RESERVE IS HELD
10	RDEVPEND	DASD - RESERVE IS PENDING
40	RDEVRLPN	DASD - RELEASE IS PENDING
08	RDEVSHAR	DASD IS SHAREABLE
04	RDEVSOFF	DASD SHARING IS TO BE SET OFF
01	RDEVCACH	DASD - SUBSET OF VOLUME IN MDCACHE
80	RDEVPSUP	TERM - PRINT SUPPRESS AVAILABLE
40	RDEVPREP	TERM - PREPARE CCW ACTIVE
20	RDEVHALT	TERM - HALT ISSUED TO DEVICE
10	RDEVIPND	TERM - IORBK ACTIVE & PENDING
08	RDEVATOF	TERM - SUPPRESS ATTENION CHAR.

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         40     RDEVSSCT    USED FOR SUSPENDING COUNTING

014    RDEVLSOP    004       LOGICAL SUBCHANNEL OBJECT POINTER
018    RDEVSPEC    096       DEVICE REDEFINITION AREA
078    RDEVSHRT    008       END OF SHORT (CASCADED) RDEV
078    RDEVLCKW    016       ENTIRE REAL DEVICE LOCKWORD
078    RDEVLOCK    008       OWNER & ANCHOR OF REAL DEVICE LOCKWORD
078    RDEVLOWN    004       ADDRESS OF LOCK OWNER'S VMDBK
07C    RDEVTSKQ    004       ANCHOR FOR QUEUE OF WAITING TASKS
080    RDEVCTRG    004       COUNT OF GRANTED RDEV LOCK REQUESTS
084    RDEVCTRD    004       COUNT OF DEFERRED RDEV LOCK REQUESTS
088    RDEVNXTL    004       NEXT LOWER  SEEK QUEUED IORBK
08C    RDEVNXTH    004       NEXT HIGHER SEEK QUEUED IORBK
090    RDEVNXTI    004       NEXT IMMEDIATE   QUEUED IORBK
094    RDEVNXTW    004       IORBK MOST-RECENTLY-QUEUED FOR
                             INTERVENTION REQUIRED CONDITION
098    RDEVAIOR    004       CURRENTLY ACTIVE I/O REQUEST
09C    RDEVSID     004       HOST SUBCHANNEL ID
09C    RDEVSID0    001       MUST BE X'00'
09D    RDEVSID1    001       MUST BE X'01'
09E    RDEVSUB     002       HOST SUBCHANNEL NUMBER
0A0    RDEVDEV     002       DEVICE NUMBER
0A2    RDEVMBI     002       HOST MEASUREMENT BLOCK INDEX
0A4    RDEVMBLK    004       HOST MEASUREMENT BLOCK
0A8    RDEVCUID    002       CONTROL UNIT ID IN PACKED DECIMAL
0AA    RDEVCUMN    001       CONTROL UNIT MODEL NUMBER
0AB    RDEVIDFL    001       IDENTIFICATION VALIDITY FLAGS

       BITS DEFINED IN RDEVIDFL (AT HEX DISPLACEMENT: AB)

         80     RDEVCUIV    CONTROL UNIT ID IS VALID, HAVING BEEN
                            OBTAINED VIA THE SENSE ID CCW.
         40     RDEVDVIV    DEVICE ID IS VALID, HAVING BEEN
                            OBTAINED VIA THE SENSE ID CCW.
                            NOTE: RDEVDVMN MAY STILL BE FILLED IN
                            WHEN THIS FLAG IS OFF, IF MODEL= WAS
                            CODED ON THE RDEVICE MACRO.

0AC    RDEVDVID    002       DEVICE ID IN PACKED DECIMAL
0AE    RDEVDVMN    001       DEVICE MODEL NUMBER
                             NOTE: RDEVDVMN IS FILLED IN BY THE
                             RDEVICE MACRO WHEN THE MODEL= OPERAND
                             IS CODED.  IT MAY LATER BE CHANGED
                             IF THE SENSE ID DURING INTIALIZATION
                             PROVIDES A DIFFERENT MODEL NUMBER.

       CODES DEFINED FOR RDEVDVMN BY HCPDVTYP DEVMODEL

0AF                X        RESERVED FOR FUTURE IBM USE
0B0    RDEVERPA    004       ERROR RECOVER PROCEDURE ADDRESS
0B4    RDEVMIH     004       MISSING INTERRUPT HANDLER BLOCK
0B8    RDEVSDR     004       ADDRESS OF STATISTICAL DATA BLOCK
0BC    RDEVWTDV    004       ADDRESS OF CPEBK FOR WAIT-DEVICE
0C0    RDEVCTIO    004       COUNT OF I/O REQUESTS QUEUED
0C4    RDEVCTRS    004       COUNT OF SUCCESSFUL ERP ATTEMPTS
0C8    RDEVCTRU    004       COUNT OF UNSUCCESSFUL ERP ATTEMPTS
0CC    RDEVCTSN    004       COUNT OF SSCH EXECUTED FOR NORMAL
                             OPERATIONS (CP INITIATED SSCH)
0D0    RDEVCTSS    004       COUNT OF SSCH EXECUTED FOR SENSE
                             OPERATIONS
0D4    RDEVCTSR    004       COUNT OF SSCH EXECUTED FOR RECOVERY
                             OPERATIONS
0D8    RDEVCTSI    004       COUNT OF I/O SOLICITED INTERRUPTS
0DC    RDEVCTUI    004       COUNT OF I/O UNSOLICITED INTERRUPTS
0E0    RDEVRCWH    004       CUMULATIVE COUNT OF NUMBER OF REAL RESERVE
                             CCWS SENT TO A DEVICE THAT ARE HELD
                             IMMEDIATELY
0E4    RDEVRCWP    004       CUMULATIVE COUNT OF NUMBER OF REAL RESERVE
                             CCWS SENT TO A DEVICE THAT ARE HELD PENDING

0E8    RDEVRTPD    008       CUMULATIVE COUNT OF THE AMOUNT OF REAL TIME
                             A REAL RESERVE CCW IS "PENDING" OR NOT
```

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                                IMMEDIATELY.
0F0   RDEVMICT    004           CUMULATIVE COUNT OF THE NUMBER OF MISSING
                                INTERRUPTS DETECTED FOR THIS DEVICE
0F4   RDEVSKCT    004           CUMULATIVE COUNT OF THE NUMBER OF SEEK CCWS
                                EXECUTED ON THIS DEVICE
0F8   RDEVSKSM    004           CUMULATIVE SUMMATION OF CYLINDER NUMBERS
                                ASSOCIATED WITH SEEK CCWS EXECUTED ON THIS
                                DEVICE
0FC   RDEVHFSD    004           POINTER TO THE HIGH-FREQUENCY FREE STORAGE
                                DATA AREA FOR THIS DEVICE
100   RDEVHFLK    004          LOCK FOR RDEVHFSD
104   RDEVMON     004          MONITOR INFORMATION
104   RDEVMONS    001          INDICATES THE MONITORING STATUS FOR THIS
                                DEVICE

        BITS DEFINED IN RDEVMONS (AT HEX DISPLACEMENT: 104)

        80     RDEVMNSD       DEVICE IS NOT BEING MONITORED FOR SAMPLE DATA

        40     RDEVMNSK       DEVICE IS BEING MONITORED FOR EVENT SEEKS

        20     RDEVMNIO       DEVICE IS BEING MONITORED FOR EVENT I/O

105                 3X         RESERVED FOR FUTURE IBM USE
108   RDEVRDCA    004          REAL DEVICE CHARACTERISTICS TBL ADDR
10C   RDEVCHPS    008          ARRAY OF CHANNEL PATH ID'S
10C   RDEVCHP0    001          CHANNEL PATH IDENTIFIER 0
10D   RDEVCHP1    001          CHANNEL PATH IDENTIFIER 1
10E   RDEVCHP2    001          CHANNEL PATH IDENTIFIER 2
10F   RDEVCHP3    001          CHANNEL PATH IDENTIFIER 3
110   RDEVCHP4    001          CHANNEL PATH IDENTIFIER 4
111   RDEVCHP5    001          CHANNEL PATH IDENTIFIER 5
112   RDEVCHP6    001          CHANNEL PATH IDENTIFIER 6
113   RDEVCHP7    001          CHANNEL PATH IDENTIFIER 7
114   RDEVDP      001          DYNAMIC PATHING FLAG

        BITS DEFINED IN RDEVDP   (AT HEX DISPLACEMENT: 114)

        80     RDEVGRPD       PATHS ARE CURRENTLY GROUPED
        40     RDEVPMNV       PATH MASK IS (OR MAY BE) NOT VALID
        20     RDEVPMIP       PATH MASK RECONSTRUCTION IN PROCESS
        10     RDEVAPGI       USE ALTERNATE PATH GROUP ID
        02     RDEVMPM        MULTIPATH MODE DP WAS ESTABLISHED
        01     RDEVSPM        SINGLE PATH MODE DP WAS ESTABLISHED

115   RDEVPAM     001          PATH AVAILABLE MASK
116   RDEVRVPT    001          MASK OF PATH RESERVE WAS ISSUED DOWN
117   RDEVLPO     001          MASK OF LOGICAL PATHS VARIED OFFLINE BY THE
118   RDEVPIM     001          PATH INSTALLED MASK
119   RDEVPFLG    001          DEVICE PROCESSING FLAG

        BITS DEFINED IN RDEVPFLG (AT HEX DISPLACEMENT: 119)

        80     RDEVCCTR       I/O TRACE ENABLED
        08     RDEVLDST       STACK WORK FOR LOGICAL DEVICE

11A   RDEVOBS     001          MASK OF LOGICAL PATHS VARIED OFFLINE BY THE
11B   RDEVRDMN    001          USER SPECIFIED MODEL NUMBER (RDEVICE)
11C                 4X         RESERVED FOR IBM USE
120   RDEVSNA     004          ADDRESS OF THE SNABK(WAS RESERVED 4X)
124   RDEVTRC     004          ADDRESS OF TRCBK
128   RDEVEND     008          END OF A FULL RDEV

                    EQUATES

        25     RDEVSIZE       SIZE OF A NORMAL RDEVBK
        0F     RDEVSSIZ       SIZE OF CASCADE RDEVBK
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REDEFINITION - DIRECT ACCESS STORAGE DEVICES

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018   RDEVMDSK   004       CHAIN OF MDISK BLOCKS
01C   RDEVVOL    004       POINTER TO SYSTEM CPVOL ENTRY
020   RDEVSER    006       DASD VOLUME SERIAL IDENTIFIER
026   RDEVCYL    002       CURRENT SEEK CYLINDER FOR DASD
028   RDEVHRCT   002       COUNTER FOR DETECTING DASD DEVICE
                           POTENTIAL HEAD CRASH. INCREMENTED
                           BY DASD ERP WHEN EQUIPMENT CHECK
                           OR SERIOUS DATA CHECK REPETITIVELY
                           OCCURS. THE OPERATOR IS WARNED TO
                           TAKE ACTION WHEN THIS COUNT REACHES
                           THE THRESHOLD VALUE.

                     EQUATES

        20    RDEVXHCT     THRESHOLD VALUE OF HEAD CRASH

02A                H       RESERVED FOR FUTURE IBM USE
02C   RDEVFCYL     002     NUMBER OF FIXED-HEAD CYLINDERS
02E   RDEVMCYL     002     MAXIMUM NUMBER OF CYLINDERS
030   RDEVPCYL     002     MAXIMUM PAGES/CYLINDER
032   RDEVLCNT     002     LINK COUNT FOR SYSTEM DASD DEV
034                A       RESERVED FOR IBM USE
038   RDEVPIOL     004     ANCHOR OF PIOBK'S ON THIS RDEV
03C   RDEVRSVQ     004     POINTER TO RESERVE REQUEST TOKEN
040   RDEVRTRQ     004     RESERVE REQUEST TIMER ANCHOR
044   RDEVTCYL     002     TOTAL NUMBER OF CYLINDERS
046                H       RESERVED FOR FUTURE IBM USE
048   RDEVCMAP     004     ADDRESS OF CYLINDER BIT MAP
                           USED BY HCPMDC FOR INVALIDATES
04C                11F     RESERVED FOR FUTURE IBM USE

         REDEFINITION - TAPE DRIVES

018   RDEVSPT      004     POINTER TO THE SPTBK
                           FOR THE SPTAPE COMMAND
01C   RDEVTPFG     001     TAPE OPERATION CONTROL FLAG

        BITS DEFINED IN RDEVTPFG (AT HEX DISPLACEMENT: 1C)

        80    RDEVNOAS     TAPE - NOASSIGN OPTION DEFINED

01D                X       RESERVED FOR FUTURE IBM USE
01E                H       RESERVED FOR FUTURE IBM USE
020   RDEVSERT     006     TAPE VOLUME SERIAL IDENTIFIER
                           RDEVSERT LOCATION MUST BE SAME DISPLACEMENT
                           AS RDEVSER IN DASD RE-DEFINE AREA
026                H       RESERVED FOR FUTURE IBM USE
028   RDEVSUSD     004     POINTER TO THE CPEBK FOR A
                           SUSPENDED SPTAPE DUMP COMMAND

         REDEFINITION - REAL SPOOLING POINTERS

018   RDEVRSP      004     POINTER TO THE RSPBK

         REDEFINITION - COMMON TERMINAL SPECIFIC AREA

018   RDEVTCTL     004     TERMINAL CONTROL FLAGS
018   RDEVTFLG     001     TERMINAL OPERATION CONTROL FLAGS

        BITS DEFINED IN RDEVTFLG (AT HEX DISPLACEMENT: 18)

        80    RDEVLOG      TERM - LOGGED ON USER AT RDEVUSER
        40    RDEVLHLD     HOLD OPTION FROM LOGOFF OR DISCONNECT
        20    RDEVENAB     TERM - ENABLED FOR SYSTEM ACCESS
        10    RDEVDROP     TERM - IN DROP PROCESSING
        08    RDEVDISA     TERM - DISABLE SEQUENCE IN PROGRESS
        04    RDEVCTL      TERM - CONTROL FUNCTION
                           BEING PERFORMED
        02    RDEVDOEN     ENABLE/DISABLE PROCESS FLAG
        01    RDEVRHLD     E3270HLD FEATURE OPTION FOR 7171

019   RDEVADVF     001     327X ADVANCED FEATURE FLAGS
```

BITS DEFINED IN RDEVADVF (AT HEX DISPLACEMENT: 19)

80	RDEVECOL	DEVICE HAS EXTENDED COLOR
40	RDEVEHLT	DEVICE HAS EXTENDED HIGHLIGHTING
20	RDEVPSS	DEVICE HAS PROGRAMMABLE SYMBOL SETS
10	RDEVQRY	ENABLE GENERAL QUERY IN PROGRESS
08	RDEVWSF	WSF HAS BEEN ISSUED
04	RDEVAINH	READ NODISPLAY HAS BEEN ISSUED
02	RDEV7171	7171 ASCII DACU 3270 EMULATION
01	RDEV14BT	14 BIT ADDRESSING IS SUPPORTED
E3	RDEV8CBT	ALL THE BITS USED FOR DIAGNOSE X'8C'

01A	RDEVLLEN	001	TERMINAL OUTPUT LINE LENGTH
01B	RDEVTMCD	001	TERMINAL CHARACTER-SET CODE

BITS DEFINED IN RDEVTMCD (AT HEX DISPLACEMENT: 1B)

80	RDEVAPLO	ASCII/APL 'SHIFT OUT'
40	RDEVAPLI	ASCII/APL 'SHIFT IN'
20	RDEVTXTC	TEXT CHARACTER SET
10	RDEVAPLC	APL CHARACTER SET
08	RDEVEDIC	EBCDIC TERMINAL CODE
04	RDEVASCI	ANSI X3.4 1977 TRANSLATION TABLE
02	RDEVVM2	ANSI X3.26 1980 TRANSLATION TABLE
01	RDEVPTTC	PTTC/EBCD TERMINAL CODE

01C	RDEVCON	004	POINTER TO COMBK CHAIN
020	RDEVWSFD	004	VIRTUAL ADDRESS OF THE WSF QUERY DATA
024	RDEVWSFL	002	LENGTH OF WSF QUERY DATA
026	RDEVPT	001	THE NUMBER OF PARTITIONS ON THE SCREEN
027	RDEVQFLG	001	QUERY DATA INITIALIZATION CONTROL

BITS DEFINED IN RDEVQFLG (AT HEX DISPLACEMENT: 27)

80	RDEVQDO	PERFORM QUERY DATA INITIALIZATION
40	RDEVQLK	LOCK QUERY INITIALIZATION DATA
20	RDEVQIGE	IGNORE I/O INIT. ERROR RECORDING
10	RDEVQATN	WAITING FOR THE WSF QUERY ATTENTION

028	RDEVWDTH	002	THE WIDTH OF THE SCREEN (
02A	RDEVHGHT	002	THE HEIGHT OF THE SCREEN (
02C		F	RESERVED FOR IBM USE
030	RDEVTDUA	024	TERMINAL DEVICE UNIQUE AREA THIS AREA IS DEFINED FOR EACH DEVICE

REDEFINITION - 3270 LOGICAL/LOCAL UNIQUE AREA

030	RDEVTRQ	004	POINTER TO CONTROL TRQBK
034	RDEVINPL	002	LENGTH OF THE INPUT AREA IN BYTES
036	RDEVOUTL	002	LENGTH OF THE OUTPUT AREA IN BYTES
038	RDEVINP	OSS	ATTRIBUTE BYTE. (12 OR 14 BIT MODE)
03A	RDEVSTS	OSS	ATTRIBUTE BYTE. (12 OR 14 BIT MODE)
03C	RDEVCORD	002	SCREEN COORDINATE FOR NEXT WRITE
03C	RDEVROW	001	THE ROW OF THE NEXT WRITE
03D	RDEVCOL	001	THE COLUMN OF THE NEXT WRITE
03E	RDEVERSE	001	EW/EWA OPCODE TO USE ON THIS DISPLAY
03F	RDEVSFLG	001	SCREEN CONTROL FLAGS

BITS DEFINED IN RDEVSFLG (AT HEX DISPLACEMENT: 3F)

80	RDEVMORE	3270 - SCREEN FULL, MORE DATA TO COME
40	RDEVHOLD	3270 - SCREEN FULL, HOLD FOR MORE DATA
20	RDEVREAD	3270 - READ PENDING FOR DATA INPUT
10	RDEVRUN	3270 - SCREEN IN RUNNING STATUS
08	RDEVCPNA	3270 - DATA INPUT NOT ACCEPTED
04	RDEVTPND	3270 - TIMER REQUEST PENDING
02	RDEVFSSA	3270 - SCREEN IN VIRT SYS AVAIL
01	RDEVFSII	3270 - SCREEN IN VIRT INP INHIB

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         F0     RDEVSTTS     3270 - BITS FOR MORE+HOLD+READ+RUN

040    RDEVCFLG    001       SCREEN CONTROL FLAGS

         BITS DEFINED IN RDEVCFLG (AT HEX DISPLACEMENT: 40)

         80     RDEVLOGO     3270 - LOGO WRITTEN TO SCREEN
         40     RDEVDIAG     3270 - SCREEN WRITTEN WITH DIAGNOSE
         20     RDEVALRM     3270 - SCREEN HAS ALARM MESSAGE
         10     RDEVWNG      3270 - 10 SECOND WARNING GIVEN
         08     RDEVGSUS     3270 - GUEST MODE SUSPENDED
         04     RDEVDGIN     3270 - DIAGNOSE TO INPUT AREA
         02     RDEVCARD     3270 - DATA FROM CARD READER
         01     RDEVAIO      3270 - I/O ACTIVE AT TIMER EXP

041    RDEVEFLG    001       EXTRA SCREEN CONTROL FLAGS

         BITS DEFINED IN RDEVEFLG (AT HEX DISPLACEMENT: 41)

         80     RDEVVMRD     VIRTUAL MACHINE READ PENDING
         40     RDEVESEL     CONTROL UNIT SUPPORTS EXT. SELECT CCWS
         20     RDEVACTV     ENABLE/DISABLE ACTIVE FLAG

042    RDEVLFLG    001       LOGICAL DEVICE FLAGS

         BITS DEFINED IN RDEVLFLG (AT HEX DISPLACEMENT: 42)

         80     RDEVGONE     DEVICE IS BEING TERMINATED

043              XL5         RESERVED FOR IBM USE

          REDEFINITION - START/STOP TERMINAL UNIQUE AREA

030    RDEVSADN    001       270X/370X-EP SETADDR VALUE
031                XL23      RESERVED FOR IBM USE

          REDEFINITION - TTY UNIQUE AREA

030    RDEVSCRL    001       TTY SCROLLING VALUE
031    RDEVOCNT    001       TTY OUTPUT LINE COUNT
032    RDEVTTYF    001       TTY DEVICE FLAGS

         BITS DEFINED IN RDEVTTYF (AT HEX DISPLACEMENT: 32)

         80     RDEVNOCR     TTY - LAST WRITE WAS NAAUTO CR
         40     RDEVNDLF     TTY - A LINE FEED IS REQUIRED
         20     RDEVNOCT     TTY - USER LINE CONTROL CHARACTERS
         10     RDEV3101     TTY - TTY DEVICE IS A 3101
         08     RDEVPCHG     TTY - TTY PROMPT WAS CHANGED
         04     RDEVVPMT     TTY - VM PROMPT SEQUENCE
         02     RDEVNOLF     TTY - DO NOT LINEFEED OUTPUT
         01     RDEVTTYS     TTY - HAS ENHANCED SNA SUPPORT

033              XL21        RESERVED FOR FUTURE IBM USE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
RDEV	001	000	RDEVAIO	001	001	RDEVAPLC	001	010
RDEVACTV	001	020	RDEVAIOR	004	098	RDEVAPLI	001	040
RDEVADVF	001	019	RDEVALID	001	080	RDEVAPLO	001	080
RDEVAFLG	001	011	RDEVALRM	001	020	RDEVASCI	001	004
RDEVAINH	001	004	RDEVAPGI	001	010	RDEVATOF	001	008

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
RDEVAUTO	001	080	RDEVGRPD	001	080	RDEVPREP	001	040
RDEVBASE	002	00E	RDEVGSUS	001	008	RDEVPSS	001	020
RDEVCACH	001	001	RDEVHALT	001	020	RDEVPSUP	001	080
RDEVCARD	001	002	RDEVHELD	001	020	RDEVPT	001	026
RDEVCCTR	001	080	RDEVHFLK	004	100	RDEVPTTC	001	001
RDEVCFLG	001	040	RDEVHFSD	004	0FC	RDEVQATN	001	010
RDEVCHPS	008	10C	RDEVHGHT	002	02A	RDEVQDO	001	080
RDEVCHP0	001	10C	RDEVHOLD	001	040	RDEVQFLG	001	027
RDEVCHP1	001	10D	RDEVHOT	001	020	RDEVQIGE	001	020
RDEVCHP2	001	10E	RDEVHRCT	002	028	RDEVQLK	001	040
RDEVCHP3	001	10F	RDEVIDFL	001	0AB	RDEVQRY	001	010
RDEVCHP4	001	110	RDEVINP@	002	038	RDEVRCWH	004	0E0
RDEVCHP5	001	111	RDEVINPL	002	034	RDEVRCWP	004	0E4
RDEVCHP6	001	112	RDEVINRQ	001	010	RDEVRDCA	004	108
RDEVCHP7	001	113	RDEVINTR	001	020	RDEVRDMN	001	11B
RDEVCLAS	001	000	RDEVIPND	001	010	RDEVREAD	001	020
RDEVCMAP	004	048	RDEVIRM	001	040	RDEVRFLG	001	012
RDEVCODE	002	000	RDEVLCKW	016	078	RDEVRHLD	001	001
RDEVCOL	001	03D	RDEVLCNT	002	032	RDEVRLPN	001	040
RDEVCON	004	01C	RDEVLDST	001	008	RDEVROW	001	03C
RDEVCONC	001	008	RDEVLFLG	001	042	RDEVRSET	001	010
RDEVCORD	002	03C	RDEVLHLD	001	040	RDEVRSP	004	018
RDEVCPNA	001	008	RDEVLLEN	001	01A	RDEVRSVD	001	004
RDEVCPVL	001	010	RDEVLOCK	008	078	RDEVRSVQ	004	03C
RDEVCTIO	004	0C0	RDEVLOFF	001	008	RDEVRTPD	008	0E8
RDEVCTL	001	004	RDEVLOG	001	080	RDEVRTRQ	004	040
RDEVCTRD	004	084	RDEVLOGO	001	080	RDEVRUN	001	010
RDEVCTRG	004	080	RDEVLOWN	004	078	RDEVRVPT	001	116
RDEVCTRS	004	0C4	RDEVLPM	001	00D	RDEVSADN	001	030
RDEVCTRU	004	0C8	RDEVLPO	001	117	RDEVSCRL	001	030
RDEVCTSI	004	0D8	RDEVLSOP	004	014	RDEVSDR	004	0B8
RDEVCTSN	004	0CC	RDEVMBI	002	0A2	RDEVSER	006	020
RDEVCTSR	004	0D4	RDEVMBLK	004	0A4	RDEVSERT	006	020
RDEVCTSS	004	0D0	RDEVMCYL	002	02E	RDEVSFLG	001	03F
RDEVCTUI	004	0DC	RDEVMDSK	004	018	RDEVSHAR	001	008
RDEVCUID	002	0A8	RDEVMICT	004	0F0	RDEVSHRT	008	078
RDEVCUIV	001	080	RDEVMIH	004	0B4	RDEVSID	004	09C
RDEVCUMN	001	0AA	RDEVMIHF	001	00C	RDEVSID0	001	09C
RDEVCYL	002	026	RDEVMIHM	001	001	RDEVSID1	001	09D
RDEVDED	001	008	RDEVMNIO	001	020	RDEVSIZE	001	025
RDEVDEFN	004	000	RDEVMNSD	001	080	RDEVSKCT	004	0F4
RDEVDEV	002	0A0	RDEVMNSK	001	040	RDEVSKSM	004	0F8
RDEVDFLG	001	013	RDEVMNT	001	002	RDEVSKUP	001	080
RDEVDGIN	001	004	RDEVMON	004	104	RDEVSNA	004	120
RDEVDIAG	001	040	RDEVMONS	001	104	RDEVSOFF	001	004
RDEVDISA	001	008	RDEVMORE	001	080	RDEVSPEC	096	018
RDEVDOEN	001	002	RDEVMPM	001	002	RDEVSPL	001	004
RDEVDP	001	114	RDEVNDLF	001	040	RDEVSPM	001	001
RDEVDROP	001	010	RDEVNOAS	001	080	RDEVSPT	004	018
RDEVDVID	002	0AC	RDEVNOCR	001	080	RDEVSSCT	001	040
RDEVDVIV	001	040	RDEVNOCT	001	020	RDEVSSIZ	008	00F
RDEVDVMN	001	0AE	RDEVNOLF	001	002	RDEVSTAT	001	010
RDEVECOL	001	080	RDEVNXTH	004	08C	RDEVSTS@	002	03A
RDEVEDIC	001	008	RDEVNXTI	004	090	RDEVSTTS	001	0F0
RDEVEFLG	001	041	RDEVNXTL	004	088	RDEVSUB	002	09E
RDEVEHLT	001	040	RDEVNXTW	004	094	RDEVSUSD	004	028
RDEVENAB	001	020	RDEVOBS	001	11A	RDEVSYS	001	040
RDEVEND	008	128	RDEVOCNT	001	031	RDEVTCTL	004	018
RDEVERPA	004	0B0	RDEVOFFL	001	080	RDEVTCYL	002	044
RDEVERSE	001	03E	RDEVOUTL	002	036	RDEVTDUA	024	030
RDEVESEL	001	040	RDEVPAM	001	115	RDEVTFLG	001	018
RDEVEXOF	001	004	RDEVPCHG	001	008	RDEVTMCD	001	01B
RDEVFCYL	002	02C	RDEVPCYL	002	030	RDEVTPFG	001	01C
RDEVFEAT	001	002	RDEVPEND	001	010	RDEVTPND	001	004
RDEVFLGS	004	010	RDEVPFLG	001	119	RDEVTRC	004	124
RDEVFREE	001	020	RDEVPIM	001	118	RDEVTRQ	004	030
RDEVFSII	001	001	RDEVPIOL	004	038	RDEVTSKQ	004	07C
RDEVFSSA	001	002	RDEVPMIP	001	020	RDEVTTYF	001	032
RDEVGONE	001	080	RDEVPMNV	001	040	RDEVTTYS	001	001

Name	Len	Val/Disp
RDEVTXTC	001	020
RDEVTYPE	001	001
RDEVUDEI	001	002
RDEVUSER	004	004
RDEVVDEV	004	008
RDEVVMRD	001	080
RDEVVM2	001	002
RDEVVOL	004	01C
RDEVVPMT	001	004
RDEVVPOF	001	002
RDEVVSCH	004	008
RDEVWDTH	002	028
RDEVWNG	001	010
RDEVWSF	001	008
RDEVWSFD	004	020
RDEVWSFL	002	024
RDEVWTDE	001	080
RDEVWTDV	004	0BC
RDEVXHCT	001	020
RDEVXVOL	001	001
RDEV14BT	001	001
RDEV3101	001	010
RDEV7171	001	002
RDEV8CBT	001	0E3

HCPRECBK— RECORDING RECORD FORMAT BLOCK

DSECT NAME: RECBK

DESCRIPTIVE NAME: RECORDING RECORD FORMAT BLOCK

FUNCTION: CONTAINS THE DATA TO CONTROL THE VMCF INTERFACE FOR ERROR RECORDING AND ACCOUNTING

LOCATED BY:

EXTERNS-
HCPRECTS - START OF RECBK TABLE
HCPRECAC - RECBK ENTRY FOR ACCOUNTING
HCPRECER - RECBK ENTRY FOR ERROR RECORDING
HCPRECTE - 1ST BYTE AFTER RECBK TABLE RESIDENT IN REC

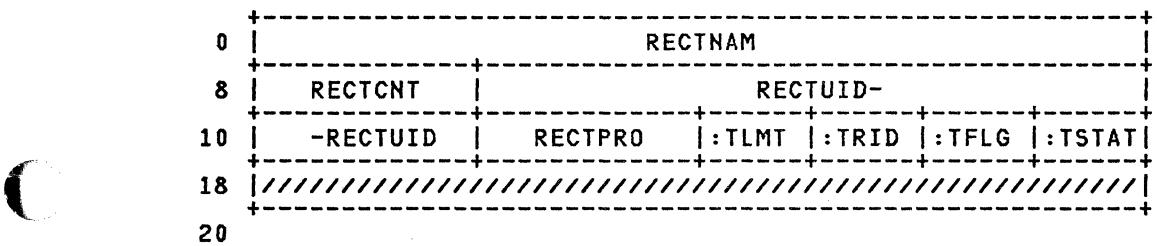
CREATED BY:

HCPREC ASSEMBLY

DELETED BY:

NONE

RECBK - RECORDING RECORD FORMAT BLOCK



disp	name	length	description
000	RECTNAM	008	RECORDING NAME
008	RECTCNT	002	COUNT OF RECORD IN THE QUEUE
00A	RECTUID	008	USERID AUTHORIZED TO RETRIEVE RECORDS
012	RECTPRO	002	PROTOCOL TO TALK TO VM USER
014	RECTLMT	001	THRESHOLD VALUE
015	RECTRID	001	RECORDING ID = GSDFLAG SETTING
016	RECTFLG	001	RECORDING STATUS

BITS DEFINED IN RECTFLG (AT HEX DISPLACEMENT: 16)

80	RECTOFF	RECORDING IS TURNED OFF
40	RECTAUT	USER VMCF AUTHORIZED TO RECEIVE DATA
20	RECTINT	EXTERNAL INTERRUPT PENDING
10	RECTCKP	RECORDS TO BE CHECKPOINTED
01	RECTNOT	UNAVAILABLE RECORDING TABLE ENTRY
02	RECTWRN	WARNING MESSAGE SENT ONCE
04	RECTINIT	RECORDING NEEDS TO BE INITIALIZED

017	RECTSTAT	001	STATUS FOR VMCPARM
018		D	RESERVED FOR FUTURE IBM USE

EQUATES

20	RECBLEN	RECBK ENTRY IN BYTES
04	RECSIZE	RECBK ENTRY IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
RECBK	001	000
RECBLEN	001	020
RECSIZE	001	004
RECTAUT	001	040
RECTCKP	001	010
RECTCNT	002	008
RECTFLG	001	016
RECTINIT	001	004
RECTINT	001	020
RECTLMT	001	014
RECTNAM	008	000
RECTNOT	001	001
RECTOFF	001	080
RECTPRO	002	012
RECTRID	001	015
RECTSTAT	001	017
RECTUID	008	00A
RECTWRN	001	002

HCPRQHDR— SAVBK RETURN QUEUE HEADER BLOCK

DSECT NAME: RQHDR

DESCRIPTIVE NAME: SAVBK RETURN QUEUE HEADER BLOCK

FUNCTION: PROVIDE QUEUE ANCHOR FOR SAVBK'S RETURNED BY SAVBK MANAGEMENT FUNCTIONS

LOCATED BY:

SAVECPRQ IN SAVBK
PFXCPRQA IN PFXPG
SSACPRQ IN SSABK
RCCSRCQ IN RCCBK

CREATED BY:

NOT CREATED, PART OF SSABK AND HCPRCC

DELETED BY:

NOT DELETED

RQHDR - SAVBK RETURN QUEUE HEADER BLOCK

disp	name	length	description
000	RQHCOUNT	004	COUNT OF SAVBK'S ON QUEUE
004	RQHQUEUE	004	QUEUE OF SAVBK'S

EQUATES

01	RQHSIZE	SIZE OF RQHDR IN DWORDS
08	RQHLEN	LENGTH OF RQHDR

CROSS REFERENCE

Name	Len	Val/Disp
RQHCOUNT	004	000
RQHDR	001	000
RQHLEN	001	008
RQHQUEUE	004	004
RQHSIZE	001	001

HCPRSAMP— REAL STORAGE MANAGEMENT DATA AREA MAPS

DSECT NAME: RSAMP

DESCRIPTIVE NAME: REAL STORAGE MANAGEMENT DATA AREA MAPS

FUNCTION: MAP THE REAL STORAGE MANAGEMENT DATA AREAS LOCATED IN THE DATA MODULE HCPRSM THAT CONTAIN ANCHORS, LOCKS AND COUNTS FOR REAL STORAGE DATA.

LOCATED BY:

HCPRSMAC	COUNT OF AVAILABLE FRAMES
HCPRSMAQ	AVAILABLE LIST ANCHOR AND LOCK AREA
HCPRSMCL	COUNT OF FRAMES LOCKED BY CP LOCK COMMAND
HCPRSMCM	RSM COMMON DATA AREA
HCPRSMDQ	DEFERRED SEGMENT TRANSLATION QUEUE ANCHOR AND LOCK AREA
HCPRSMDU	COUNT OF DOUBLE WORDS OF FREE STORAGE IN USE
HCPRSMFD	COUNT OF DOUBLE WORDS OF SYSTEM FREE STORAGE
HCPRSMFQ	FRAME REQUEST DEFER QUEUE ANCHOR AND LOCK AREA
HCPRSMFR	FREE STORAGE VMDBK CHAIN ANCHOR AND COUNT
HCPRSMFS	FIXED STORAGE MANAGEMENT DATA AREA
HCPRSMFW	COUNT OF DEFERRED TASKS WAITING FOR A FRAME
HCPRSMHT	AVAILABLE LIST HIGH THRESHOLD
HCPRSMLD	LONG TERM DORMANT VMDBK POINTER
HCPRSMLT	AVAILABLE LIST LOW THRESHOLD
HCPRSMNP	NON-PAGEABLE PAGE FRAME COUNT
HCPRSMOP	OFF-LINE FRAME COUNT
HCPRSMPG	DPA PAGE FRAME COUNT
HCPRSMRA	RESET INTERVAL DATA AREA
HCPRSMRL	DEMAND SCAN REPLENISHMENT LOCK AREA
HCPRSMSP	RESIDENT SHARED FRAME COUNT
HCPRSMSU	FREE STORAGE SYSTEM FREE DWDS IN USE
HCPRSMSV	FREE STORAGE SYSTEM CHAIN ANCHOR AND COUNT
HCPRSMSW	FRAME REPLACEMENT PAGE I/O WRITES PENDING
HCPRSMSZ	ACTUAL REAL STORAGE SIZE

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

CREATED BY:

SYSTEM LOAD (HCPLOD)

DELETED BY:

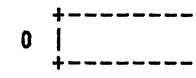
NEVER DELETED, REINITIALIZED WITH NEXT SYSTEM LOAD

RSAMP - REAL STORAGE MANAGEMENT DATA AREA MAPS

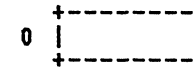
REDEFINITION - RSM COMMON DATA AREA

0	RSASAVFR	RSARIOSZ
8	RSARIOFR	RSARIOCT
10	RSARIOLK	RSALRFQ
18	RSALRFLK	RSAMSARC
20	RSAMSASC	24

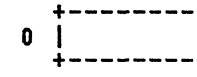
REDEFINITION - ACTUAL STORAGE SIZE



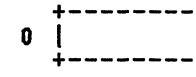
REDEFINITION - COUNT OF CP LOCKED FRAMES



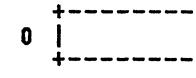
REDEFINITION - COUNT OF OFF-LINE FRAMES



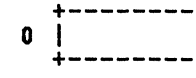
REDEFINITION - COUNT OF RESIDENT SHARED FRAMES



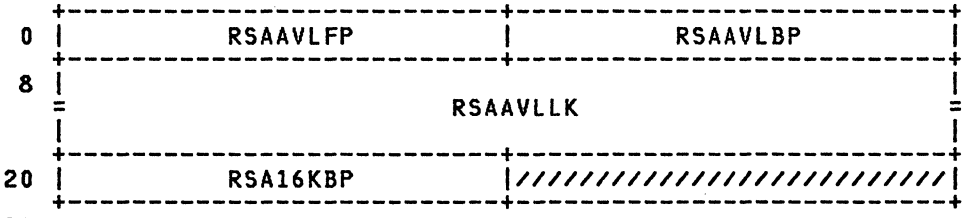
REDEFINITION - COUNT OF NON-PAGEABLE PAGE FRAMES



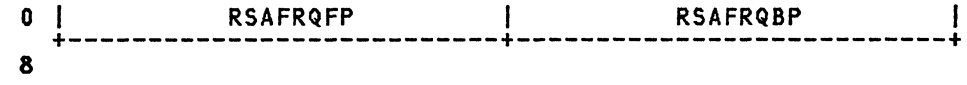
REDEFINITION - COUNT OF DPA PAGE FRAMES



REDEFINITION - AVAILABLE LIST ANCHORS AND LOCK



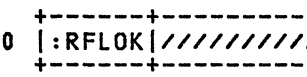
REDEFINITION - FRAME REQUEST DEFER QUEUE ANCHOR



REDEFINITION - COUNT OF AVAILABLE FRAMES

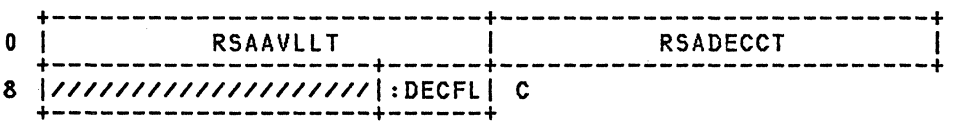
REDEFINITION - COUNT OF DEFERRED FRAME REQUESTS

REDEFINITION - REPLENISHMENT DEMAND SCAN LOCK

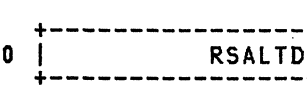


REDEFINITION - AVAILABLE LIST HIGH THRESHOLD

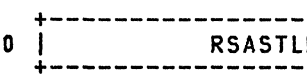
REDEFINITION - AVAILABLE LIST LOW THRESHOLD



REDEFINITION - LONG TERM DORMANT VMDBK POINTER

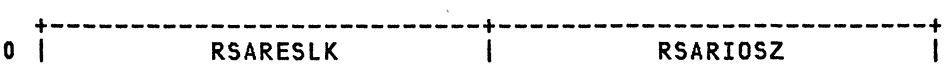


REDEFINITION - COUNT OF REPLENISHMENT PAGE



REDEFINITION - RESET INTERVAL DATA AREA

REDEFINITION -



```
   +-------------------------+-------------------------+
 8 |                      RSARESSH                     |
   +-----------------------------------------------------+
10 |                      RSARESSS                     |
   +-----------------------------------------------------+
18 |                      RSARESSY                     |
   +-------------------------+-------------------------+
20 |         RSAALLTA        |         RSAAVGDU        |
   +-------------------------+-------------------------+
28 |         RSAAVGRT        |         RSAOLDTA        |
   +-------------------------+-------------------------+
30 |                      RSAOLDTD                     |
   +-----------------------------------------------------+
38
```

REDEFINITION - COUNT OF DOUBLE WORDS OF FREE STORAGE

```
   +-------------------------+
 0 |         RSAFSTOR        | 4
   +-------------------------+
```

REDEFINITION - COUNT OF FREE STORAGE IN USE

```
   +-------------------------+
 0 |         RSAFSYUD        | 4
   +-------------------------+
```

REDEFINITION - COUNT OF V=R FREE STORAGE IN USE

```
   +-------------------------+
 0 |         RSAFVRUD        | 4
   +-------------------------+
```

REDEFINITION - COUNT OF EXTENDED FREE FRAMES

```
   +-------------------------+
 0 |         RSAXFREE        | 4
   +-------------------------+
```

REDEFINITION - COUNT OF DWDS OF V=V IN USE

```
   +-------------------------+
 0 |         RSAFVMUD        | 4
   +-------------------------+
```

REDEFINITION - COUNT OF USER FREE FRAMES

```
   +-------------------------+
 0 |         RSAVMXFR        | 4
   +-------------------------+
```

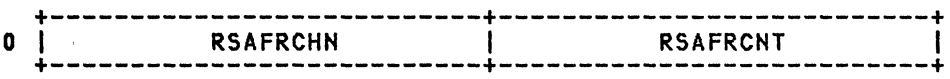
REDEFINITION - COUNT OF USER FREE IN USE

```
   +-------------------------+
 0 |         RSAVMXUD        | 4
   +-------------------------+
```

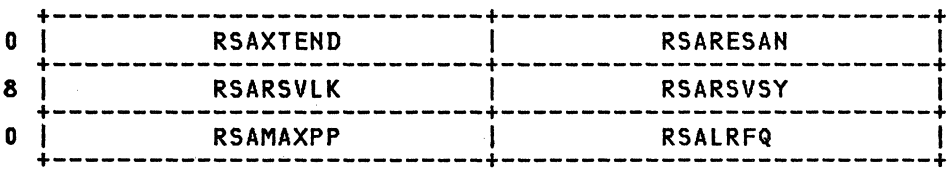
REDEFINITION - COUNT OF SYSTEM FREE FRAMES

REDEFINITION - COUNT OF SYSTEM FREE IN USE

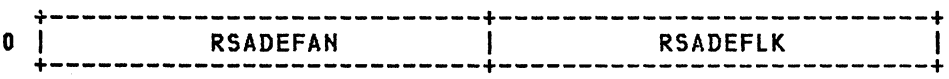
REDEFINITION - ADDRESS/COUNT OF FREE FRAMES



REDEFINITION - FREE STORAGE RESERVED FRAMES DATA

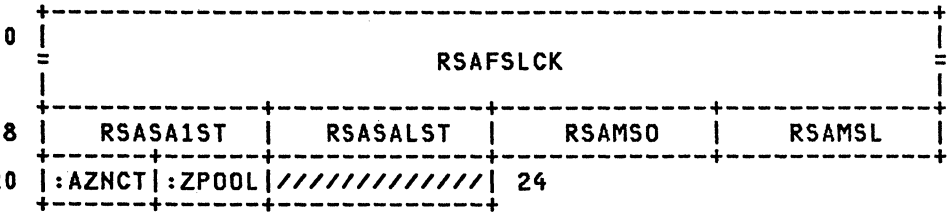


REDEFINITION - DEFERRED SEGMENT TRANSLATION



REDEFINITION - COUNT OF DEFERRED PAGE REQUESTS

REDEFINITION - FIXED STORAGE MANAGEMENT BLOCK



disp	name	length	description
000	RSADATA	001	START OF VARIABLE LENGTH DATA

REDEFINITION - RSM COMMON DATA AREA

000	RSASAVFR	004	COUNT OF FRAMES IN USE BY THE SAVE AREA MANAGER
004	RSARIO37	004	RIO370 AREA
004	RSARIOSZ	004	RIO370 SIZE, IN NUMBER OF FRAMES
008	RSARIOFR	004	RIO370 AVAILABLE STACK ANCHOR, THIS FIELD POINTS TO THE FIRST WORD OF THE FIRST AVAILABLE RIO370 FRAME AND IS '0' IF NONE ARE ALLOCATED OR AVAILABLE.
00C	RSARIOCT	004	COUNT OF RIO370 FRAMES IN USE
010	RSARIOLK	004	RIO370 DATA LOCK, THIS LOCK MUST BE HELD WHEN CHANGING THE SIZE, ANCHOR, AND COUNT FIELDS. THIS FIELD IS SET TO THE ADDRESS OBTAINING THE LOCK WHEN IT IS OBTAINED, AND IS '0' OTHERWISE.
014	RSALRFA	004	LRFBK QUEUE & LOCK WORD
014	RSALRFQ	004	HCPLRFBK QUEUE, ANY FRAME FOUND TO BE LOCKED DURING RELEASE PROCESSING WILL HAVE A BLOCK ON THIS QUEUE POINTING TO IT. THIS FIELD POINTS TO THE FIRST SUCH BLOCK AND IS '0' IF THERE ARE NONE.
018	RSALRFLK	004	RSALRFQ'S LOCK. THIS LOCK MUST BE HELD WHEN CHANGING THE RSALRFQ FIELD. THIS LOCK IS SET TO THE ADDRESS OBTAINING THE LOCK WHEN IT IS OBTAINED, AND IS '0' OTHERWISE.
01C	RSAMSARC	004	COUNT OF MACHINE STORAGE AREAS BELOW THE HIGHEST ADDRESSABLE FRAME
020	RSAMSASC	004	COUNT OF MACHINE STORAGE AREAS BELOW THE HIGHEST ADDRESSABLE FRAME OR SYSGEN FRAME, WHICHEVER IS LOWER

REDEFINITION - ACTUAL STORAGE SIZE

000	RSASTORE	004	REAL STORAGE SIZE CALCULATED DURING SYSTEM INITIALIZATION

REDEFINITION - COUNT OF CP LOCKED FRAMES

000	RSACPLOK	004	COUNT OF LOCKED FRAMES BY THE CP LOCK COMMAND

REDEFINITION - COUNT OF OFF-LINE FRAMES

000	RSAOFFLN	004	COUNT OF FRAMES MARKED OFF-LINE

REDEFINITION - COUNT OF RESIDENT SHARED FRAMES

000	RSASHARE	004	COUNT OF FRAMES IN THE SYSTEM THAT CURRENTLY HAVE A SHARED PAGE IN THEM

REDEFINITION - COUNT OF NON-PAGEABLE PAGE FRAMES

000	RSANONPG	004	COUNT OF DPA PAGE FRAMES WHICH ARE CURRENTLY NON-PAGEABLE

REDEFINITION - COUNT OF DPA PAGE FRAMES

000	RSAPGABL	004	COUNT OF PAGE FRAMES IN THE DYNAMIC PAGING AREA

REDEFINITION - AVAILABLE LIST ANCHORS AND LOCK

```
000   RSAAVLAN   008      AVAILABLE LIST ANCHOR
000   RSAAVLFP   004      FORWARD POINTER
004   RSAAVLBP   004      BACKWARD POINTER
008   RSAAVLLK   008      SPIN LOCK
020   RSA16KBP   004      BACKWARD POINTER TO LIST OF
                          AVAILABLE 16K BLOCKS.  BLOCKS
                          ARE CHAINED VIA THE BACKWARD
                          POINTER IN THE FRMTE FOR THE LAST
                          FRAME IN EACH 16K BLOCK.
024              F        RESERVED FOR FUTURE IBM USE

        REDEFINITION - FRAME REQUEST DEFER QUEUE ANCHOR

000   RSAFRQAN   008      FRAME REQUEST DEFER ANCHOR
000   RSAFRQFP   004      FORWARD POINTER
004   RSAFRQBP   004      BACKWARD POINTER

        REDEFINITION - COUNT OF AVAILABLE FRAMES

000   RSAAVAIL   004      COUNT OF FRAMES CURRENTLY
                          AVAILABLE IN SYSTEM

        REDEFINITION - COUNT OF DEFERRED FRAME REQUESTS

000   RSAFRQWT   004      COUNT OF REQUESTS FOR REAL FRAMES
                          NOT YET SATISFIED BECAUSE THERE
                          ARE NO FRAMES AVAILABLE

        REDEFINITION - REPLENISHMENT DEMAND SCAN LOCK

000              0D
000   RSADSLOK   004      DEMAND SCAN (STEAL) LOCK
000   RSARFLOK   001      TS LOCK TO PREVENT TRIGGERING OF
                          MULTIPLE CONCURRENT STEAL TASKS
001   RSADSCPU   003      COMPARE AND SWAP LOCK TO ISOLATE
                          ONE CPU TO RUN A STEAL TASK

        REDEFINITION - AVAILABLE LIST HIGH THRESHOLD

000   RSAAVLHT   004      AVAILABLE LIST HIGH THRESHOLD

        REDEFINITION - AVAILABLE LIST LOW THRESHOLD

000   RSAAVLLT   004      AVAILABLE LIST LOW THRESHOLD
004   RSADECCT   004      DECREMENT LOW THRESHOLD COUNT
008   RSADECCS   004      DECREMENT FLAG COMP. & SWAP WORD
008              XL3      RESERVED FOR FUTURE IBM USED
00B   RSADECFL   001      DECREMENT LOW THRESHOLD FLAG

      CODES DEFINED IN RSADECFL (AT HEX DISPLACEMENT: B)

        00   RSADECNO    FLAG IS OFF, DON'T DECREMENT THE
                         LOW THRESHOLD UNTIL FLAG GOES ON
                         (LOW THRESHOLD WAS RECENTLY
                         INCREMENTED)
        01   RSADECYS    FLAG IS ON, THE LOW THRESHOLD
                         MAY NOW BE DECREMENTED


        REDEFINITION - LONG TERM DORMANT VMDBK POINTER

000   RSALTDPT   004      ADDRESS OF THE LAST LONG
                          TERM DORMANT VMDBK

        REDEFINITION - COUNT OF REPLENISHMENT PAGE

000   RSASTLWT   004      COUNT OF AVAILABLE LIST
                          REPLENISHMENT PAGE WRITES
                          (STEAL WRITES)

        REDEFINITION - RESET INTERVAL DATA AREA

000   RSARINTA   008      BEGINNING OF RESET INTERVAL DATA
```

LOCATED BY HCPRSMRA

REDEFINITION -

000	RSARESLK	004	RESET INTERVAL DATA AREA LOCK
004		F	RESERVED FOR FUTURE IBM USE
008		0D	ALIGN TO DOUBLEWORD BOUNDARY
008	RSARESSH	008	RESET INTERVAL FOR SHARED SYSTEM
010		0D	ALIGN TO DOUBLEWORD BOUNDARY
010	RSARESSS	008	RESET INTERVAL FOR SHARED SEGMENT
018		0D	ALIGN TO DOUBLEWORD BOUNDARY
018	RSARESSY	008	RESET INTERVAL FOR SYSTEM VMDBK
020	RSAALLTA	004	TOTAL NUMBER OF FRAMES TAKEN BY THE AVAILABLE LIST REPLENISHMENT FUNCTIONS
024	RSAAVGDU	004	AVERAGE NUMBER OF DISPATCH USERS
028	RSAAVGRT	004	AVERAGE NUMBER OF FRAMES TAKEN IN THE AVAILABLE LIST REPLENISHMENT FUNCTIONS PER SECOND
02C	RSAOLDTA	004	TOTAL NUMBER OF FRAMES TAKEN BY THE AVAILABLE LIST REPLENISHMENT FUNCTIONS AT THE TIME OF THE LAST RESET INTERVAL CALCULATION
030		0D	ALIGN TO DOUBLEWORD BOUNDARY
030	RSAOLDTD	008	TOD AT THE TIME OF THE LAST RESET INTERVAL CALCULATION

REDEFINITION - COUNT OF DOUBLE WORDS OF FREE STORAGE

000	RSAFSTOR	004	COUNT OF DOUBLE WORDS OF SYSTEM FREE STORAGE

REDEFINITION - COUNT OF FREE STORAGE IN USE

000	RSAFSYUD	004	COUNT OF DOUBLE WORDS OF SYSTEM FREE STORAGE IN USE

REDEFINITION - COUNT OF V=R FREE STORAGE IN USE

000	RSAFVRUD	004	COUNT OF DOUBLE WORDS OF V=R FREE STORAGE IN USE

REDEFINITION - COUNT OF EXTENDED FREE FRAMES

000	RSAXFREE	004	COUNT OF FRAMES IN USE FOR FREE STORAGE

REDEFINITION - COUNT OF DWDS OF V=V IN USE

000	RSAFVMUD	004	COUNT OF DWDS OF V=V STORAGE IN USE.

REDEFINITION - COUNT OF USER FREE FRAMES

000	RSAVMXFR	004	COUNT OF USER FREE FRAMES ALLOCATED.

REDEFINITION - COUNT OF USER FREE IN USE

000	RSAVMXUD	004	COUNT OF USER FREE STORAGE DWDS IN USE.

REDEFINITION - COUNT OF SYSTEM FREE FRAMES

000	RSASYSFR	004	COUNT OF SYSTEM FREE FRAMES ALLOCATED.

REDEFINITION - COUNT OF SYSTEM FREE IN USE

000	RSASYSUD	004	COUNT OF SYSTEM FREE STORAGE DWDS IN USE.

REDEFINITION - ADDRESS/COUNT OF FREE FRAMES

000	RSAFRCHN	004	ANCHOR FOR FRMTE CHAIN OF AVAILABLE FRAMES
004	RSAFRCNT	004	COUNT OF FRMTES CHAINED ON HCPRSMSV OR HCPRSMFR

REDEFINITION - FREE STORAGE RESERVED FRAMES DATA

000		0D	
000	RSAXTEND	004	COUNT OF FRAMES MISSING FROM THE FREE STORAGE RESERVED FRAMES LIST
004	RSARESAN	004	RESERVED FRAME QUEUE AREA
008	RSARSVLK	004	FREE STORAGE RESERVED FRAMES DATA AREA COMPARE AND SWAP LOCK WORD
00C	RSARSVSY	004	TOTAL NUMBER OF FREE STORAGE RESERVED FRAMES REQUIRED TO BE ON THE RESERVED FRAMES LIST
010	RSAMAXPP	004	NUMBER OF FREE STORAGE RESERVED FRAMES REQUIRED PER PROCESSOR NOTE: RSAMAXPP MUST BE POSITIVE
014		F	RESERVED FOR FUTURE IBM USE

REDEFINITION - DEFERRED SEGMENT TRANSLATION

000		0D	
000	RSADEFAN	004	DEFERRED SEGMENT TRANSLATION QUEUE ANCHOR
004	RSADEFLK	004	COMPARE AND SWAP LOCK

REDEFINITION - COUNT OF DEFERRED PAGE REQUESTS

000	RSAPRQWT	004	COUNT OF TASKS WAITING FOR A PAGE REQUEST

REDEFINITION - FIXED STORAGE MANAGEMENT BLOCK

000	RSAFSTBK	002	FIXED STORAGE MGMT. BLOCK
000	RSAFSLCK	008	FIXED STORAGE MGMT LOCK (DEFER)
018	RSASA1ST	002	OFFSET OF ENTRY IN THE FIXED STORAGE ASSIGNMENT TABLE WITH THE LOWEST MAIN STORAGE ORIGIN
01A	RSASALST	002	OFFSET OF ENTRY IN THE FIXED STORAGE ASSIGNMENT TABLE WITH THE HIGHEST MAIN STORAGE ORIGIN
01C	RSASTRNG	004	THE ENTIRE STORAGE RANGE FOR THE V=R REGION.
01C	RSAMSO	002	BITS 5-15 SPECIFY A 1M-BYTE MAIN STORAGE ORIGIN OF THE V=R REGION
01E	RSAMSL	002	BITS 5-15 SPECIFY A 1M-BYTE MAIN STORAGE LIMIT OF THE V=R REGION
020	RSAAZNCT	001	COUNT OF ZOMES AVAILABLE FOR GUEST USE, INCLUDING ZONES IN USE
021	RSAZPOOL	001	POOL OF AVAILABLE ZONES, NOT INCLUDING THOSE IN USE
022		2X	RESERVED FOR FUTURE IBM USE

EQUATES

24	RSAFSTLN	LENGTH OF FSTBK
24	RSAFSTSZ	SIZE OF FSTBK

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
RSAALLTA	004	020	RSASHARE	004	000
RSAAVAIL	004	000	RSASTLWT	004	000
RSAAVGDU	004	024	RSASTORE	004	000
RSAAVGRT	004	028	RSASTRNG	004	01C
RSAAVLAN	008	000	RSASYSFR	004	000
RSAAVLBP	004	004	RSASYSUD	004	000
RSAAVLFP	004	000	RSAVMXFR	004	000
RSAAVLHT	004	000	RSAVMXUD	004	000
RSAAVLLK	008	008	RSAXFREE	004	000
RSAAVLLT	004	000	RSAXTEND	004	000
RSAAZNCT	001	020	RSAZPOOL	001	021
RSACPLOK	004	000	RSA16KBP	004	020
RSADATA	001	000			
RSADECCS	004	008			
RSADECCT	004	004			
RSADECFL	001	00B			
RSADECNO	001	000			
RSADECYS	001	001			
RSADEFAN	004	000			
RSADEFLK	004	004			
RSADSCPU	003	001			
RSADSLOK	004	000			
RSAFRCHN	004	000			
RSAFRCNT	004	004			
RSAFRQAN	008	000			
RSAFRQBP	004	004			
RSAFRQFP	004	000			
RSAFRQWT	004	000			
RSAFSLCK	008	000			
RSAFSTBK	002	000			
RSAFSTLN	001	024			
RSAFSTOR	004	000			
RSAFSTSZ	001	024			
RSAFSYUD	004	000			
RSAFVMUD	004	000			
RSAFVRUD	004	000			
RSALRFA	004	014			
RSALRFLK	004	018			
RSALRFQ	004	014			
RSALTDPT	004	000			
RSAMAXPP	004	010			
RSAMP	001	000			
RSAMSARC	004	01C			
RSAMSASC	004	020			
RSAMSL	002	01E			
RSAMSO	002	01C			
RSANONPG	004	000			
RSAOFFLN	004	000			
RSAOLDTA	004	02C			
RSAOLDTD	008	030			
RSAPGABL	004	000			
RSAPRQWT	004	000			
RSARESAN	004	004			
RSARESLK	004	000			
RSARESSH	008	008			
RSARESSS	008	010			
RSARESSY	008	018			
RSARFLOK	001	000			
RSARINTA	008	000			
RSARIOCT	004	00C			
RSARIOFR	004	008			
RSARIOLK	004	010			
RSARIOSZ	004	004			
RSARIO37	004	004			
RSARSVLK	004	008			
RSARSVSY	004	00C			
RSASALST	002	01A			
RSASAVFR	004	000			
RSASA1ST	002	018			

HCPRSPBK— REAL SPOOL DEVICE BLOCK

DSECT NAME: RSPBK

DESCRIPTIVE NAME: REAL SPOOL DEVICE BLOCK

FUNCTION: CONTAINS CONTROL INFORMATION FOR A REAL SPOOLING DEVICE.

LOCATED BY:

RDEVRSP FIELD OF HCPRDEV
CKPRSPB FIELD OF HCPCKPBK

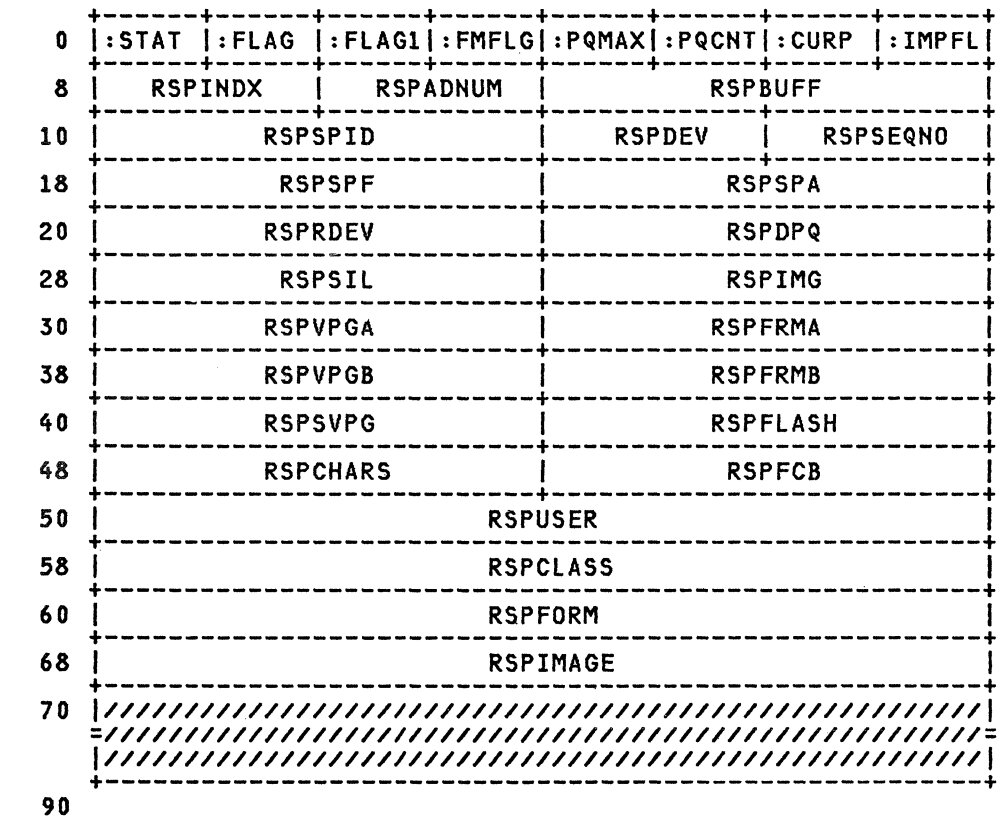
CREATED BY:

HCPRIO

DELETED BY:

N/A (RSPBKS ARE NEVER DELETED.)

RSPBK - REAL SPOOL FILE BLOCK



disp	name	length	description
000	RSPSTAT	001	SPOOLING DEVICE STATUS FLAGS

BITS DEFINED IN RSPSTAT (AT HEX DISPLACEMENT: 0)

80	RSPPDED	DEVICE 'PSEUDO DEDICATED' TO 'RSPUSER'
40	RSPOSEP	SEPARATOR ROUTINE ACTIVE
20	RSPRSTRT	IPL TIME RESTART OF FILE
10	RSPDLOCK	SPDBK FRAME IS 'LOCKED'
08	RSPOPEN	RDR IS OPEN; NOTHING READ YET


```
001   RSPFLAG    001      SPOOLING DEVICE CONTROL FLAGS

        BITS DEFINED IN RSPFLAG  (AT HEX DISPLACEMENT: 1)

        80     RSPDRAN     DEVICE IS DRAINED
        40     RSPFLUSH    DEVICE TO BE FLUSHED
        20     RSPSPAC     FORCE SINGLE SPACING ON PRINTER
        10     RSPREPO     REPOSITION FILE (FWD OR BKWD)
        08     RSPSEP      FILE SEPARATORS WANTED
        04     RSPULD      UCS VERIFIED
        02     RSPDRING    DEVICE IS BEING DRAINED

002   RSPFLAG1   001      SPOOLING DEVICE FLAGS

        BITS DEFINED IN RSPFLAG1 (AT HEX DISPLACEMENT: 2)

        80     RSPWAIT     PUNCH WAITING FOR INTERRUPT TO
                           PUNCH ID CARD.
        40     RSPSEPPR    SEPARATOR HEADER PRINTED
        20     RSPIOACT    HCPRSPIO IS PROCESSING A FILE
        10     RSPBEG      SELECT FILES WITH 3800 LOAD CCW'S
                           IF ALL APPEAR AT THE BEGINNING
        08     RSPANY      ALLOW 3800 LOAD CCWS ANYWHERE
        04     RSPURGE     PURGE FILES W/ 3800 LOAD CHECKS
        02     RSPINPRT    INITIALIZE THE PRINTER
        01     RSPDVACT    ACTIVE (MAY BE AWAITING PROMPT)

003   RSPFMFLG   001      FORMS PROCESSING FLAGS

        BITS DEFINED IN RSPFMFLG (AT HEX DISPLACEMENT: 3)

        80     RSPAUTO     OUTPUT DEVICE IN AUTO MODE
        40     RSPMAN      OUTPUT DEVICE IN MANUAL MODE
        20     RSPSETUP    PRINTER IN SETUP MODE
        10     RSPFMNT     OUTPUT DEVICE IS WAITING FOR A
                           FORM TO BE MOUNTED
        08     RSPSETRQ    PRINTER REQUIRES FORMS ALIGNMENT
        04     RSPFMCHG    FORM NEEDS TO BE CHANGED

004   RSPPQMAX   001      MAX SIZE OF 3800 DELAYED PURGE Q
005   RSPPQCNT   001      CURRENT SIZE OF DELAYED PURGE Q
006   RSPCURP    001      CURRENT 3800 PAPER SIZE
007   RSPIMPFL   001      FLAG FOR IMPACT PRINTER INFO

        BITS DEFINED IN RSPIMPFL (AT HEX DISPLACEMENT: 7)

        80     RSPFOLD     FOLD CHARACTERS INTO UPPERCASE
        20     RSPINDEX    INDEX SET ON START COMMAND
        10     RSPFCBCH    FCB NEEDS TO BE CHANGED
        08     RSPUCSCH    UCS NEEDS TO BE CHANGED
        04     RSPFLDCH    FOLD OPTION HAS CHANGED

008   RSPINDX    002      VALUE OF THE FIRST PRINT POSITION
                          AS SPECIFIED WITH INDEX OPTION
00A   RSPADNUM   002      RELATIVE SPDBK NUMBER
00C   RSPBUFF    004      ADDRESS OF BUFFER TO CONTAIN FCB
                          OR UCS FOR AN IMPACT PRINTER
010   RSPCKPT    004      INFORMATION TO BE CHECKPOINTED
                          IF THE FILE IS TO BE RESTARTED
010   RSPSPID    004      SYSTEM SPID OF ACTIVE FILE
014   RSPDEV     002      SPOOLING DEVICE DEVICE NUMBER
016   RSPSEQNO   002      FILE SEQUENCE NUMBER
018   RSPSPF     004      ADDRESS OF THE ACTIVE SPFBK
01C   RSPSPA     004      ADDRESS OF THE CURRENT SPABK
020   RSPRDEV    004      SPOOLING DEVICE RDEV BLK ADDRESS
024   RSPDPQ     004      3800 DELAYED PURGE QUEUE ADDRESS
028   RSPSIL     004      ADDRESS OF A  SILBK
02C   RSPIMG     004      ADDRESS OF AN IMGBK
030   RSPPAGEA   008      3800 IO BUFFER A ADDRESSES
030   RSPVPGA    004      VPAGE ADDR OF 3800 IO BUFFER - A
034   RSPFRMA    004      FRAME ADDR OF 3800 IO BUFFER - A
038   RSPPAGEB   008      3800 IO BUFFER B ADDRESSES
038   RSPVPGB    004      VPAGE ADDR OF 3800 IO BUFFER - B
```

```
03C   RSPFRMB    004       FRAME ADDR OF 3800 IO BUFFER - B
040   RSPSVPG    004       SAVE VPAGE ADDR FOR LATER RELEASE
044   RSPFLASH   004       FORMS OVERLAY ACTIVE ON A 3800
048   RSPCHARS   004       PRINTER CHARACTER SET NAME
04C   RSPFCB     004       PRINTER FCB NAME
050   RSPUSER    008       USERID OF 'DEDICATED' DEVICE
058   RSPCLASS   008       SPOOL CLASSES
060   RSPFORM    008       PRINT OR PUNCH FORM NUMBER
068   RSPIMAGE   008       IMAGELIB ACTIVE ON A PRINTER
070              CL32      RESERVED FOR IBM USE

                     EQUATES

        12    RSPSIZE     RSPBK SIZE IN DOUBLE-WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
RSPADNUM	002	00A	RSPPQMAX	001	004
RSPANY	001	008	RSPRDEV	004	020
RSPAUTO	001	080	RSPREPO	001	010
RSPBEG	001	010	RSPRSTRT	001	020
RSPBK	001	000	RSPSEP	001	008
RSPBUFF	004	00C	RSPSEPPR	001	040
RSPCHARS	004	048	RSPSEQNO	002	016
RSPCKPT	004	010	RSPSETRQ	001	008
RSPCLASS	008	058	RSPSETUP	001	020
RSPCURP	001	006	RSPSIL	004	028
RSPDEV	002	014	RSPSIZE	001	012
RSPDLOCK	001	010	RSPSPA	004	01C
RSPDPQ	004	024	RSPSPAC	001	020
RSPDRAN	001	080	RSPSPF	004	018
RSPDRING	001	002	RSPSPID	004	010
RSPDVACT	001	001	RSPSTAT	001	000
RSPFCB	004	04C	RSPSVPG	004	040
RSPFCBCH	001	010	RSPUCSCH	001	008
RSPFLAG	001	001	RSPULD	001	004
RSPFLAG1	001	002	RSPURGE	001	004
RSPFLASH	004	044	RSPUSER	008	050
RSPFLDCH	001	004	RSPVPGA	004	030
RSPFLUSH	001	040	RSPVPGB	004	038
RSPFMCHG	001	004	RSPWAIT	001	080
RSPFMFLG	001	003			
RSPFMNT	001	010			
RSPFOLD	001	080			
RSPFORM	008	060			
RSPFRMA	004	034			
RSPFRMB	004	03C			
RSPIMAGE	008	068			
RSPIMG	004	02C			
RSPIMPFL	001	007			
RSPINDEX	001	020			
RSPINDX	002	008			
RSPINPRT	001	002			
RSPIOACT	001	020			
RSPMAN	001	040			
RSPOPEN	001	008			
RSPOSEP	001	040			
RSPPAGEA	008	030			
RSPPAGEB	008	038			
RSPPDED	001	080			
RSPPQCNT	001	005			

HCPSABCM— SOFT ABEND COMMON AREA

DSECT NAME: SABCM

DESCRIPTIVE NAME: SOFT ABEND COMMON AREA

FUNCTION: A SABCM CONTAINS SOFT ABEND COMMON POINTERS AND INFORMATION NECESSARY FOR SOFT ABEND PROCESSING.

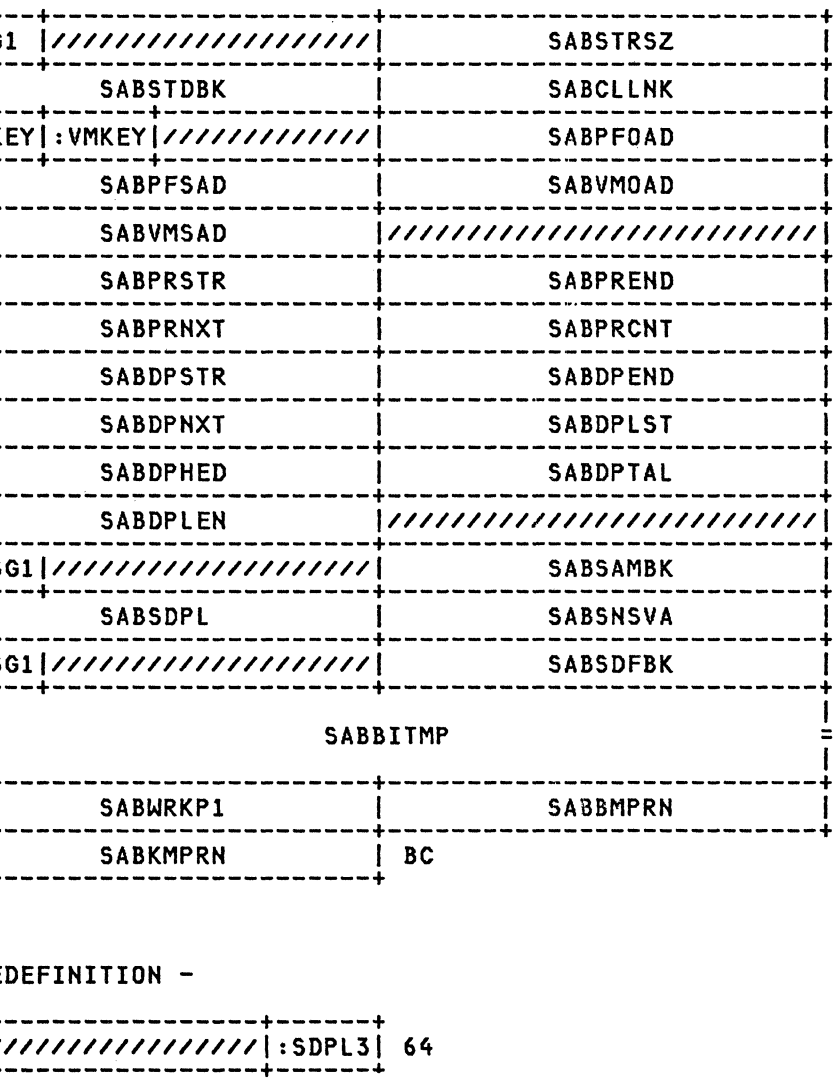
LOCATED BY:

AT EXTERNAL LABEL HCPABWCM

DELETED BY:

N/A

SABCM - SOFT ABEND COMMON AREA



REDEFINITION -

disp	name	length	description
000	SABFLG1	001	FLAGS

BITS DEFINED IN SABFLG1 (AT HEX DISPLACEMENT: 0)

```
        80     SABCKSUM    CHECKSUMMING IS IN EFFECT

001                XL3
004    SABSTRSZ    004      SYSTEM STORAGE SIZE
008    SABSTDBK    004      POINTER TO THE STDBK
00C    SABCLLNK    004      CALL LINKAGE STACK
010    SABPFKEY    001      KEY OF ABENDING PREFIX PAGE
011    SABVMKEY    001      KEY OF ABENDING RUNUSER VMDBK
012                XL2      RESERVED
014    SABPFOAD    004      ADDRESS OF ABENDING PREFIX PAGE
018    SABPFSAD    004      ADDRESS WHERE ABENDING PREFIX PAGE
                            IS PRESERVED
01C    SABVMOAD    004      ADDRESS OF ABENDING RUNUSER VMDBK
020    SABVMSAD    004      ADDRESS WHERE ABENDING RUNUSER VMDBK
                            IS PRESERVED
024                F        RESERVED
028    SABABSDA    008
028    SABPRSTR    004      POINTER TO PRESERVE START
02C    SABPREND    004      POINTER TO PRESERVE END+1
030    SABPRNXT    004      POINTER TO PRESERVE NEXT ENTRY
034    SABPRCNT    004      NUMBER OF BYTES FREE IN PRESERVE AREA
038    SABDPSTR    004      POINTER TO DUMP PAGE LIST START
03C    SABDPEND    004      POINTER TO DUMP PAGE LIST END+1
040    SABDPNXT    004      POINTER TO DUMP PAGE LIST NEXT ENTRY
044    SABDPLST    004      POINTER TO LAST REFERENCED ENTRY
048    SABDPHED    004      POINTER TO DUMP PAGE LIST HEAD ENTRY
04C    SABDPTAL    004      POINTER TO DUMP PAGE LIST TAIL ENTRY
050    SABDPLEN    004      LENGTH OF AN ENTRY IN DUMP PAGE LIST
054                F        RESERVED
058    SABGATHR    008
058    SABGMSG1    001      MESSAGE FLAGS FOR DATA GATHERING

      BITS DEFINED IN SABGMSG1 (AT HEX DISPLACEMENT: 58)

        80     SAB9302I    SEND ERROR MESSAGE 9302I
        40     SAB9303I    SEND ERROR MESSAGE 9303I
        20     SAB9304I    SEND ERROR MESSAGE 9304I
        10     SAB9305I    SEND ERROR MESSAGE 9305I
        08     SAB9306I    SEND ERROR MESSAGE 9306I

059                XL3
05C    SABSAMBK    004      POINTER TO SAMBK
060    SABSDPL     004      POINTER TO THE SDPL
064    SABSNSVA    004      POINTER TO FIRST SAVEAREA TO SNAP
068    SABFRMTR    008
068    SABFMSG1    001      MESSAGE FLAGS FOR DATA FORMATING

      BITS DEFINED IN SABFMSG1 (AT HEX DISPLACEMENT: 68)

        80     SAB0400I    SEND ERROR MESSAGE 0400I
        40     SAB0439E    SEND ERROR MESSAGE 0439E
        20     SAB9308I    SEND ERROR MESSAGE 9308I
        10     SAB0847E    SEND ERROR MESSAGE 0847E
        08     SAB9309E    SEND ERROR MESSAGE 9309E
        04     SAB9310E    SEND ERROR MESSAGE 9310E

069                XL3
06C    SABSDFBK    004      POINTER TO SDFBK
070    SABBITMP    004      LIST OF BIT MAP PAGES
0B0    SABWRKP1    004      POINTER TO WORK PAGE 1
0B4    SABBMPRN    004      BIT MAP START RECORD NUMBER
0B8    SABKMPRN    004      KEY MAP START RECORD NUMBER

                  EQUATES

        BC     SABCMLN     LENGHT OF COMMON AREA
        18     SABSIZE     DWRD SIZE OF COMMON AREA

       REDEFINITION -
```

```
060                 XL3
063    SABSDPL3     001       BOUNDARY CHECK FOR SDPL
```

CROSS REFERENCE

Name	Len	Val/Disp
SABABSDA	008	028
SABBITMP	004	070
SABBMPRN	004	0B4
SABCKSUM	001	080
SABCLLNK	004	00C
SABCM	001	000
SABCMLN	001	0BC
SABDPEND	004	03C
SABDPHED	004	048
SABDPLEN	004	050
SABDPLST	004	044
SABDPNXT	004	040
SABDPSTR	004	038
SABDPTAL	004	04C
SABFLG1	001	000
SABFMSG1	001	068
SABFRMTR	008	068
SABGATHR	008	058
SABGMSG1	001	058
SABKMPRN	004	0B8
SABPFKEY	001	010
SABPFOAD	004	014
SABPFSAD	004	018
SABPRCNT	004	034
SABPREND	004	02C
SABPRNXT	004	030
SABPRSTR	004	028
SABSAMBK	004	05C
SABSDFBK	004	06C
SABSDPL	004	060
SABSDPL3	001	063
SABSIZE	001	018
SABSNSVA	004	064
SABSTDBK	004	008
SABSTRSZ	004	004
SABVMKEY	001	011
SABVMOAD	004	01C
SABVMSAD	004	020
SABWRKP1	004	0B0
SAB0400I	001	080
SAB0439E	001	040
SAB0847E	001	010
SAB9302I	001	080
SAB9303I	001	040
SAB9304I	001	020
SAB9305I	001	010
SAB9306I	001	008
SAB9308I	001	020
SAB9309E	001	008
SAB9310E	001	004

HCPSALBK— SLOT ALLOCATION DATA BLOCK

DSECT NAME: SALBK

DESCRIPTIVE NAME: SLOT ALLOCATION DATA BLOCK

FUNCTION: MAPS THE DATA IN THE SLOT ALLOCATION DATA AREAS IN HCPPGD FOR PAGING (HCPPGDPG) AND SPOOLING (HCPPGDSP).

LOCATED BY:

THE DATA AREAS MAPPED BY THIS BLOCK, HCPPGDPG (PAGING DATA) AND HCPPGDSP (SPOOLING DATA), ARE IN NUCLEUS-RESIDENT AREAS.

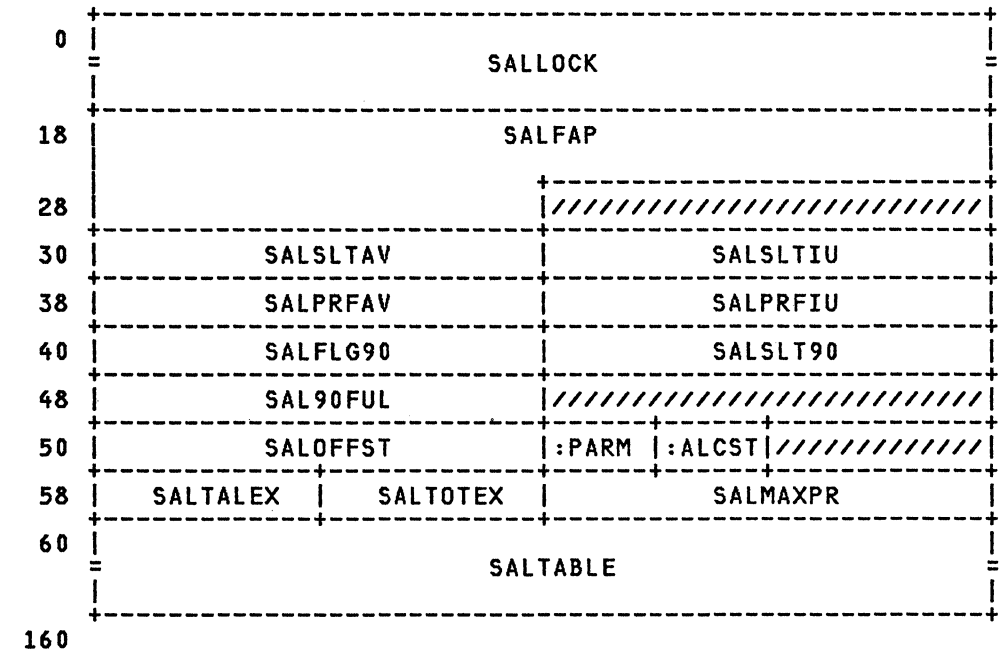
CREATED BY:

THE DATA AREAS MAPPED BY THIS BLOCK ARE CREATED AT SYSTEM GENERATION.

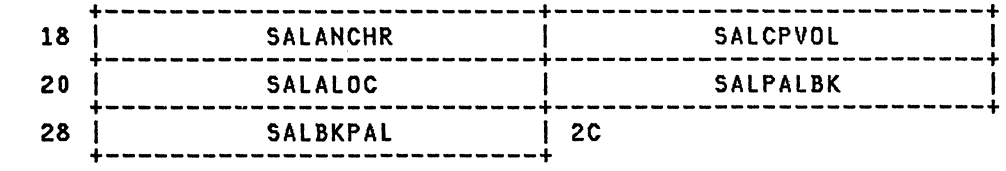
DELETED BY:

THE DATA AREAS MAPPED BY THIS BLOCK ARE NEVER DELETED.

SALBK - SLOT ALLOCATION DATA BLOCK



REDEFINITION - FAST ALLOCATION POINTERS



disp	name	length	description
000	SALLOCK	008	ALLOCATION LOCKWORD
018	SALFAP	016	FAST ALLOCATION POINTERS FOR HCPPG

028	SALLIST	004	CPVOL ANCHOR
02C	SALSLTAV	004	TOTAL SLOTS AVAILABLE
030	SALSLTIU	004	NUMBER OF SLOTS IN USE
034	SALPRFAV	004	TOTAL PREFERRED SLOTS AVAILABLE (USED FOR PAGE SLOTS ONLY)
038	SALPRFIU	004	NUMBER OF PREFERRED SLOTS IN USE (USED FOR PAGE SLOTS ONLY)
03C	SALFLG90	004	90% FULL RESET FLAG
040	SALSLT90	004	90% OF SLOTS AVAILABLE
044	SAL90FUL	004	NUMBER OF TIMES PAGING OR SPOOLING SLOTS WERE 90% FULL.
048	SALOFFST	004	OFFSET TO PALBK CHAIN IN ALOCLIST
04C	SALPARM	001	HCPPGT PARAMETER: PGTPAGE, FOR PAGING PGTSPOOL, FOR SPOOLING
04D	SALALCST	001	WORK AREA: NUMBER OF PAGING SLOTS ALLOCATED ON THE CURRENT VOLUME DURING ONE INVOCATION OF HCPPGT.
04E	SALTOTEX	002	TOTAL NUMBER OF PAGING READ EXPOSURES CURRENTLY ATTACHED TO THE SYSTEM
050	SALOTHER	004	ADDRESS OF THE OTHER SLOT TYPE.
054	SALMAXPR	004	THEORETICAL MAXIMUM PAGING RATE FOR THE SYSTEM, INCLUDING ALL VOLUMES CURRENTLY ATTACHED (USED FOR PAGING SLOTS ONLY)
058	SALTOTML	004	TOTAL MLOAD FOR THIS SPACE TYPE.
05C	SALAVGML	004	AVERAGE MLOAD FOR THIS SPACE TYPE.
060		40F	RESERVED FOR IBM USE.
100	SALTABLE	001	TRANSLATE TABLE FOR LOCATING AN AVAILABLE CYLINDER

REDEFINITION - FAST ALLOCATION POINTERS

018	SALCPAL	008	CURRENT CPVOL/ALOC ADDRESSES
018	SALCPVOL	004	CURRENT CPVOL ADDRESS
01C	SALALOC	004	CURRENT ALOC ADDRESS
020	SALPALS	008	CURRENT PALBK CHAIN POINTERS
020	SALPALBK	004	CURRENT PALBK ADDRESS
024	SALBKPAL	004	CURRENT PALBK BACKWARD POINTER

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SALALCST	001	04D	SALSLTAV	004	02C
SALALOC	004	01C	SALSLTIU	004	030
SALAVGML	004	05C	SALSLT90	004	040
SALBK	001	000	SALTABLE	001	100
SALBKPAL	004	024	SALTOTEX	002	04E
SALCPAL	008	018	SALTOTML	004	058
SALCPVOL	004	018	SAL90FUL	004	044
SALFAP	016	018			
SALFLG90	004	03C			
SALLIST	004	028			
SALLOCK	008	000			
SALMAXPR	004	054			
SALOFFST	004	048			
SALOTHER	004	050			
SALPALBK	004	020			
SALPALS	008	020			
SALPARM	001	04C			
SALPRFAV	004	034			
SALPRFIU	004	038			

HCPSAMBK— SNAPPED AREA'S MAP BLOCK

DSECT NAME: SAMBK

DESCRIPTIVE NAME: SNAPPED AREA'S MAP BLOCK

FUNCTION: A SAMBK CONTAINS THE POINTER AND CONTROL INFORMATION TO ACCESS THE SNAPPED SAVERAREAS AND SNAPPED DATA AREAS IN THE SOFT ABEND DUMP FILE.

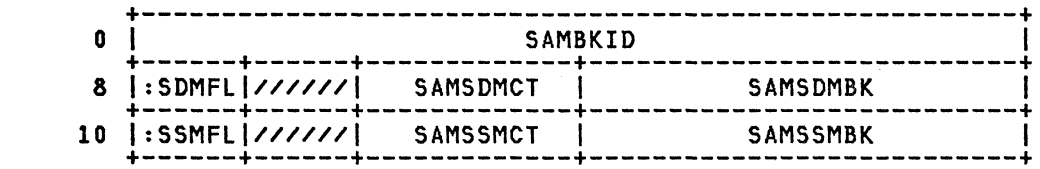
LOCATED BY:

DFISAMBK FIELD IN HCPDFIR

DELETED BY:

N/A

SAMBK - SNAPPED AREA'S MAPPED BLOCK



disp	name	length	description
000		0F	FORCE WORD BOUNDARY
000	SAMBKID	008	EYECATCHER FOR IDENTIFICATION
008	SAMSDMFL	001	STATUS FLAG FOR THE SDMBK
	BITS DEFINED IN SAMSDMFL (AT HEX DISPLACEMENT: 8)		
	80 SAMSDINA		INVALID BEGINNING SNAP LIST ADDRESS
	40 SAMSDTRN		SNAP LIST TRUNCATED, SOFT ABEND WORK AREA IS FULL, SNAP DATA NOT SAVED
	20 SAMSDINL		INVALID SDPL, THE LIST CONTAINS MORE THAN 256 ENTRIES OR IS MISSING AN EOL INDICATOR
009		XL1	IBM RESERVED
00A	SAMSDMCT	002	COUNT OF SDMBK'S
00C	SAMSDMBK	004	ADDRESS OF THE SNAP DATA MAP BLOCK (HCPSDMBK) LIST
010	SAMSSMFL	001	STATUS FLAG FOR THE SSMBK
	BITS DEFINED IN SAMSSMFL (AT HEX DISPLACEMENT: 10)		
	80 SAMSSINA		INVALID BEGINNING SAVEAREA ADDRESS
	40 SAMSSTRN		SNAP SAVEAREA LIST TRUNCATED, SOFT ABEND WORK AREA IS FULL, SAVEAREAS NOT SAVED
011		XL1	IBM RESERVED
012	SAMSSMCT	002	COUNT OF SNAPPED SAVEAREAS
014	SAMSSMBK	004	ADDRESS OF THE SNAP SAVEAREA MAP BLOCK (HCPSSMBK) LIST
	EQUATES		
	18 SAMBKLN		LENGHT OF SAMBK
	03 SAMSIZE		DWRD SIZE OF SAMBK

CROSS REFERENCE

Name	Len	Val/Disp
SAMBK	001	000
SAMBKID	008	000
SAMBKLN	001	018
SAMSDINA	001	080
SAMSDINL	001	020
SAMSDMBK	004	00C
SAMSDMCT	002	00A
SAMSDMFL	001	008
SAMSDTRN	001	040
SAMSIZE	001	003
SAMSSINA	001	080
SAMSSMBK	004	014
SAMSSMCT	002	012
SAMSSMFL	001	010
SAMSSTRN	001	040

HCPSAVBK— CALL WITH SAVEAREA BLOCK

DSECT NAME: SAVBK

DESCRIPTIVE NAME: CALL WITH SAVEAREA BLOCK

FUNCTION: THE SAVBK IS USED IN THE CALL-WITH-DYNAMIC-SAVEAREA CALLING LINKAGE. THE CALLER DOES NOT SUPPLY THE SAVEAREA. INSTEAD, THE LINKAGE ASSISTANCE ROUTINE (HCPSVCCL) ALLOCATES THE SAVBK AND THE CALLED ROUTINE THEN SAVES THE CALLER'S REGISTERS IN THE SAVBK. THE SAVBK DSECT IS ALSO USED AS A MAP OF THE SEVERAL FIXED SAVEAREAS SUCH AS PFXBALSV AND PFXTMPSV. NOTE: THE SAVBK AND THE CPEBK HAVE THE SAME FORMAT AND OCCASIONALLY A SAVBK IS CONVERTED INTO A CPEBK OR VICE VERSA. THE FORMATS ARE IDENTICAL INTENTIONALLY SO THAT THESE CONVERSIONS CAN BE MADE.

LOCATED BY:

R13	WHEN RUNNING IN ANY ROUTINE WHICH IS CALLED USING A CALL-WITH-DYNAMIC-SAVEAREA LINKAGE. POINTS TO CURRENT (ALREADY FILLED UP) SAVEAREA.
SAVER13	THIS FIELD IN CALLEE'S SAVEAREA POINTS BACK TO THE CALLER'S SAVEAREA. (THIS ASSUMES THAT THE CALLER HAD A SAVEAREA OF HIS OWN AND THAT HE HAD ITS ADDRESS IN R13 AT THE TIME OF THE CALL. SEE ALSO SAVECSAV FOR ANOTHER BACKWARD POINTER.)
SAVEFPNT	FORWARD CHAINING POINTER. THE CHAIN OF AVAILABLE SAVBK'S USES THIS POINTER. WHEN THE SAVBK IS IN USE AS A SAVEAREA, SAVEFPNT IS NORMALLY NOT USED FOR ANYTHING (SAVER13 POINTS BACK TO PRECEDING SAVBK IF THE CALLER HAD ONE).
SAVEBPNT	THIS POINTER IS AVAILABLE FOR BACKWARD CHAINING, BUT IS NOT NORMALLY USED.
VMDVOSAV	SIMULATION SAVBK STACK ANCHOR.

CREATED BY:

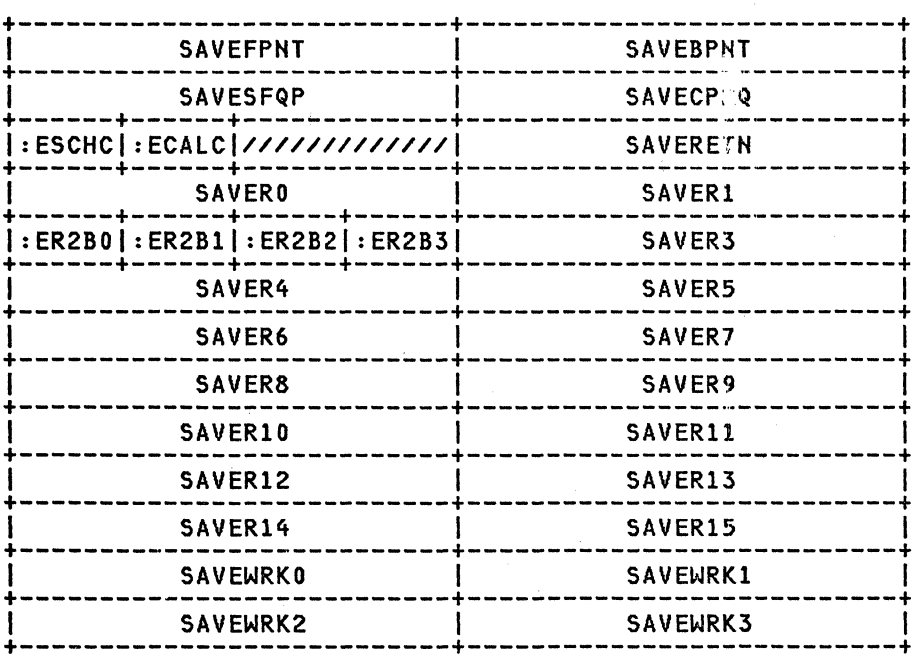
HCPSVC	WHEN NO FREE SAVBKS ARE AVAILABLE
HCPSAM	DURING PROCESSOR ONLINE STORAGE ALLOCATION

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

DELETED BY:

HCPSVC	DURING SAVBK RECLAIM PROCESSING
HCPSAM	DURING PROCESSOR OFFLINE STORAGE DEALLOCATIO

SAVBK - CALL WITH SAVEAREA BLOCK




```
   68 |          SAVEWRK4          |          SAVEWRK5          |
      +----------------------------+----------------------------+
   70 |          SAVEWRK6          |          SAVEWRK7          |
      +----------------------------+----------------------------+
   78 |          SAVEWRK8          |          SAVEWRK9          |
      +----------------------------+----------------------------+
   80
```

disp	name	length	description
000	SAVEFPNT	004	GENERAL FORWARD POINTER
004	SAVEBPNT	004	GENERAL BACKWARD POINTER (BACKWARD POINTER NOT USED FOR SINGLE-THREAD LISTS)
008	SAVESFQP	004	SAVBK FRAME QUEUE POINTER
00C	SAVECPRQ	004	CROSS PROCESSOR RETURN QUEUE ADDR
010	SAVESCHD	008	SAVBK STACKING CONTROL FIELDS
010	SAVESCHC	001	SAVBK DISPATCHING CONTROLS
	BITS DEFINED IN SAVESCHC (AT HEX DISPLACEMENT: 10)		
	80 SAVENOFR		DO NOT FRET SAVBK ON DISPATCH
	40 SAVESKCR		THIS IS A STACKED RETURN
	20 SAVESKCL		THIS IS A STACKED CALL
	10 SAVERTNF		"RETURN" WITH NO FRET
	08 SAVEUCFM		STACK AS CONSOLE FUNCTION CPEBK
	04 SAVEURGT		STACK AS AN URGENT CPEBK
	01 SAVEDMCO		DISPATCH ON THE MASTER CPU ONLY
011	SAVECALC	001	SAVBK USAGE STATUS
	BITS DEFINED IN SAVECALC (AT HEX DISPLACEMENT: 11)		
	80 SAVEOPEN		SAVBK IN USE FOR A CALL
	40 SAVEGET		SAVBK OBTAINED VIA 'GET SAVBK'
	20 SAVEPGLK		CALLEE MODULE IS PAGEABLE, AND WAS LOCKED
	10 SAVEPGWT		CALL WAITING ON PAGEABLE MODULE TO BE PAGED IN
	08 SAVESPAR		SAVBK IS NOT ACTIVE
012		H	RESERVED
014	SAVERETN	004	RETURN LINKAGE ROUTINE ADDRESS
018	SAVEREGS	064	CALLERS REGISTERS - R0 TO R15
018	SAVER0	004	CALLERS SAVED REGISTER 0
01C	SAVER1	004	CALLERS SAVED REGISTER 1
020	SAVER2	004	CALLERS SAVED REGISTER 2 THE FOLLOWING BYTE DEFINITIONS OF SAVER2 ARE FOR TESTING PARAMETERS PASSED BETWEEN MODULES.
020	SAVER2B0	001	CALLERS SAVED REGISTER 2 BYTE 0
021	SAVER2B1	001	CALLERS SAVED REGISTER 2 BYTE 1
022	SAVER2B2	001	CALLERS SAVED REGISTER 2 BYTE 2
023	SAVER2B3	001	CALLERS SAVED REGISTER 2 BYTE 3
024	SAVER3	004	CALLERS SAVED REGISTER 3
028	SAVER4	004	CALLERS SAVED REGISTER 4
02C	SAVER5	004	CALLERS SAVED REGISTER 5
030	SAVER6	004	CALLERS SAVED REGISTER 6
034	SAVER7	004	CALLERS SAVED REGISTER 7
038	SAVER8	004	CALLERS SAVED REGISTER 8
03C	SAVER9	004	CALLERS SAVED REGISTER 9
040	SAVER10	004	CALLERS SAVED REGISTER 10
044	SAVER11	004	CALLERS SAVED REGISTER 11; ALSO VMDBK ADDRESS OF USER ON WHICH SAVBK IS SCHEDULED
048	SAVER12	004	CALLERS SAVED REGISTER 12
04C	SAVER13	004	CALLERS SAVED REGISTER 13; ALSO PREVIOUS SAVBK ADDRESS ON CALL
050	SAVER14	004	CALLERS SAVED REGISTER 14; ALSO RETURN ADDRESS ON CALL OR STACKED SAVBK RETURN
054	SAVER15	004	CALLERS SAVED REGISTER 15;

```
                                ALSO GOTO ADDRESS ON SCHEDULED
                                SAVBK EXECUTION; ALSO REGISTER
                                15 RETURN CODE ON HCPEXIT
                                OR STACKED SAVBK RETURN
058     SAVEWRK      040        WORKAREA FOR CALLEE
058     SAVEWRK0     004        WORKAREA FOR CALLEE
05C     SAVEWRK1     004        WORKAREA FOR CALLEE
060     SAVEWRK2     004        WORKAREA FOR CALLEE
064     SAVEWRK3     004        WORKAREA FOR CALLEE
068     SAVEWRK4     004        WORKAREA FOR CALLEE
06C     SAVEWRK5     004        WORKAREA FOR CALLEE
070     SAVEWRK6     004        WORKAREA FOR CALLEE
074     SAVEWRK7     004        WORKAREA FOR CALLEE
078     SAVEWRK8     004        WORKAREA FOR CALLEE
07C     SAVEWRK9     004        WORKAREA FOR CALLEE

                     EQUATES

         10     SAVESIZE     SIZE IN DOUBLE WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SAVBK	001	000	SAVESKCR	001	040
SAVEBPNT	004	004	SAVESPAR	001	008
SAVECALC	001	011	SAVEUCFM	001	008
SAVECPRQ	004	00C	SAVEURGT	001	004
SAVEDMCO	001	001	SAVEWRK	040	058
SAVEFPNT	004	000	SAVEWRK0	004	058
SAVEGET	001	040	SAVEWRK1	004	05C
SAVENOFR	001	080	SAVEWRK2	004	060
SAVEOPEN	001	080	SAVEWRK3	004	064
SAVEPGLK	001	020	SAVEWRK4	004	068
SAVEPGWT	001	010	SAVEWRK5	004	06C
SAVEREGS	064	018	SAVEWRK6	004	070
SAVERETN	004	014	SAVEWRK7	004	074
SAVERTNF	001	010	SAVEWRK8	004	078
SAVER0	004	018	SAVEWRK9	004	07C
SAVER1	004	01C			
SAVER10	004	040			
SAVER11	004	044			
SAVER12	004	048			
SAVER13	004	04C			
SAVER14	004	050			
SAVER15	004	054			
SAVER2	004	020			
SAVER2B0	001	020			
SAVER2B1	001	021			
SAVER2B2	001	022			
SAVER2B3	001	023			
SAVER3	004	024			
SAVER4	004	028			
SAVER5	004	02C			
SAVER6	004	030			
SAVER7	004	034			
SAVER8	004	038			
SAVER9	004	03C			
SAVESCHC	001	010			
SAVESCHD	008	010			
SAVESFQP	004	008			
SAVESIZE	001	010			
SAVESKCL	001	020			

HCPSBIOP— SYNCHRONOUS BLOCK I/O PARAMETER

DSECT NAME: SBIOP

DESCRIPTIVE NAME: SYNCHRONOUS BLOCK I/O PARAMETER

FUNCTION: DESCRIBE THE PARAMETERS OF A DIAGNOSE 'A4' REQUEST

LOCATED BY:

THE "X" REGISTER CONTAINS THE LOGICAL ADDRESS OF THE SBIOP IN GUEST STORAGE AT THE TIME DIAGNOSE 'A4' IS ISSUED.

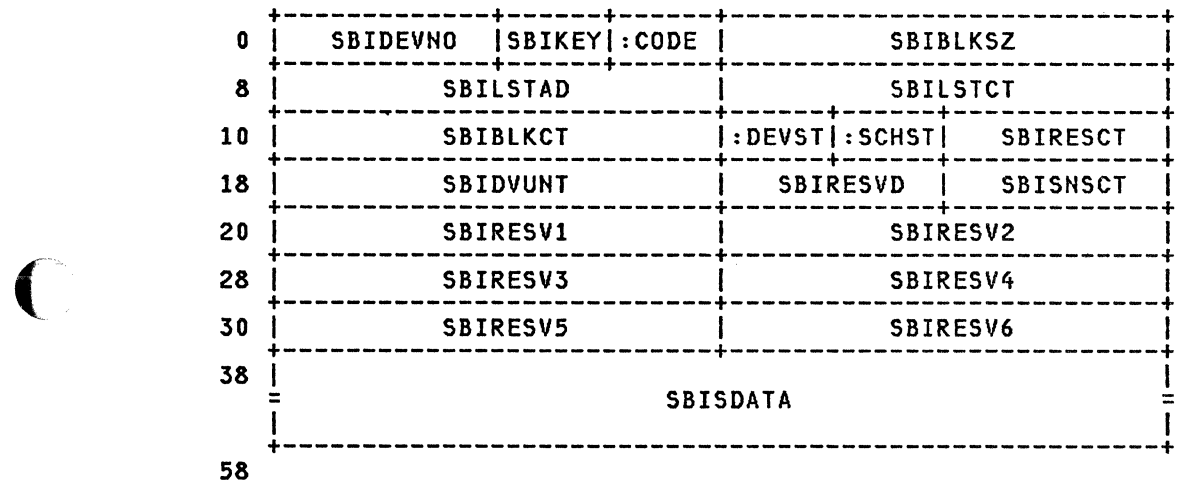
CREATED BY:

THE PROGRAM ISSUING DIAGNOSE 'A4'.

DELETED BY:

N/A

SBIOP - SYNCHRONOUS BLOCK I/O PARAMETER



REDEFINITION - DESCRIBE A DISK/BUFFER LIST ENTRY

disp	name	length	description
000	SBIDEVNO	002	THE VIRTUAL DEVICE NUMBER OF THE DASD TO BE USED.
002	SBIKEY	001	THE STORAGE PROTECTION KEY TO USE FOR I/O OPERATIONS WITH THIS REQUEST.
003	SBICODE	001	TYPE OF REQUEST. CODES DEFINED FOR SBICODE

EQUATES

01	SBIWRITE	WRITE DATA FROM STORAGE TO DASD.
02	SBIREAD	READ DATA FROM DASD TO STORAGE.

004	SBIBLKSZ	004	SIZE OF PHYSICAL RECORDS ON DASD FOR THIS REQUEST.
008	SBILSTAD	004	ADDRESS OF LIST OF BLOCK NUMBER / DATA

```
                        ADDRESS PAIRS FOR THIS REQUEST.  SEE
                        SBILIST, BELOW.
00C   SBILSTCT   004     THE NUMBER OF PAIRS IN LIST AT SBILSTAD.
                        PROVIDED BY THE ISSUER OF THE DIAGNOSE.

                    EQUATES

        F4    SBILSTMX    MAXIMUM NUMBER OF BLOCKS THAT MAY BE
                          PROCESSED IN ONE READ OR WRITE OPERATION.

010   SBIBLKCT   004     THE NUMBER OF BLOCKS PROCESSED BY CP.
014   SBIDEVST   001     DEVICE STATUS BYTE, RETURNED BY CP.
015   SBISCHST   001     THE SUBCHANNEL STATUS BYTE, RETURNED BY CP
016   SBIRESCT   002     THE RESIDUAL COUNT, RETURNED BY CP.
018   SBIDVUNT   004     DEVICE UNITS FIELD
01C   SBIRESVD   002     RESERVED FOR FUTURE IBM USE.
01E   SBISNSCT   002     THE AMOUNT OF SENSE DATA PRESENT.
020   SBIRESV1   004     RESERVED FOR FUTURE IBM USE.
024   SBIRESV2   004     RESERVED FOR FUTURE IBM USE.
028   SBIRESV3   004     RESERVED FOR FUTURE IBM USE.
02C   SBIRESV4   004     RESERVED FOR FUTURE IBM USE.
030   SBIRESV5   004     RESERVED FOR FUTURE IBM USE.
034   SBIRESV6   004     RESERVED FOR FUTURE IBM USE.
038   SBISDATA   032     THE SENSE DATA (ONLY IF UNIT CHECK IS ON
                        IN SBIDEVST)

                    EQUATES

        58    SBIBYLEN    LENGTH (IN BYTES) OF SBIOP
        0B    SBIDWSIZ    SIZE OF SBIOP IN DOUBLEWORDS.


       REDEFINITION - DESCRIBE A DISK/BUFFER LIST ENTRY

000   SBILNTRY   008     A LIST ENTRY IS TWO WORDS LONG
000   SBILBKNO   004     THE BLOCK NUMBER OF DATA ON DASD
                        ( ZERO - ORIGIN )
004   SBILBFAD   004     THE ABSOLUTE ADDRESS OF DATA IN GUEST
                        MACHINE STORAGE.
008   SBILNEXT   008     THE NEXT LIST ENTRY STARTS HERE...
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SBIBLKCT	004	010	SBIRESCT	002	016
SBIBLKSZ	004	004	SBIRESVD	002	01C
SBIBYLEN	001	058	SBIRESV1	004	020
SBICODE	001	003	SBIRESV2	004	024
SBIDEVNO	002	000	SBIRESV3	004	028
SBIDEVST	001	014	SBIRESV4	004	02C
SBIDVUNT	004	018	SBIRESV5	004	030
SBIDWSIZ	001	00B	SBIRESV6	004	034
SBIKEY	001	002	SBISCHST	001	015
SBILBFAD	004	004	SBISDATA	032	038
SBILBKNO	004	000	SBISNSCT	002	01E
SBILIST	001	000	SBIWRITE	001	001
SBILNEXT	008	008			
SBILNTRY	008	000			
SBILSTAD	004	008			
SBILSTCT	004	00C			
SBILSTMX	001	1F4			
SBIOP	001	000			
SBIREAD	001	002			

HCPSCABK— SYSTEM CONTROL AREA FOR INTERPRETIVE

DSECT NAME: SCABK

DESCRIPTIVE NAME: SYSTEM CONTROL AREA FOR INTERPRETIVE EXECUTION

FUNCTION: MAP SCA FOR SIE VIRTUAL MP SUPPORT

LOCATED BY:

VMDISCAA IN ALL VMDBKS OF THE VIRTUAL CONFIGURATION POINTS TO LABEL SCASTART IN THIS BLOCK. THE FRONT OF THE BLOCK.

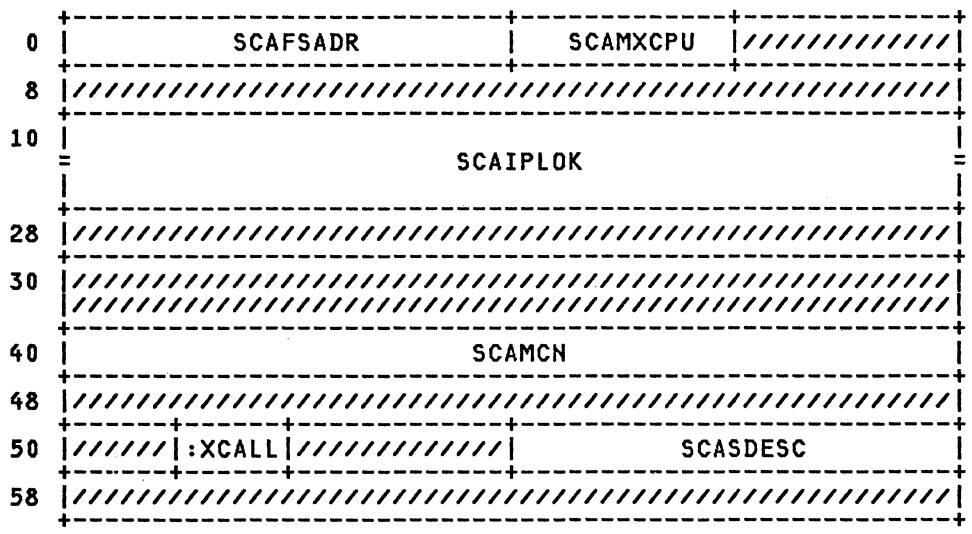
CREATED BY:

HCPBIESC

DELETED BY:

HCPBIESC, HCPBIESR

SCABK - SYSTEM CONTROL AREA FOR INTERPRETIVE EXECUTION



disp	name	length	description
000	SCAFSADR	004	START ADDRESS OF CONTAINING FREE STORAGE BLOCK
004	SCAMXCPU	002	MAXIMUM VIRTUAL CPU ADDRESS IN CONFIGURATION
006		H	RESERVED FOR FUTURE IBM USE
008		2F	RESERVED FOR FUTURE IBM USE
010	SCASTART	016	*** TRUE SCA BEGINS HERE ***
010	SCAIPLK0	001	REDEFINITION OF IPTE INTERLOCK (BELOW):

BITS DEFINED IN SCAIPLK0 (AT HEX DISPLACEMENT: 10)

80	SCAIPLKH	IPTE INTERLOCK IS HELD

010	SCAIPLOK	008	IPTE INTERLOCK
028		D	RESERVED FOR FUTURE IBM USE
030		2D	RESERVED FOR FUTURE IBM USE
040	SCAMCN	008	MASK OF VALID VIRTUAL CPU ADDRS FOR SIGP INTERPRETATION (MAY BE A SUBSET OF DEFINED VIRTUAL CPUS)
048		D	RESERVED FOR FUTURE IBM USE

EQUATES

	0B	SCAFSIZE	FIXED SIZE FOR FREE-STORAGE ALLOCATION (INCLUDES CP HEADER, ARCHITECTED HEADER, AND AN EXTRA DOUBLEWORD TO ALLOW QUADWORD ALIGNMENT)
050	SCACPU	016	CPU DESCRIPTOR (ONE SLOT PER VIRTUAL CPU ADDR):
050	SCAXCWRD	004	WORD FOR COMPARE-AND-SWAP
050		X	RESERVED FOR FUTURE IBM USE
051	SCAXCALL	001	EXTERNAL-CALL STATE:

BITS DEFINED IN SCAXCALL (AT HEX DISPLACEMENT: 51)

80	SCAXCPND	..EXTERNAL CALL PENDING
3F	SCAXCCPU	..MASK TO ISOLATE SENDING ..CPU ADDR

052		2X	RESERVED FOR FUTURE IBM USE

EQUATES

10	SCAXCSHF	NUMBER OF BITS TO SHIFT SCAXCALL LEFT TO INSTALL IT INTO SCAXCWRD

054	SCASDESC	004	POINTER TO STATE DESCRIPTION, OR ZERO IF VIRTUAL CPU NOT DEFINED
058		2F	RESERVED FOR FUTURE IBM USE

EQUATES

10	SCACLEN	LENGTH OF ONE SCACPU ENTRY
02	SCACSIZE	SIZE IN DOUBLEWORDS
04	SCACPUSB	SHIFT-COUNT TO CONVERT CPU ADDR TO OFFSET INTO SCACPU ARRAY (SCACLEN = 2**SCACPUSB)
01	SCACPUSD	SHIFT COUNT TO CONVERT CPU ADDR TO NUMBER OF DOUBLEWORDS (SCACSIZE = 2**SCACPUSD)

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SCABK	001	000	SCAXCALL	001	051
SCACLEN	001	010	SCAXCCPU	001	03F
SCACPU	016	050	SCAXCPND	001	080
SCACPUSB	001	004	SCAXCSHF	001	010
SCACPUSD	001	001	SCAXCWRD	004	050
SCACSIZE	001	002			
SCAFSADR	004	000			
SCAFSIZE	001	00B			
SCAIPLKH	001	080			
SCAIPLK0	001	010			
SCAIPLOK	008	010			
SCAMCN	008	040			
SCAMXCPU	002	004			
SCASDESC	004	054			
SCASTART	016	010			

HCPSCHIB— SUBCHANNEL INFORMATION BLOCK MAPPING

DSECT NAME: SCHIB

DESCRIPTIVE NAME: SUBCHANNEL INFORMATION BLOCK MAPPING

FUNCTION: PROVIDE SYMOLIC REFERENCES FOR THE FIELDS OF AN XA SUBCHANNEL INFORMATION BLOCK (THE EXPLICIT OPERAND OF THE STORE SUBCHANNEL AND MODIFY SUBCHANNEL INSTRUCTIONS.)

LOCATED BY:

N/A

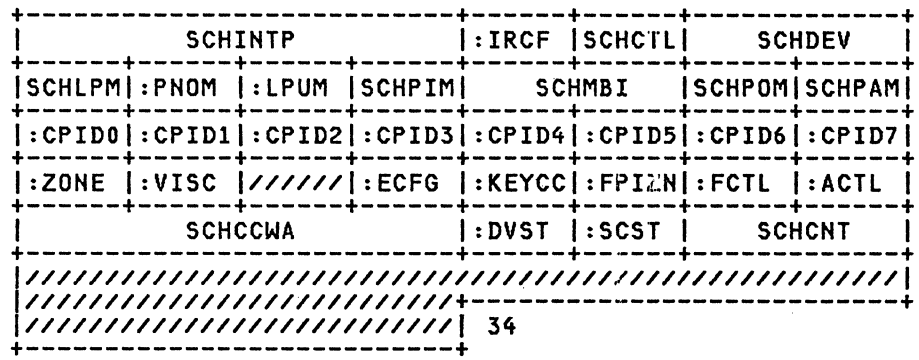
CREATED BY:

N/A

DELETED BY:

N/A

SCHIB - SUBCHANNEL INFORMATION BLOCK



disp	name	length	description
000	SCHPMCW	028	PATH MANAGEMENT CONTROL WORD
000	SCHINTP	004	INTERRUPTION PARAMETER
004	SCHPMW1	004	PMCW WORD-1
004	SCHIRCF	001	INTERRUPTION REQUEST CODE
	BITS DEFINED FOR SCHIRCF BY HCPEQUAT CSWIRCF		
005	SCHCTL	001	CONTROL FLAGS
	BITS DEFINED FOR SCHCTL BY HCPEQUAT CSWCTL		
006	SCHDEV	002	DEVICE NUMBER
008	SCHLPM	001	LOGICAL PATH MASK
009	SCHPNOM	001	PATH NOT OPERATIONAL MASK
00A	SCHLPUM	001	LAST PATH USED MASK
00B	SCHPIM	001	PATH INSTALLED MASK
00C	SCHMBI	002	MEASUREMENT BLOCK INDEX
00E	SCHPOM	001	PATH OPERATIONAL MASK
00F	SCHPAM	001	PATH AVAILABLE MASK
010	SCHCPIDS	008	ARRAY OF CHANNEL PATH IDS
010	SCHCPID0	001	CHANNEL PATH IDENTIFIER 0
011	SCHCPID1	001	CHANNEL PATH IDENTIFIER 1
012	SCHCPID2	001	CHANNEL PATH IDENTIFIER 2
013	SCHCPID3	001	CHANNEL PATH IDENTIFIER 3
014	SCHCPID4	001	CHANNEL PATH IDENTIFIER 4
015	SCHCPID5	001	CHANNEL PATH IDENTIFIER 5
016	SCHCPID6	001	CHANNEL PATH IDENTIFIER 6
017	SCHCPID7	001	CHANNEL PATH IDENTIFIER 7

```
018   SCHWORD6   004       PMCW WORD 6
018   SCHZONE    001       ZONE
019   SCHVISC    001       GUEST ISC - 00000V-ISC
01A              1X        RESERVED
01B   SCHECFG    001       EXTENDED CONTROL FLAGS
                           I0000000
01C   SCHSCSW    012       SCSW CONTAINED IN SCHIB
01C   SCHKEYCC   001       KEY AND CONDITION CODE

        BITS DEFINED FOR SCHKEYCC BY HCPEQUAT CSWSKEY

01D   SCHFPIZN   001       FORMAT AND INITIAL STATUS

        BITS DEFINED FOR SCHFPIZN BY HCPEQUAT CSWFPIZN

01E   SCHFCTL    001       FUNCTION CONTROL

        BITS DEFINED FOR SCHFCTL BY HCPEQUAT CSWFCTL

01F   SCHACTL    001       ACTIVITY CONTROL

        BITS DEFINED FOR SCHACTL BY HCPEQUAT CSWACTL

020   SCHCCWA    004       ADDRESS OF LAST CCW EXECUTED
024   SCHDVST    001       DEVICE STATUS

        BITS DEFINED FOR SCHDVST BY HCPEQUAT CSWDVST

025   SCHSCST    001       SUBCHANNEL STATUS

        BITS DEFINED FOR SCHSCST BY HCPEQUAT CSWSCST

026   SCHCNT     002       RESIDUAL COUNT
028              3F        MACHINE DEPENDENT AREA

                    EQUATES

        34    SCHBLEN     SIZE OF A SCHIB IN BYTES
        07    SCHSIZE     SIZE OF A SCHIB IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SCHACTL	001	01F	SCHIB	001	000
SCHBLEN	001	034	SCHINTP	004	000
SCHCCWA	004	020	SCHIRCF	001	004
SCHCNT	002	026	SCHKEYCC	001	01C
SCHCPIDS	008	010	SCHLPM	001	008
SCHCPID0	001	010	SCHLPUM	001	00A
SCHCPID1	001	011	SCHMBI	002	00C
SCHCPID2	001	012	SCHPAM	001	00F
SCHCPID3	001	013	SCHPIM	001	00B
SCHCPID4	001	014	SCHPMCW	028	000
SCHCPID5	001	015	SCHPMW1	004	004
SCHCPID6	001	016	SCHPNOM	001	009
SCHCPID7	001	017	SCHPOM	001	00E
SCHCTL	001	005	SCHSCST	001	025
SCHDEV	002	006	SCHSCSW	012	01C
SCHDVST	001	024	SCHSIZE	001	007
SCHECFG	001	01B	SCHVISC	001	019
SCHFCTL	001	01E	SCHWORD6	004	018
SCHFPIZN	001	01D	SCHZONE	001	018

HCPSCMBK— SUBCHANNEL MEASUREMENT BLOCK

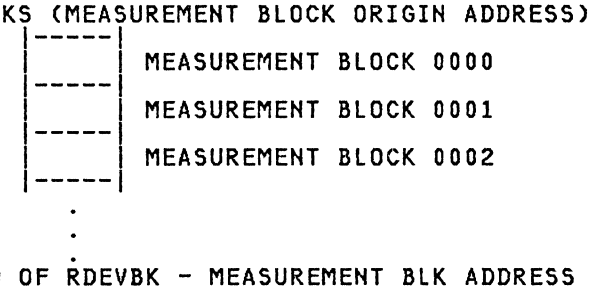
DSECT NAME: SCMBK

DESCRIPTIVE NAME: SUBCHANNEL MEASUREMENT BLOCK

FUNCTION: THE MEASUREMENT BLOCK IS AN ARCHITECTUALLY DEFINED 32 BYTE AREA THAT CONTAINS THE ACCUMULATED VALUES OF THE MEASURED PARAMETERS FOR EACH SUBCHANNEL.

LOCATED BY:

HCPRIOSM IS THE ANCHOR FIELD FOR THE SUBCHANNEL MEASUREMENT BLOCKS (MEASUREMENT BLOCK ORIGIN ADDRESS)



RDEVMBLK FIELD OF RDEVBK - MEASUREMENT BLK ADDRESS

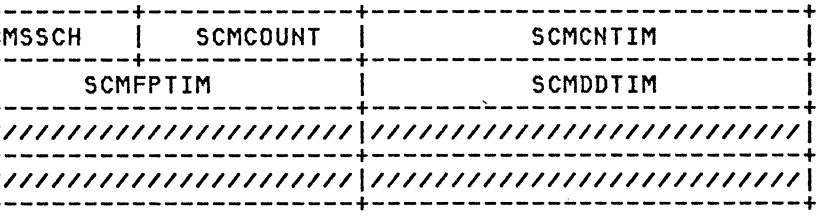
CREATED BY:

SCMBK'S ARE STATIC AND CREATED BY THE SYSGEN PROCESS.

DELETED BY:

SCMBK'S ARE PART OF THE SYSTEM NUCLEUS AND NEVER DELETED.

SCMBK - SUBCHANNEL MEASUREMENT BLOCK



disp	name	length	description
000	SCMSSCH	002	CYCLIC COUNT OF SSCH AND RSCH
002	SCMCOUNT	002	SAMPLE COUNT
004	SCMCNTIM	004	DEVICE-CONNECT TIME
008	SCMFPTIM	004	FUNCTION-PENDING TIME
00C	SCMDDTIM	004	DEVICE-DISCONNECT TIME
010		1F	RESERVED FOR FUTURE HARDWARE USE
014		1F	RESERVED FOR FUTURE HARDWARE USE
018		1F	RESERVED FOR FUTURE HARDWARE USE
01C		1F	RESERVED FOR FUTURE HARDWARE USE

EQUATES

20	SCMSIZEB	LENGTH OF SCMBK IN BYTES
04	SCMSIZE	LENGTH OF SCMBK IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
SCMBK	001	000
SCMCNTIM	004	004
SCMCOUNT	002	002
SCMDDTIM	004	00C
SCMFPTIM	004	008
SCMSIZE	001	004
SCMSIZEB	001	020
SCMSSCH	002	000

HCPSCTBK— SPOOL FILE CLASS TITLE BLOCK

DSECT NAME: SCTBK

DESCRIPTIVE NAME: SPOOL FILE CLASS TITLE BLOCK

FUNCTION: CONTAINS THE CLASSIFICATION TITLE FOR EACH SPOOL FILE CLASS SPECIFIED IN SYSPCLAS MACRO. THE CLASSIFICATION TITLE APPEARS ON SEPARATOR PAGES AND ON THE TOP OR BOTTOM OF EACH PAGE OF PRINTED OUTPUT IF SO SPECIFIED IN SYSPCLAS MACRO.

LOCATED BY:

SYSSCTT FIELD OF HCPSYSCM

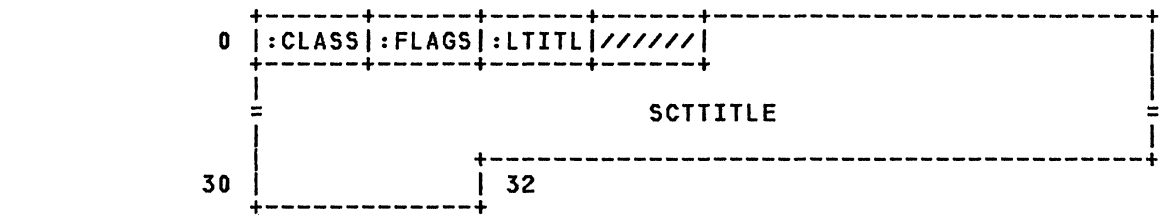
CREATED BY:

HCPSYS ASSEMBLY (SYSGEN) IF THERE IS A SYSPCLAS MACRO

DELETED BY:

NONE

SCTBK - SPOOL FILE CLASS TITLE BLOCK



disp	name	length	description
000	SCTCLASS	001	SPOOL FILE CLASS
		EQUATES	
	FF SCTEND		END OF QUEUE MARKER IN SCTCLASS
001	SCTFLAGS	001	OPTIONS TOP/BOTTOM
002	SCTLTITL	001	LENGTH OF CLASS TITLE
003		XL1	RESERVED FOR IBM FUTURE USE
		EQUATES	
	04 SCTHDRSZ		NUMBER OF BYTES IN BLOCK HEADER SCTHDRSZ + SCTLTITL = LENGTH OF CLASS. TITLE ENTRY
004	SCTTITLE	046	TITLE FOR PRINT TITLES
		MORE EQUATES	
	080 SCTTOP		PUT TITLE AT TOP OF EACH PAGE
	040 SCTBOT		PUT TITLE AT BOTTOM OF EACH PAGE

CROSS REFERENCE

Name	Len	Val/Disp
SCTBK	001	000
SCTBOT	001	040
SCTCLASS	001	000
SCTEND	001	0FF
SCTFLAGS	001	001
SCTHDRSZ	001	004
SCTLTITL	001	002
SCTTITLE	046	004
SCTTOP	001	080

HCPSDFBK— SYSTEM DATA FILE BLOCK

DSECT NAME: SDFBK

DESCRIPTIVE NAME: SYSTEM DATA FILE BLOCK

FUNCTION: THIS IS THE CONTROL BLOCK THROUGH WHICH USERS OF SYSTEM DATA FILES COMMUNICATE WITH THE SPOOLING SUBSYSTEM.

LOCATED BY:

THE ADDRESS OF THE BLOCK IS MAINTAINED BY THE ROUTINES WHICH UTILIZE SYSTEM DATA FILES, AND IS PASSED TO ALL SYSTEM DATA FILE ROUTINES.

CREATED BY:

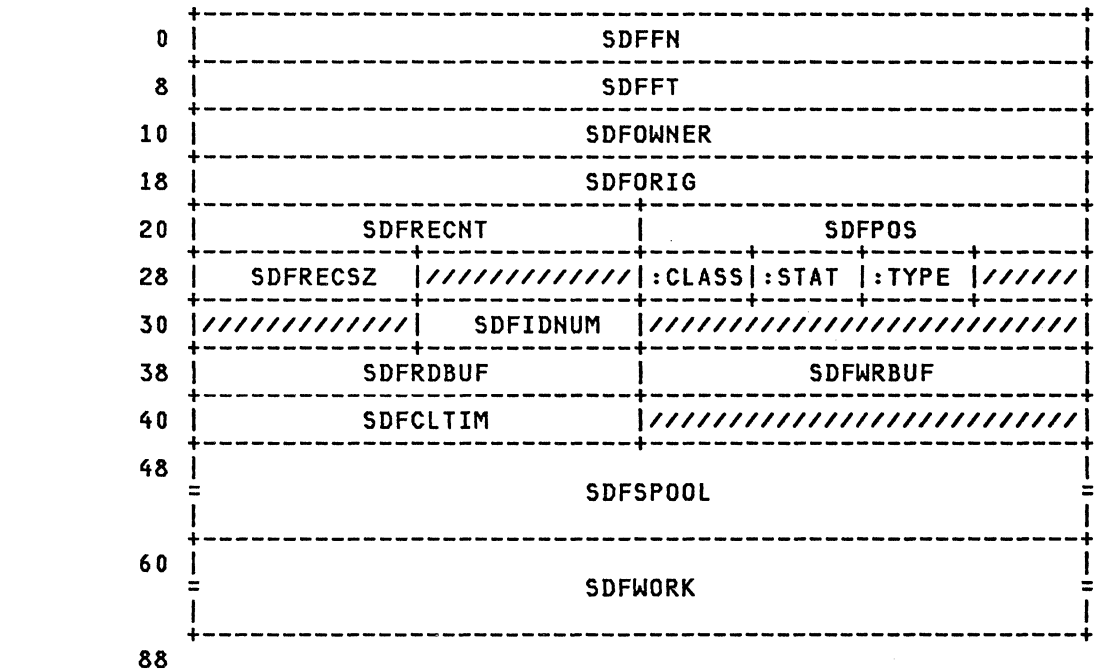
HCPNSD - WHEN DEFINING A SYSTEM OR SEGMENT
HCPNSG - WHEN SAVING ANY SYSTEM DATA FILE
HCPNSI - WHEN LOADING ANY SYSTEM DATA FILE
HCPNSL - WHEN LOADING A SYSTEM OR SEGMENT
HCPNSN - TO PURGE SYSTEM DATA FILES
HCPNSQ - TO QUERY NSS/DCSS FILES
HCPNSR - WHEN OPENING AN IMAGE LIBRARY
HCPNSS - WHEN SAVING A SYSTEM OR SEGMENT
HCPTRD - AFTER OPENING A SYSTEM TRACE FILE
HCPUCR - WHEN OPENING A UCR FILE

DELETED BY:

HCPNSD - AFTER DEFINING A SYSTEM OR SEGMENT
HCPNSG - AFTER SAVING ANY SYSTEM DATA FILE
HCPNSI - AFTER LOADING ANY SYSTEM DATA FILE
HCPNSN - AFTER PURGE SYSTEM DATA FILES

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

SDFBK - SYSTEM DATA FILE BLOCK



disp	name	length	description
000	SDFFN	008	FILE NAME
008	SDFFT	008	FILE TYPE

```
010   SDFOWNER   008       USERID OF FILE OWNER
018   SDFORIG    008       USERID OF FILE ORIGINATOR
020   SDFRECNT   004       NUMBER OF RECORDS
024   SDFPOS     004       CURRENT RECORD POSITION IN THE
                           FILE
028   SDFRECSZ   002       RECORD SIZE
02A              1H        RESERVED FOR FUTURE IBM USE
02C   SDFCLASS   001       FILE CLASS
02D   SDFSTAT    001       FILE STATUS FLAG

        BITS DEFINED IN SDFSTAT  (AT HEX DISPLACEMENT: 2D)

        80    SDFOPENR    FILE IS OPEN FOR READING
        40    SDFOPENW    FILE IS OPEN FOR WRITING
        08    SDFPURGE    FILE IS MARKED FOR PENDING PURGE
        04    SDFEOF      FILE IS POSITIONED AT END

02E   SDFTYPE    001       TYPE OF SYSTEM DATA FILE FLAG

        CODES DEFINED IN SDFTYPE  (AT HEX DISPLACEMENT: 2E)

        80    SDFNSS      NAMED SAVED SYSTEM FILE
        40    SDFIMG      IMAGE LIBRARY FILE
        20    SDFTRF      SYSTEM TRACE FILE (TRF)
        10    SDFDMP      SOFT ABEND DUMP FILE
        08    SDFUCR      CLASS OVERRIDE FILE (UCR)
        04    SDFNLS      NATIONAL LANGUAGE FILE (NLS)

02F              XL1       RESERVED FOR FUTURE IBM USE
030              1H        RESERVED FOR FUTURE IBM USE
032   SDFIDNUM   002       FILE IDENTIFICATION NUMBER
034              1F        RESERVED FOR FUTURE IBM USE
038   SDFRDBUF   004       READ BUFFER ADDRESS
03C   SDFWRBUF   004       WRITE BUFFER ADDRESS
040   SDFCLTIM   004       FIRST HALF OF TOD CLOCK WHEN THE
                           FILE WAS CLOSED
044              1F        RESERVED FOR FUTURE IBM USE
048   SDFSPOOL   004       RESERVED AREA FOR SPOOL SUBSYSTEM
060   SDFWORK    004       USER WORK AREA

                    EQUATES

        11    SDFSIZE     SIZE OF SDFBK IN DOUBLE WORDS
        88    SDFBSIZE    SIZE OF SDFBK IN BYTES
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SDFBK	001	000	SDFOPENW	001	040	SDFTRF	001	020
SDFBSIZE	001	088	SDFORGID	001	002	SDFTYPE	001	02E
SDFCLAS	001	004	SDFORIG	008	018	SDFUCR	001	008
SDFCLASS	001	02C	SDFOWNER	008	010	SDFUSER	001	010
SDFCLTIM	004	040	SDFPNAME	001	040	SDFVOL	001	008
SDFDMP	001	010	SDFPOS	004	024	SDFWORK	004	060
SDFEOF	001	004	SDFPURGE	001	008	SDFWRBUF	004	03C
SDFFN	008	000	SDFRDBUF	004	038			
SDFFT	008	008	SDFRECNT	004	020			
SDFIDNUM	002	032	SDFRECSZ	002	028			
SDFIMG	001	040	SDFSIZE	001	011			
SDFNLS	001	004	SDFSPID	001	020			
SDFNSS	001	080	SDFSPOOL	004	048			
SDFOPENR	001	080	SDFSTAT	001	02D			

HCPSDLBK— SPOOLING DATA LOCATOR BLOCK

DSECT NAME: SDLBK

DESCRIPTIVE NAME: SPOOLING DATA LOCATOR BLOCK

FUNCTION: SPECIFIES THE CCW AND THE LOCATION OF ASSOCIATED DATA TO BE ADDED TO OR READ FROM A SPOOL FILE.

LOCATED BY:

VDSSDL - ANCHOR IN HCPVDSBK
GENERAL REGISTER 1 IN HCPVSP, HCPSPS, & HCPSXS

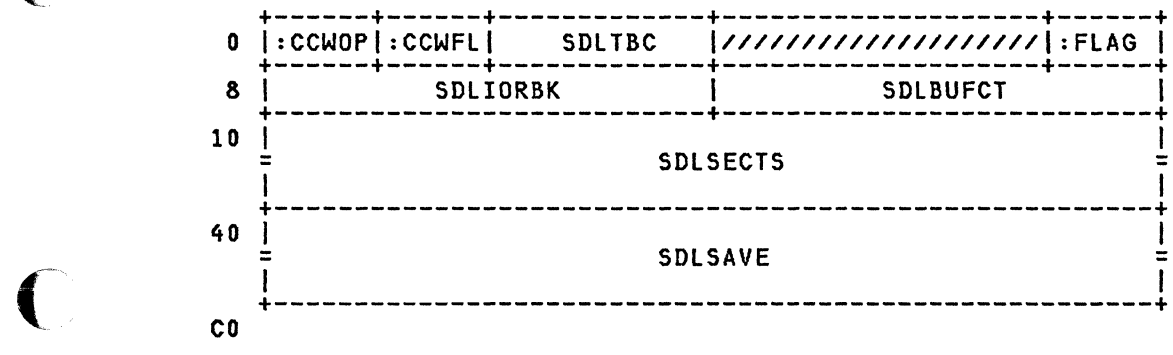
CREATED BY:

HCPVDS, HCPSPS

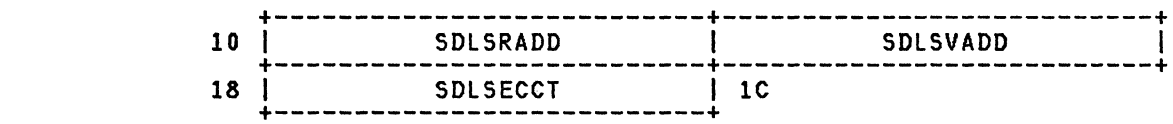
DELETED BY:

HCPDTD, HCPSPS

SDLBK - SPOOLING DATA LOCATOR BLOCK



REDEFINITION - DEFINE ONE DATA BUFFER ENTRY.



disp	name	length	description
000	SDLCCWOP	001	CCW COMMAND CODE
001	SDLCCWFL	001	CCW FLAG BITS
	BITS DEFINED FOR SDLCCWFL BY HCPEQUAT CCWFLAG		
002	SDLTBC	002	TOTAL BYTE COUNT (CCW DATA COUNT)
004		3X	RESERVED
007	SDLFLAG	001	DATA LOCATOR FLAG
	BITS DEFINED IN SDLFLAG (AT HEX DISPLACEMENT: 7)		
	80 SDLCHSIM		USE CHANNEL SIMULATOR TO MOVE DATA. IF OFF, DATA BUFFER LIST FOLLOWS.
	40 SDLNOTTL		DO NOT PRINT PAGE TITLES
008	SDLIORBK	004	IORBK ADDR FOR CHANNEL SIMULATOR
00C	SDLBUFCT	004	NUMBER OF DATA BUFFERS (0-4) WHICH FOLLOW
010	SDLSECTS	008	0-4 DATA BUFFERS (ADDR / LENGTH)
040	SDLSAVE	004	ADD A SAVEAREA FOR USE BY VSQRW

EQUATES

18	SDLSIZE	SDLBK SIZE IN DOUBLE WORDS

REDEFINITION - DEFINE ONE DATA BUFFER ENTRY.

010	SDLSRADD	004	REAL ADDRESS OF DATA SECTION
014	SDLSVADD	004	VIRTUAL ADDRESS OF DATA SECTION. (WORK AREA FOR CALLER - NOT REQ)
018	SDLSECCT	004	BYTE COUNT OF THE DATA SECTION

EQUATES

0C	SDLENTRY	LENGTH OF ONE DATA BUFFER ENTRY

CROSS REFERENCE

Name	Len	Val/Disp
SDLBK	001	000
SDLBUFCT	004	00C
SDLCCWFL	001	001
SDLCCWOP	001	000
SDLCHSIM	001	080
SDLENTRY	001	00C
SDLFLAG	001	007
SDLIORBK	004	008
SDLNOTTL	001	040
SDLSAVE	004	040
SDLSECCT	004	018
SDLSECTS	008	010
SDLSIZE	001	018
SDLSRADD	004	010
SDLSVADD	004	014
SDLTBC	002	002

HCPSDMBK— SNAP DATA MAP BLOCK

DSECT NAME: SDMBK

DESCRIPTIVE NAME: SNAP DATA MAP BLOCK

FUNCTION: A SDMBK DESCRIBES THE SNAP LIST DATA THAT IS CONTAINED IN THE SNAP BUFFERS OF THE SOFT ABEND DUMP. INCLUDED IN THE MAP IS A COPY OF THE PARAMETER LIST THAT WAS PASSED TO THE SOFT ABEND PROCESSOR.

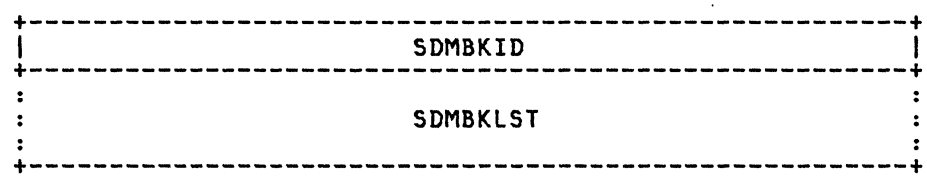
LOCATED BY:

SAMSDMBK FIELD IN HCPSAMBK

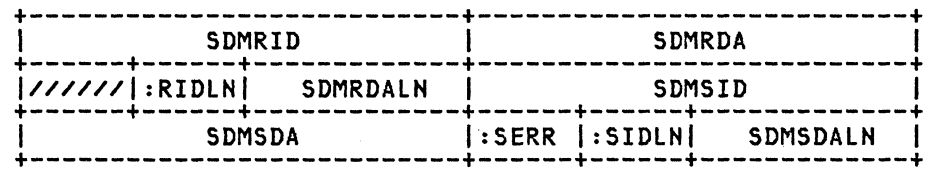
DELETED BY:

N/A

SDMBK - SNAP DATA MAP BLOCK



REDEFINITION - SNAP DATA MAP LIST



disp	name	length	description
000		0F	FORCE WORD BOUNDARY
000	SDMBKID	008	EYECATCHER FOR IDENTIFICATION
008	SDMBKLST	004	START OF VARIABLE LENGTH DATA

REDEFINITION - SNAP DATA MAP LIST

008	SDMRID	004	REQUESTED ADDRESS OF THE SNAP ID FROM THE SDPL
00C	SDMRDA	004	REQUESTED ADDRESS OF SNAP DATA FROM THE SDPL
010		XL1	IBM RESERVED
011	SDMRIDLN	001	REQUESTED LENGTH OF SNAP ID (0:32) FROM THE SDPL
012	SDMRDALN	002	REQUESTED LENGTH OF SNAP DATA FROM THE SDPL
014	SDMSID	004	SAVED ADDRESS OF THE SNAP ID
018	SDMSDA	004	SAVED ADDRESS OF THE SNAP DATA
01C	SDMSERR	001	ERROR FLAGS

BITS DEFINED IN SDMSERR (AT HEX DISPLACEMENT: 1C)

80	SDMINCP	ID STARTS OR END IN A NON-CP PAGE
40	SDMDNCP	DATA STARTS OR END IN A NON-CP PAGE
20	SDMSBFL	SAVE BUFFER IS FULL, DATA MAY BE PARTIALLY SAVED

```
01D   SDMSIDLN   001      SAVED LENGTH OF SAVED SNAP ID (0:32)
01E   SDMSDALN   002      SAVED LENGTH OF SAVED SNAP DATA

                    EQUATES

        18    SDMENTLN    LENGHT OF SNAP DATA MAP LIST ENTRY
        20    SDMBKLN     LENGTH OF SNAP DATA MAP LIST ENTRY
                          AND THE EYECHATCHER

020   SDMNEXT    004      NEXT SNAP DATA MAP LIST ENTRY
```

CROSS REFERENCE

Name	Len	Val/Disp
SDMBK	001	000
SDMBKID	008	000
SDMBKLN	001	020
SDMBKLST	004	008
SDMDNCP	001	040
SDMENTLN	001	018
SDMINCP	001	080
SDMNEXT	004	020
SDMRDA	004	00C
SDMRDALN	002	012
SDMRID	004	008
SDMRIDLN	001	011
SDMSBFL	001	020
SDMSDA	004	018
SDMSDALN	002	01E
SDMSERR	001	01C
SDMSID	004	014
SDMSIDLN	001	01D

HCPSDPL— SNAP DATA PARAMETER LIST

DSECT NAME: SDPL

DESCRIPTIVE NAME: SNAP DATA PARAMETER LIST

FUNCTION: A SDPL LIST IS BUILT BY A CP MODULE WHICH ISSUES A A SOFT ABEND TO INDICATE ADDITIONAL DATA AREA(S) TO BE PRESERVED IN THE SOFT ABEND DUMP.

LOCATED BY:

BY REGISTER 1 FROM THE HCPABEND MACRO

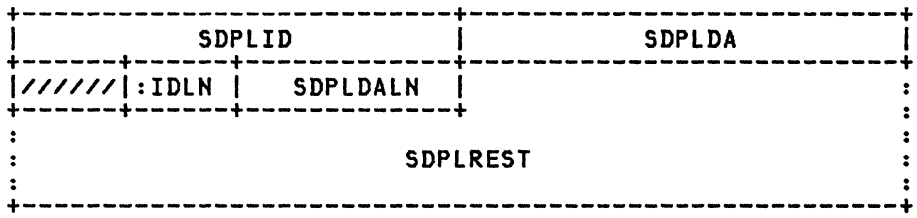
CREATED BY:

THE CALLER OF THE SOFT ABEND PROCESSOR

DELETED BY:

THE CALLER OF THE SOFT ABEND PROCESSOR

SDPL - SNAP DATA PARAMETER LIST



disp	name	length	description
000	SDPLIST	012	SDPL ENTRY
000	SDPLID	004	ADDRESS OF THE SNAP ID
004	SDPLDA	004	ADDRESS OF SNAP DATA
008		XL1	IBM RESERVED
009	SDPLIDLN	001	LENGTH OF SNAP ID (0-32 BYTES)
00A	SDPLDALN	002	LENGTH OF SNAP DATA (1- 65K)
		EQUATES	
	0C SDPLLN		LENGTH OF SDPL ENTRY
00C	SDPLNXT	004	NEXT SNAP DATA LIST ENTRY
		EQUATES	
	FF SDPLEOL		SNAP DATA PARAMTER END OF LIST INDICATOR
00C	SDPLREST	004	START OF VARIABLE LENGTH DATA THIS AREA CONTAINS AS MANY MULTIPLE COPIES OF THE ABOVE FIELDS (SDPLID-SDPLDALN) AS IS NECESSARY.

CROSS REFERENCE

Name	Len	Val/Disp
SDPL	001	000
SDPLDA	004	004
SDPLDALN	002	00A
SDPLEOL	001	FFF
SDPLID	004	000
SDPLIDLN	001	009
SDPLIST	012	000
SDPLLN	001	00C
SDPLNXT	004	00C
SDPLREST	004	00C

SDRREC— STATISTICAL DATA RECORDING BLOCK

DSECT NAME: SDRREC

DESCRIPTIVE NAME: STATISTICAL DATA RECORDING BLOCK

FUNCTION: SDRREC CONTAINS COUNTERS TO RECORD TEMPORARY ERRORS ON A GIVEN I/O DEVICE.

LOCATED BY:

RDEVSDR FIELD OF HCPRDEV.

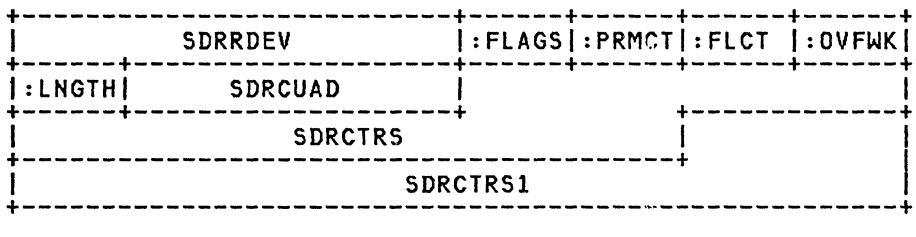
CREATED BY:

HCPIOE

DELETED BY:

HCPIOE

SDRREC - STATISTICAL DATA RECORDING BLOCK



disp	name	length	description
000	SDRRDEV	004	ADDRESS OF ASSOCIATED RDEVBLOK
004	SDRFLAGS	001	SDRREC FLAGS
	BITS DEFINED IN SDRFLAGS (AT HEX DISPLACEMENT: 4)		
005	SDRPRMCT	001	PARAMETER LIST COUNTER
006	SDRFLCT	001	FULL BYTE COUNTER
007	SDROVFWK	001	STATISTICAL UPDATE WORK BYTE
008	SDRLNGTH	001	LENGTH (BYTES) OF SDR COUNTERS
009	SDRCUAD	003	PRIMARY ADDRESS OF DEVICE USED
00C	SDRCTRS	001	SDR ERROR COUNTERS
016	SDRCTRS1	001	ADDITIONAL SDR ERROR CNTR FOR DEVICES WHICH USE MORE THAN 10.

EQUATES

0C	SDRBLEN	HEADER SIZE IN BYTES
04	SDRSIZE	SDRREC SIZE IN DW'S

MORE EQUATES

080	SDRSHRT	SHORT OBR TO BE WRITTEN
040	SDRRECD	TO BE RECORDED ON CNTR OVERFLOW
020	SDRMAX	MAX NUMBER OF SDR CNTRS HANDLED

CROSS REFERENCE

Name	Len	Val/Disp
SDRBLEN	001	00C
SDRCTRS	001	00C
SDRCTRS1	001	016
SDRCUAD	003	009
SDRFLAGS	001	004
SDRFLCT	001	006
SDRLNGTH	001	008
SDRMAX	001	020
SDROVFWK	001	007
SDRPRMCT	001	005
SDRRDEV	004	000
SDRREC	001	000
SDRRECD	001	040
SDRSHRT	001	080
SDRSIZE	001	004

HCPSEGTE— SEGMENT TABLE ENTRY

DSECT NAME: SEGTE

DESCRIPTIVE NAME: SEGMENT TABLE ENTRY

FUNCTION: THERE IS ONE SEGMENT TABLE ENTRY FOR EACH MEGABYTE OF ADDRESS SPACE. A SEGMENT TABLE IS MADE UP OF CONTIGUOUS SEGMENT TABLE ENTRIES. THE SEGMENT TABLE DESCRIBES THE ADDRESS SPACE WHICH CONTAINS GUEST STORAGE AND THE RCP AREA. THE SEGMENT TABLE IS IMBEDDED IN THE VMDBK WHEN GUEST STORAGE IS DEFINED AS 31 MEGABYTES OR LESS. FOR GUEST STORAGE OVER 31 MEGABYTES, A SEPARATE PAGE OF STORAGE IS ALLOCATED. THERE IS ALSO A SEGMENT TABLE IDENTIFIED BY THE SYSTEM VMDBK WHICH DESCRIBES SYSTEM VIRTUAL ADDRESS SPACE. IT IS ALWAYS ALLOCATED AS TWO CONTIGUOUS FRAMES OF STORAGE AT SYSGEN TIME. THE FORMAT OF THE SEGMENT TABLE ENTRY IS ARCHITECTED.

LOCATED BY:

VMDPSTO FIELD OF HCPVMDBK
VMDWSHC1 FIELD OF HCPVMDBK FOR SHADOW TABLES
CONTROL REGISTER 1

CREATED BY:

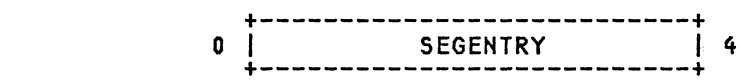
HCPBVMBK WHEN A VMDBK IS BUILT
HCPBPBRN
HCPPTRAN
HCPPTRCP
HCPWSHPX
FOR GUEST STORAGE LESS THAN OR EQUAL TO 31 MEGABYTES, HCPBVMBK CREATES THE SEGMENT TABLE WHICH IS IMBEDDED IN THE VMDBK. FOR GUEST STORAGE OVER 31 MEGABYTES, A SEPARATE PAGE TO CONTAIN THE TABLE IS CREATED BY HCPBPBRN. EACH SEGMENT TABLE ENTRY IS CREATED BY HCPPTRAN WHEN A SEGMENT FAULT

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

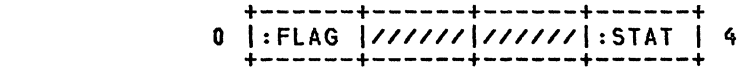
DELETED BY:

HCPSTKFG WHEN A VMDBK IS RELEASED
HCPRPBSN
HCPWSHFR
FOR GUEST STORAGE LESS THEN OR EQUAL TO 31 MEGABYTES, THE SEGMENT TABLE IS RELEASED WHEN THE VMDBK IS DELETED. THE SAME IS TRUE FOR SHADOW SEGMENT TABLES. FOR STORAGE OVER 31 MEGABYTES, HCPRPBSN RELEASES THE SEGMENT TABLE, AND HCPWSHFR RELEASES THE SHADOW SEGMENT TABLE.

SEGTE - SEGMENT TABLE ENTRY



REDEFINITION - SEGMENT TABLE ENTRY STATUS



REDEFINITION -

disp	name	length	description
000	SEGENTRY	004	POINTER TO PAGE TABLE, PAGTB WITHIN THE PGMBK NOTE THAT ARCHITECTURE ALIGNS PAGE TABLES ON 64 BYTE BOUNDARIES BUT SOFTWARE RESTRICTS THE ALIGNMENT TO 256 BYTE BOUNDARIES BECAUSE OF THE USE OF THE LEFT-MOST 2 BITS IN THE RIGHTMOST BYTE. PAGE TABLES ARE IMBEDDED WITHIN PGMBK'S, THEREBY FORCING 4K ALIGNMENT.
		EQUATES	
	04 SEGLENTH		LENGTH OF ONE SEGMENT TABLE ENTRY
004	SEGNEXT	004	NEXT SEGMENT TABLE ENTRY
	REDEFINITION - SEGMENT TABLE ENTRY STATUS		
000	SEGFLAG	001	SEGMENT ALLOCATION STATUS SEGINVAL MUST BE = 1. LEFTMOST BIT ARCHITECTED AS ZERO. RIGHTMOST 7 BITS COMPRISE BITS 1-7 OF THE 31 BIT REAL ADDRESS OF THE PAGE TABLE FOR THIS SEGMENT.
	BITS DEFINED IN SEGFLAG (AT HEX DISPLACEMENT: 0)		
	80 SEGNULL		SEGMENT CANNOT BE ALLOCATED FOR GUEST STORAGE, IT IS NOT ADDRESSABLE BY THE USER. SEGINVAL MUST BE = 1.
001		X	BITS 8-15 OF THE PAGE TABLE ADDRESS.
002		X	BITS 16-23 OF THE PAGE TABLE ADDRESS.
003	SEGSTAT	001	SEGMENT TABLE ENTRY STATUS LEFTMOST 2 BITS COMPRISE BITS 24-25 OF THE PAGE TABLE ADDRESS (6 BITS ARE APPENDED ON THE RIGHT TO FORM THE PAGE TABLE ADDRESS). LEFTMOST 2 BITS USED BY SOFTWARE WHEN SEGMENT ENTRY IS INVALID. RIGHTMOST 6 BITS ARE ARCHITECTED AND USED AS DEFINED BELOW.
	BITS DEFINED IN SEGSTAT (AT HEX DISPLACEMENT: 3)		
	80 SEGWAIT		SEGMENT HAS TRANSLATION REQUESTS WAITING. SEGINVAL MUST BE = 1.
	40 SEGTRANS		SEGMENT IS BEING TRANSLATED THIS BIT IS USED BY SOFTWARE TO SERIALIZE SEGMENT TRANSLATION. SEGINVAL MUST BE = 1.
	20 SEGINVAL		SEGMENT TABLE ENTRY IS INVALID
	10 SEGCOMMN		COMMON SEGMENT BIT. THIS BIT IS ARCHITECTED BUT NOT USED BY CP.
	0F SEGPTLNG		PAGE TABLE LENGTH (IN UNITS OF 64 BYTE BLOCKS, MINUS 1).
	REDEFINITION -		
003	SEGST370	001	SEGMENT TABLE ENTRY STATUS FOR

370 NON-EXTENDED ARCHITECTURE

LEFTMOST 4 BITS COMPRISE BITS
16-19 OF THE PAGE TABLE ADDRESS

RIGHTMOST 4 BITS DESCRIBE THE
STATUS OF THE SEGMENT TABLE ENTRY

BITS DEFINED IN SEGST370 (AT HEX DISPLACEMENT: 3)

04	SEG370PR	SEGMENT IS WRITE PROTECTED
01	SEG370IV	SEGMENT IS INVALID
		END OF DEFINITION

MORE EQUATES

014	SEGSHIFT	BITS TO SHIFT RIGHT TO GET SEGMENT NUMBER FROM AN ADDRESS OR SHIFT LEFT TO GET STARTING SEGMENT ADDRESS FROM A SEGMENT NUMBER

CROSS REFERENCE

Name	Len	Val/Disp
SEGCOMMN	001	010
SEGENTRY	004	000
SEGFLAG	001	000
SEGINVAL	001	020
SEGLENTH	001	004
SEGNEXT	004	004
SEGNULL	001	080
SEGPTLNG	001	00F
SEGSHIFT	001	014
SEGSTAT	001	003
SEGST370	001	003
SEGTE	001	000
SEGTRANS	001	040
SEGWAIT	001	080
SEG370IV	001	001
SEG370PR	001	004

SFBLOK— VM/SP 370 SPOOL FILE CONTROL BLOCK

DSECT NAME: SFBLOK

DESCRIPTIVE NAME: VM/SP 370 SPOOL FILE CONTROL BLOCK

FUNCTION: THIS DSECT IS USED TO WHEN SPOOL FILES ARE TO BE TRANSLATED TO VM/SP FORMAT. (IT IS ANALOGOUS TO THE VM/XA SPFBK.)

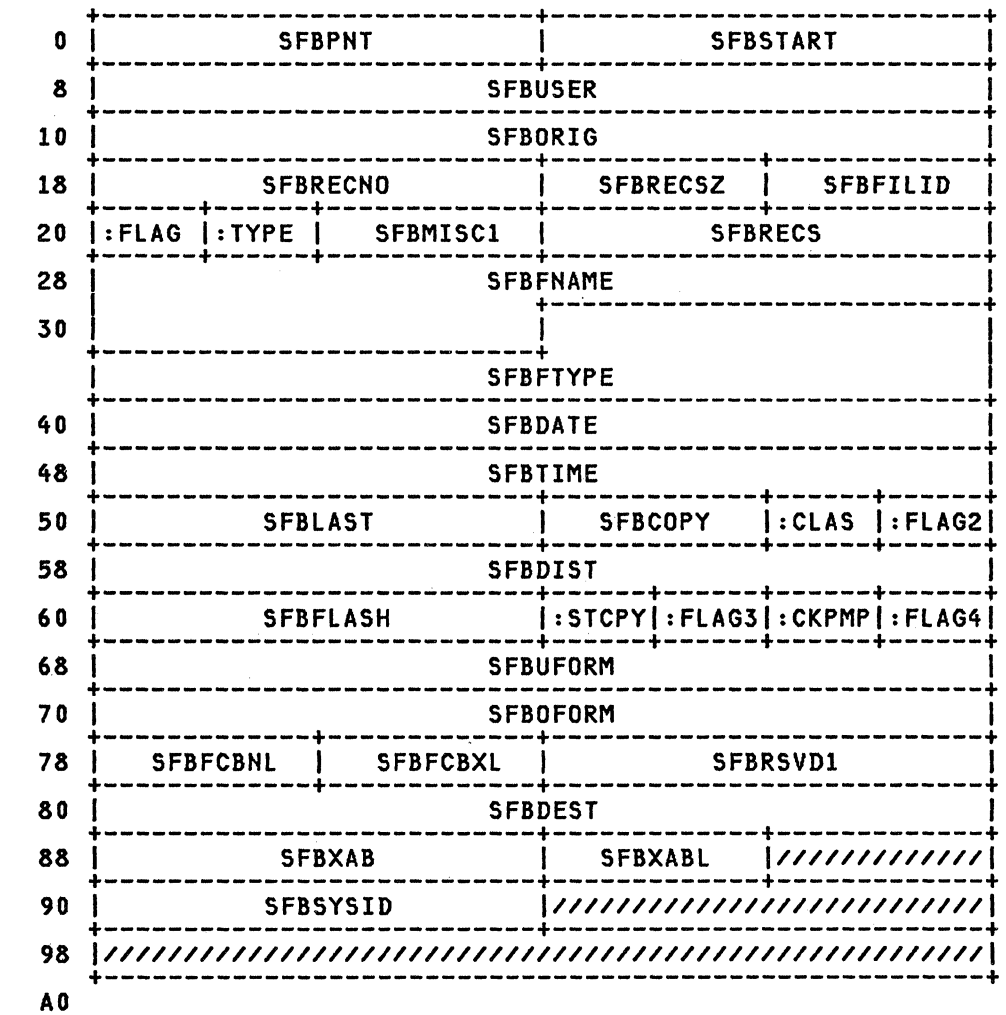
CREATED BY:

HCPSXSFB FOR SPFBK TO SFBLOK TRANSLATIONS. THIS IS DONE FOR DIAGNOSE X'14' AND SPTAPE COMMANDS.

DELETED BY:

NOT APPLICABLE

SFBLOK - VM/SP 370 SPOOL FILE CONTROL BLOCK



disp	name	length	description
000	SFBPNT	004	POINTER TO NEXT SFBLOK
004	SFBSTART	004	DASD LOC. (DCHR) OF FIRST PAGE BUFFER
008	SFBUSER	008	VMUSER IDENTIFICATION OF FILE OWNER
010	SFBORIG	008	VMUSER IDENTIFICATION OF FILE ORIGIN
018	SFBRECNO	004	NUMBER OF DATA RECORDS IN FILE
01C	SFBRECSZ	002	LOGICAL RECORD SIZE - EXCLD. CCWS


```
01E   SFBFILID   002      BINARY SYSTEM FILE NUMBER
020   SFBFLAG    001      S*1 SFBLOK CONTROL FLAGS

        BITS DEFINED IN SFBFLAG  (AT HEX DISPLACEMENT: 20)

        80    SFBINUSE    FILE BEING PROCESSED
        40    SFBRECOK    ALLOCATION RECORDS COMPLETE
        20    SFBUHOLD    FILE IN USER HOLD STATUS
        10    SFBDUMP     FILE IS A CP SYSTEM DUMP
        08    SFBOPEN     INPUT FILE HAS BEEN OPENED
        04    SFBSHOLD    FILE IN SYSTEM HOLD STATUS
        02    SFBEOF      INPUT FILE HAS REACHED EOF
        01    SFBRECER    SFBREC CHAIN INCOMPLETE

021   SFBTYPE    001      DEVICE TYPE FOR SPOOL OUTPUT
022   SFBMISC1   002      USE VARIES ACCORDING TO CALLER
024   SFBRECS    004      POINTER TO RECBLOKS FOR ACTIVE FILE
028   SFBFNAME   012      FILE NAME
034   SFBFTYPE   012      FILE TYPE
040   SFBDATE    008      CREATION DATE OF SPOOL FILE
048   SFBTIME    008      CREATION TIME OF SPOOL FILE
050   SFBLAST    004      DASD LOC. (DCHR) OF LAST PAGE BUFFER
054   SFBCOPY    002      NUMBER OF COPIES REQUESTED
056   SFBCLAS    001      SPOOL FILE CLASS CHARACTER
057   SFBFLAG2   001      SFBLOK CONTROL FLAGS - BYTE 2

        BITS DEFINED IN SFBFLAG2 (AT HEX DISPLACEMENT: 57)

        80    SFBHOLD     SAVE INPUT FILE; HOLD OUTPUT FILE
        40    SFBNOHLD    DELETE INPUT FILE; NOHOLD OUTPUT
        20    SFBFLNMT    FILE NOT EMPTY IF ON
        10    SFBRSTRT    RESTART IN PROGRESS
        08    SFBTICER    BUFFER TIC ERROR
        04    SFBPURGE    PURGE OPEN SPOOL FILE
        02    SFBFIRST    INDICATE FIRST PAGE WRITTEN
        01    SFBMON      MONITOR CLASS FILE

058   SFBDIST    008      DISTRIBUTION CODE
060   SFBFLASH   004      OVERLAY NAME FOR 3800 FLASHING
064   SFBSTCPY   001      CURRENT STARTING COPY NUMBER
065   SFBFLAG3   001      SFBLOK CONTROL FLAGS - BYTE 3

        BITS DEFINED IN SFBFLAG3 (AT HEX DISPLACEMENT: 65)

        80    SFBLDBEG    3800 LOAD CCWS AT BEGINNING
        40    SFBLDMID    3800 LOAD CCWS ALL THRU FILE
        20    SFBFCB      INDICATE FCB CCWS NOW IN FILE
        04    SFBACNT     ACCOUNTING TYPE FILE
        02    SFBSEEN     'FILE PREVIOUSLY SEEN' FLAG
        01    SFBXFER     'FILE TRANSFERRED' FLAG

066   SFBCKPMP   001      CHECKPOINT MAP NUMBER FOR SLOT
067   SFBFLAG4   001      MORE STATUS FLAGS - BYTE 4

        BITS DEFINED IN SFBFLAG4 (AT HEX DISPLACEMENT: 67)

        80    SFBINVS     SFBLOK IS IN SYSSPOOL'S VIRTUAL STORAGE
        40    SFBTUSE     FILE IN TEMPORARY USE BY SYSTEM
        20    SFBNORET    NORETURN FLAG
        0D    SFBDSIZE    DEFAULT SIZE, NON EXTENDED

068   SFBUFORM   008      USER SPECIFIED FORM NUMBER
070   SFBOFORM   008      OPERATOR SPECIFIED FORM NUMBER

                  EQUATES

        0F    SFBR2SIZ    VM/SP RELEASE 2 SIZE IN DBL WDS

078   SFBFCBNL   002      LONGEST IMBEDDED FCB (3211-TYPE)
07A   SFBFCBXL   002      LONGEST IMBEDDED FCB (EXTENDED)
07C   SFBRSVD1   001      RESERVED FOR VM/XA SPTAPE USE
080   SFBDEST    008      USER SPECIFIED DESTINATION
088   SFBXAB     004      DASD ADDRESS OF XAB (CCPD/PPPD)
```

```
                                EXTENDED ATTRIBUTE BUFFER
08C     SFBXABL     002         LENGTH OF XAB
                                EXTENDED ATTRIBUTE BUFFER
08E                 2X          RESERVED FOR FUTURE USE
090     SFBSYSID    004         SYSTEM UNIQUE FILE-ID
094                 F           RESERVED FOR FUTURE USE
098                 D           RESERVED FOR FUTURE USE

                        EQUATES

          14     SFBSIZE      SIZE IN DOUBLE WORDS
          18     SFBFNFT
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SFBACNT	001	004	SFBRSVD1	001	07C
SFBCKPMP	001	066	SFBR2SIZ	001	00F
SFBCLAS	001	056	SFBSEEN	001	002
SFBCOPY	002	054	SFBSHOLD	001	004
SFBDATE	008	040	SFBSIZE	001	014
SFBDEST	008	080	SFBSTART	004	004
SFBDIST	008	058	SFBSTCPY	001	064
SFBDSIZE	001	00D	SFBSYSID	004	090
SFBDUMP	001	010	SFBTICER	001	008
SFBEOF	001	002	SFBTIME	008	048
SFBFCB	001	020	SFBTUSE	001	040
SFBFCBNL	002	078	SFBTYPE	001	021
SFBFCBXL	002	07A	SFBUFORM	008	068
SFBFILID	002	01E	SFBUHOLD	001	020
SFBFIRST	001	002	SFBUSER	008	008
SFBFLAG	001	020	SFBXAB	004	088
SFBFLAG2	001	057	SFBXABL	002	08C
SFBFLAG3	001	065	SFBXFER	001	001
SFBFLAG4	001	067			
SFBFLASH	004	060			
SFBFLNMT	001	020			
SFBFNAME	012	028			
SFBFNFT	001	018			
SFBFTYPE	012	034			
SFBHOLD	001	080			
SFBINUSE	001	080			
SFBINVS	001	080			
SFBLAST	004	050			
SFBLDBEG	001	080			
SFBLDMID	001	040			
SFBLOK	001	000			
SFBMISC1	002	022			
SFBMON	001	001			
SFBNOHLD	001	040			
SFBNORET	001	020			
SFBOFORM	008	070			
SFBOPEN	001	008			
SFBORIG	008	010			
SFBPNT	004	000			
SFBPURGE	001	004			
SFBRECER	001	001			
SFBRECNO	004	018			
SFBRECOK	001	040			
SFBRECS	004	024			
SFBRECSZ	002	01C			
SFBRSTRT	001	010			

HCPSFNDX— CHECKPOINT SPOOL FILE POINTERS

DSECT NAME: SFNDX

DESCRIPTIVE NAME: CHECKPOINT SPOOL FILE POINTERS

FUNCTION: TO POINT TO THE FIRST MAP PAGE (SPMBK) FOR EACH SPOOL FILE IN THE SYSTEM. THE NUMBER OF ENTRIES IN THIS TABLE IS DETERMINED BY THE SIZE OF THE WARMSTART AREA. EACH 4K PAGE ON THE WARMSTART CYLINDER ALLOWS FOR 1022 ENTRIES, ONE FOR EACH POSSIBLE SPOOLID. IF AN ENTRY CONTAINS A ZERO, IT INDICATES THAT THE CORRESPONDING SPOOLID IS AVAILABLE FOR A NEW SPOOL FILE.

LOCATED BY:

THE SFNDX ENTRIES OCCUPY THE FIRST 10 PAGES IMMEDIATELY FOLLOWING THE PAGEABLE MODULES IN THE NUCLUES.
SFNDX ENTRY.

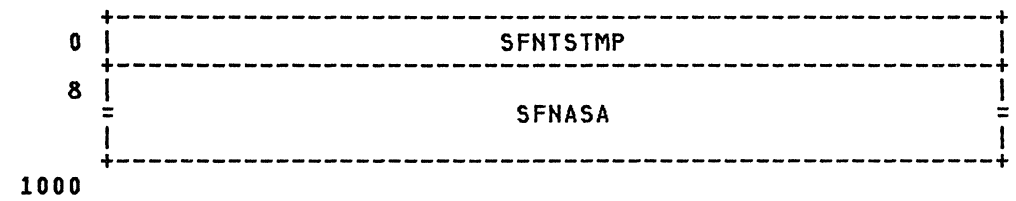
CREATED BY:

THE TEN PAGES OF STORAGE RESERVED FOR THE SFNDX ENTRIES ARE CLEARED TO ZERO WHEN THE SYSTEM IS COLD STARTED, OR REINITIALIZED BY HCPWRMST WHEN THE SYSTEM IS WARM OR FORCE STARTED.
DURING NORMAL SYSTEM PROCESSING, THE SFNDX ENTRIES ARE INITIALIZED BY HCPSFPON WHEN OPENING A NEW SPOOL FILE.

DELETED BY:

WHEN A SPOOL FILE IS DELETED, HCPSFRDR ZEROES OUT THE CORRESPONDING SFNDX ENTRY. THE STORAGE ALLOCATED FOR THE SFNDX ENTRIES IS NEVER DELETED.

SFNDX - CHECK-POINT PAGE FOR PAGE MAP POINTERS



disp	name	length	description
000	SFNTSTMP	008	TIMESTAMP INFORMATION
008	SFNASA	004	SPMBK POINTERS
000	SFNCCEND	004	

EQUATES

FE	SFNSCNT	NUMBER OF SLOTS
00	SFNSIZE	BLOCK SIZE IN DBLWDS

CROSS REFERENCE

Name	Len	Val/Disp
SFNASA	004	008
SFNCCEND	004	000
SFNDX	001	000
SFNSCNT	001	3FE
SFNSIZE	001	200
SFNTSTMP	008	000

HCPSFXBK— SOFTWARE EXTERNAL INTERRUPT CONTROL BLOCK

DSECT NAME: SFXBK

DESCRIPTIVE NAME: SOFTWARE EXTERNAL INTERRUPT CONTROL BLOCK

FUNCTION: HCPSFXBK MAINTAINS THE DATA REQUIRED FOR A GUEST EXTERNAL INTERRUPT WHEN THE INTERRUPT IS PENDING. THERE ARE THREE WAYS AN EXTERNAL INTERRUPT MAY REQUIRE THE USE OF AN SFXBK. 1. WHEN AN EXTERNAL INTERRUPT IS GENERATED AS A RESULT OF THE GUEST 'EXTERNAL' COMMAND. 2. WHEN CP GENERATES A SERVICE PROCESSOR EXTERNAL INTERRUPT TO BE REFLECTED TO THE GUEST. 3. WHEN CP GENERATES A SOFTWARE EXTERNAL INTERRUPT TO BE REFLECTED TO THE GUEST. A SOFTWARE INTERRUPT IS ONE DEFINED BY THE ARCHITECTURE THAT IS ONLY GENERATED BY THE SOFTWARE. IT IS NEVER HARDWARE GENERATED.

LOCATED BY:

SFXINEXT	FORWARD CHAIN	
VMDXTSFI	FIELD OF HCPVMDBK	(SOFTWARE EXTERNAL INTERRUPTS AND INTERRUPTS FROM THE EXTERNAL COMMAND)
FINSFXQ	FIELD OF HCPFINBK	(SERVICE PROCESSOR INTERRUPTS)

CREATED BY:

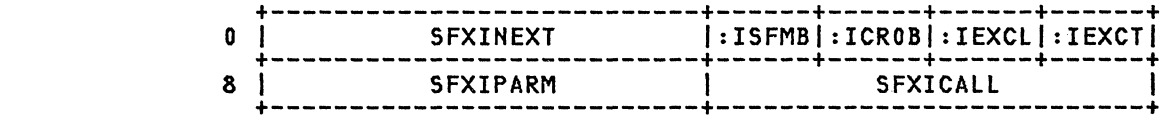
HCPPCV	FOR SERVICE PROCESSOR EXTERNAL INTERRUPTS
HCPSFI	FOR SOFTWARE EXTERNAL INTERRUPTS
HCPVEX	FOR EXTERNAL INTERRUPTS FROM THE EXTERNAL COMMAND

DELETED BY:

HCPRST	DELETES SFXBKS ANCHORED FROM VMDXTSFI FOR SYSTEM RESET AND SIGP RESET FUNCTIONS
HCPPCV	CALLED BY HCPRST TO DELETE SFXBKS ANCHORED FROM FINSFXQ FOR THE SYSTEM RESET FUNCTION
HCPUSO	DELETES ALL SFXBKS ANCHORED FROM FINSFXQ AS PART OF THE LOGOFF FUNCTION

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

SFXBK - SOFTWARE EXTERNAL INTERRUPT CONTROL BLOCK



disp	name	length	description
000	SFXINEXT	004	POINTER TO NEXT SFXBK
004	SFXICMSK	004	INTERRUPT CODES AND MASK VALUES
004	SFXISFMB	001	SOFTWARE MASK BIT NUMBER (1-31)

CODES DEFINED IN SFXISFMB (AT HEX DISPLACEMENT: 4)

FF	SFXIBNON	NO SOFTWARE ENABLE BIT
01	SFXIBACT	ACCOUNTING RECORDING BIT NO
02	SFXIBERP	EREP RECORDING BIT NO
08	SFXIBVMC	VMCF INTERRUPTION BIT NO
		SFXIMSK0 BIT DEFINITIONS - BYTE 0 SOFTWARE MASK BITS
40	SFXIMACT	ACCOUNTING RECORDING IRPT MASK
20	SFXIMERP	EREP RECORDING INTERRUPT MASK
		SFXIMSK1 BIT DEFINITIONS - BYTE 1 SOFTWARE MASK BITS
80	SFXIMVMC	VMCF INTERRUPTION MASK

```
005   SFXICR0B   001      CR0 MASK BIT NUMBER (1-31)

        CODES DEFINED IN SFXICR0B (AT HEX DISPLACEMENT: 5)

        FF    SFXI0NON   NO CR0 ENABLEMENT BIT
        13    SFXI0SYN   TOD SYNCH CHECK CR0 MASK BIT
        16    SFXI0MSF   SERVICE PROCESSOR CR0 MASK BIT
        1E    SFXI0IUC   IUCV CR0 MASK BIT
        1F    SFXI0VMC   VMCF CR0 MASK BIT

                         VALUES DEFINED IN SFXICODE

        00    SFXICIUC   IUCV EXTERNAL INTERRUPT CODE
        01    SFXICVMC   VM -> VM VMCF INTERRUPT CODE
        02    SFXICACT   CP -> VM ACNT RECORD CODE
        03    SFXICERP   CP -> VM EREP RECORD CODE

006   SFXICODE   002      SOFTWARE EXTERNAL INTERRUPT CODE
006   SFXIEXCL   001      EXTERNAL INTERRUPTION CLASS

        CODES DEFINED FOR SFXIEXCL BY HCPEQUAT EXTICLAS

007   SFXIEXCT   001      EXTERNAL INTERRUPTION CLASS

        CODES DEFINED FOR SFXIEXCT BY HCPEQUAT EXTICODE

008   SFXIPARM   004      PARAMETER TO PASS CALLED ROUTINE
00C   SFXICALL   004      ADDRESS OF ROUTINE TO BE CALLED

                    EQUATES

        02    SFXISIZE   SIZE OF BLOCK IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SFXBK	001	000	SFXI0SYN	001	013
SFXIBACT	001	001	SFXI0VMC	001	01F
SFXIBERP	001	002			
SFXIBNON	001	0FF			
SFXIBVMC	001	008			
SFXICACT	001	002			
SFXICALL	004	00C			
SFXICERP	001	003			
SFXICIUC	001	000			
SFXICMSK	004	004			
SFXICODE	002	006			
SFXICR0B	001	005			
SFXICVMC	001	001			
SFXIEXCL	001	006			
SFXIEXCT	001	007			
SFXIMACT	001	040			
SFXIMERP	001	020			
SFXIMVMC	001	080			
SFXINEXT	004	000			
SFXIPARM	004	008			
SFXISFMB	001	004			
SFXISIZE	001	002			
SFXI0IUC	001	01E			
SFXI0MSF	001	016			
SFXI0NON	001	0FF			

HCPSGIOP— SYNCHRONOUS GENERAL I/O PARAMETERS

DSECT NAME: SGIOP

DESCRIPTIVE NAME: SYNCHRONOUS GENERAL I/O PARAMETERS

FUNCTION: DESCRIBE THE PARAMETERS OF A DIAGNOSE 'A8' REQUEST

LOCATED BY:

THE "X" REGISTER CONTAINS THE LOGICAL ADDRESS OF THE SGIOP IN GUEST STORAGE AT THE TIME DIAGNOSE 'A8' IS ISSUED.

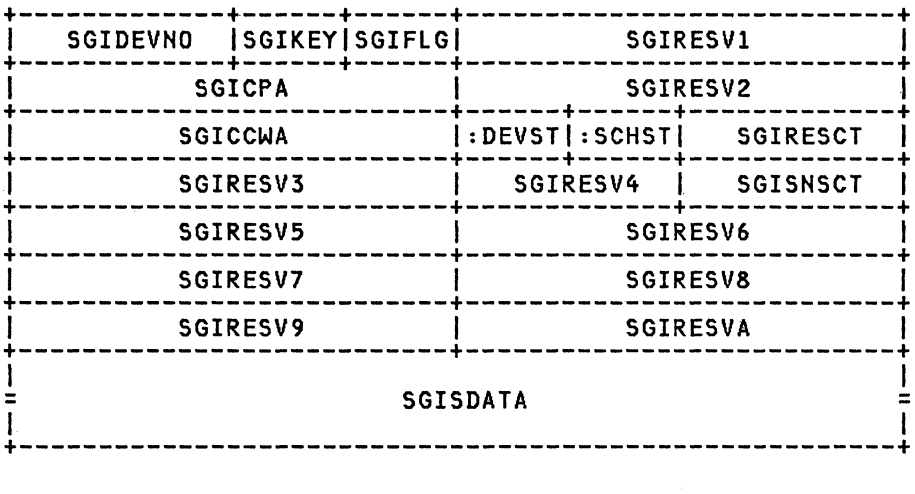
CREATED BY:

THE PROGRAM ISSUING DIAGNOSE 'A8'.

DELETED BY:

N/A

SGIOP - SYNCHRONOUS GENERAL I/O PARAMETERS



disp	name	length	description
000	SGIDEVNO	002	THE VIRTUAL DEVICE NUMBER OF THE DEVICE TO BE USED.
002	SGIOKF	002	KEY AND FLAG BYTES.
002	SGIKEY	001	THE STORAGE PROTECTION KEY TO USE FOR I/O OPERATIONS WITH THIS REQUEST.
003	SGIFLG	001	GENERAL I/O REQUEST FLAG. CODES DEFINED FOR SGIFLG
			EQUATES
	80 SGIFMT		CCW FORMAT.
004	SGIRESV1	004	RESERVED FOR FUTURE IBM USE.
008	SGICPA	004	CHANNEL PROGRAM ADDRESS FOR THIS REQUEST.
00C	SGIRESV2	004	RESERVED FOR FUTURE IBM USE.
010	SGICASC	008	COMBINED CCW ADDRESS, DEVICE & SUBCHANNEL STATUS AND RESIDUAL COUNT FIELDS.
010	SGICCWA	004	ADDRESS OF CCW AT INTERRUPT (+8).
014	SGIDEVST	001	THE DEVICE STATUS BYTE, RETURNED BY CP.
015	SGISCHST	001	THE SUBCHANNEL STATUS BYTE, RETURNED BY CP
016	SGIRESCT	002	THE RESIDUAL COUNT, RETURNED BY CP.
018	SGIRESV3	004	RESERVED FOR FUTURE IBM USE.
01C	SGIRESV4	002	RESERVED FOR FUTURE IBM USE.
01E	SGISNSCT	002	THE AMOUNT OF SENSE DATA PRESENT.

```
020    SGIRESV5    004       RESERVED FOR FUTURE IBM USE.
024    SGIRESV6    004       RESERVED FOR FUTURE IBM USE.
028    SGIRESV7    004       RESERVED FOR FUTURE IBM USE.
02C    SGIRESV8    004       RESERVED FOR FUTURE IBM USE.
030    SGIRESV9    004       RESERVED FOR FUTURE IBM USE.
034    SGIRESVA    004       RESERVED FOR FUTURE IBM USE.
038    SGISDATA    032       THE SENSE DATA (ONLY IF UNIT CHECK IS ON
                             IN SGIDEVST).
```

EQUATES

```
      58     SGIBYLEN     LENGTH (IN BYTES) OF SGIOP.
      0B     SGIDWSIZ     SIZE OF SGIOP IN DOUBLEWORDS.
```

CROSS REFERENCE

Name	Len	Val/Disp
SGIBYLEN	001	058
SGICASC	008	010
SGICCWA	004	010
SGICPA	004	008
SGIDEVNO	002	000
SGIDEVST	001	014
SGIDWSIZ	001	00B
SGIFLG	001	003
SGIFMT	001	080
SGIKEY	001	002
SGIOKF	002	002
SGIOP	001	000
SGIRESCT	002	016
SGIRESVA	004	034
SGIRESV1	004	004
SGIRESV2	004	00C
SGIRESV3	004	018
SGIRESV4	002	01C
SGIRESV5	004	020
SGIRESV6	004	024
SGIRESV7	004	028
SGIRESV8	004	02C
SGIRESV9	004	030
SGISCHST	001	015
SGISDATA	032	038
SGISNSCT	002	01E

HCPSGTBK— SAVED GUEST TIMERS BLOCK

DSECT NAME: SGTBK

DESCRIPTIVE NAME: SAVED GUEST TIMERS BLOCK

FUNCTION: THE SAVED GUEST TIMER CONTROL BLOCK IS CREATED TO SAVE THE GUEST TIMERS AT THE TIME A NAMED SAVED SYSTEM IS CREATED AND USED TO RESTORE A GUEST'S TIMERS WHENEVER THAT SAVED SYSTEM IS INVOKED.

LOCATED BY:

POINTED TO BY REGISTER TWO IN HCPVTM. PASSED BY REGISTER ONLY

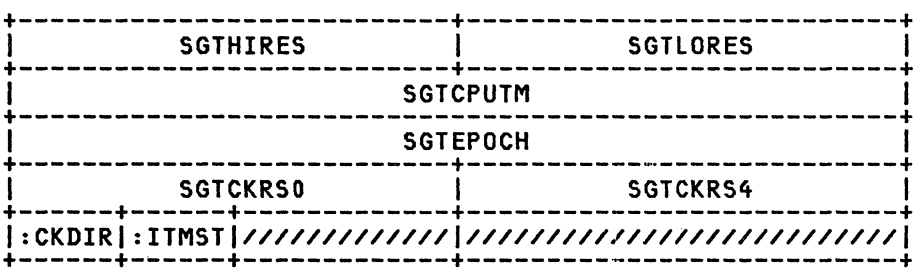
CREATED BY:

HCPVTM

DELETED BY:

HCPNSE

SGTBK - SAVED GUEST TIMERS BLOCK



disp	name	length	description
000		0D	DOUBLE WORD ALIGNMENT
000	SGTHIRES	004	SAVED GUEST HIGH ORDER INTERVAL TIMER RESIDUE COUNTER
004	SGTLORES	004	SAVED GUEST LOW ORDER INTERVAL TIMER RESIDUE COUNTER
008	SGTCPUTM	008	SAVED GUEST CPU TIMER
010	SGTEPOCH	008	SAVED GUEST EPOCH SAVED GUEST TIME-OF-DAY EPOCH TO DEFINE DELTA BETWEEN HOST TOD CLOCK AND GUEST TOD CLOCK
018	SGTCKRES	008	CLOCK COMPARATOR RESIDUE SAVED CLOCK COMPARATOR RESIDUE. THE DIFFERENCE BEWTEEN THE GUEST CLOCK COMPARATOR VALUE AND THE HOST TOD CLOCK
018	SGTCKRS0	004	HIGH-ORDER WORD OF RESIDUE
01C	SGTCKRS4	004	LOW-ORDER WORD OF RESIDUE
020	SGTCKDIR	001	DIRECTION FOR CLOCK COMPARATOR CALCULATIONS. ZEROS MEAN THE CLOCK COMPARATOR RESIDUE SHOULD BE ADDED TO THE TIME OF DAY CLOCK WHEN RESTORING GUEST CLOCK COMPARATOR VALUE. FF'S MEAN SGTCKRES SHOULD BE SUBTRACTED FROM THE TIME OF DAY CLOCK FOR RESTORING THE CLOCK COMPARATOR

CODES DEFINED IN SGTCKDIR (AT HEX DISPLACEMENT: 20)

00	SGTCKPOS	ADD TO TOD CLOCK FOR RESTORE
FF	SGTCKNEG	SUBTRACT FROM TOD CLOCK

021	SGTITMST	001	INTERVAL TIMER STATUS

CODES DEFINED IN SGTITMST (AT HEX DISPLACEMENT: 21)

00	SGTITMNI	NO INTERVAL TIMER INTERRUPT

```
        FF    SGTITMIP    INTERVAL TIMER INTERRUPT PENDING

022               H       RESERVED FOR FUTURE IBM USE
024               F       RESERVED FOR FUTURE IBM USE

                     EQUATES

        05    SGTBSIZE    BLOCK SIZE IN DOUBLE WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
SGTBK	001	000
SGTBSIZE	001	005
SGTCKDIR	001	020
SGTCKNEG	001	0FF
SGTCKPOS	001	000
SGTCKRES	008	018
SGTCKRS0	004	018
SGTCKRS4	004	01C
SGTCPUTM	008	008
SGTEPOCH	008	010
SGTHIRES	004	000
SGTITMIP	001	0FF
SGTITMNI	001	000
SGTITMST	001	021
SGTLORES	004	004

HCPSHQBK— SPOOL HOLD QUEUE

DSECT NAME: SHQBK

DESCRIPTIVE NAME: SPOOL HOLD QUEUE

FUNCTION: EACH SHQBK IDENTIFIES ONE USER WHOSE PRINT AND/OR PUNCH OUTPUT IS TO BE HELD, OR IS NOT ALLOWED TO TO LOGON.

LOCATED BY:

THE FIRST SHQBK IS ADDRESSED BY 'SYSHOLQ' IN THE SYSTEM COMMON AREA. THERE ARE THIRTY-TWO CONTIGUOUS ENTRIES IN THE ARRAY.

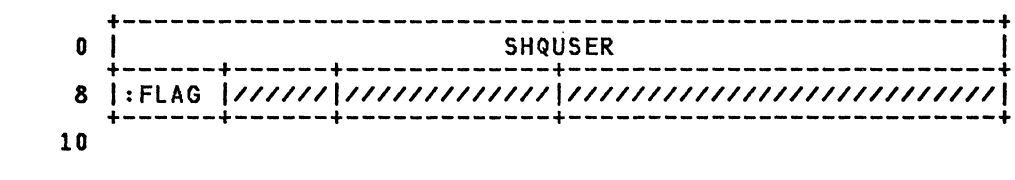
CREATED BY:

THE EXPANSION OF HCPSYS

DELETED BY:

NOT DELETED

SHQBK - SPOOL HOLD QUEUE



disp	name	length	description
000	SHQUSER	008	USER WHOSE FILES ARE TO BE HELD
008	SHQFLAG	001	STATUS FLAGS

BITS DEFINED IN SHQFLAG (AT HEX DISPLACEMENT: 8)

80	SHQHLOG	USERID CAN'T LOGON
40	SHQHPUN	HOLD ALL PUNCH OUTPUT
20	SHQHPRT	HOLD ALL PRINTER OUTPUT
009	X	RESERVED FOR FUTURE IBM USE
00A	H	RESERVED FOR FUTURE IBM USE
00C	F	RESERVED FOR FUTURE IBM USE

EQUATES

02	SHQSIZE	BLOCK LENGTH IN DBL-WORDS
10	SHQBSIZE	BLOCK LENGTH IN BYTES
20	SHQCNT	NUMBER OF ENTRIES IN HOLD QUEUE
40	SHQTOTSZ	SIZE OF ENTIRE HOLD QUEUE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SHQBK	001	000	SHQFLAG	001	008	SHQHPUN	001	040
SHQBSIZE	001	010	SHQHLOG	001	080	SHQSIZE	001	002
SHQCNT	032	020	SHQHPRT	001	020	SHQTOTSZ	032	040

Name	Len	Val/Disp
SHQUSER	008	000

HCPSHRBK— SHARE BLOCK

DSECT NAME: SHRBK

DESCRIPTIVE NAME: SHARE BLOCK

FUNCTION: THIS BLOCK IS USED TO KEEP TRACK OF EACH NSS OR DCSS THAT A USER IS ATTACHED TO.

LOCATED BY:

ALL SHRBKS FOR THE NSS AND/OR DCSSS THAT THE VIRTUAL MACHINE USER IS ACCESSING ARE CHAINED TOGETHER IN A LIST ANCHORED OFF THE VMDBK.
VMDSHRPT IS THE POINTER TO THE FIRST SHRBK FOR THIS USER. A ZERO POINTER INDICATES THAT THE USER'S CHAIN IS EMPTY.
SHRFWDPT IS THE POINTER TO THE NEXT SHRBK IN THE USER'S CHAIN. THE CHAIN END IS INDICATED WHEN SHRFWDPT IS ZERO.

- ALL SHRBKS FOR USERS USING A SPECIFIC SNTBK ARE CHAINED TOGETHER IN A DOUBLY LINKED LIST ANCHORED OFF THE SNTBK. THIS LIST REPRESENTS ALL USERS WHO HAVE LOADED THE NSS OR DCSS.
SNTSHRPT IS THE POINTER TO THE FIRST SHRBK IN THE CHAIN FOR THIS SNTBK. A ZERO POINTER INDICATES THAT THE CHAIN IS EMPTY.
SHRQUEFW IS THE POINTER TO THE NEXT SHRBK IN THE CHAIN FOR THIS SNTBK. THE CHAIN END IS INDICATED WHEN SHRQUEFW IS ZERO.
SHRQUEBK IS THE POINTER TO THE PREVIOUS SHRBK IN THE CHAIN FOR THIS SNTBK.

CREATED BY:

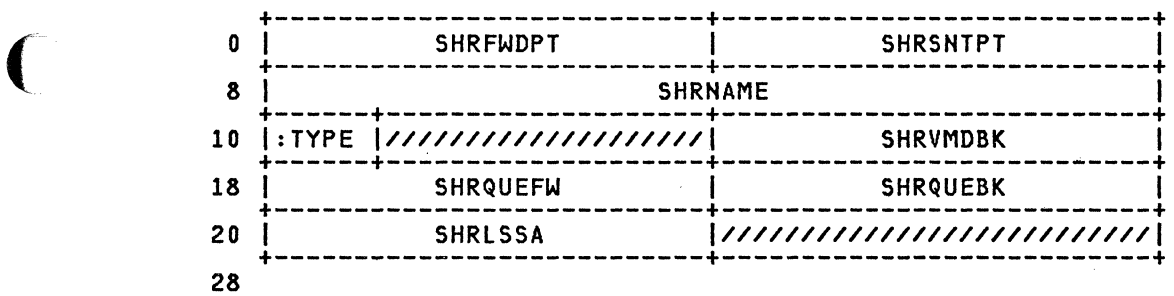
HCPNSL WHEN LOADING AN NSS OR DCSS.

DELETED BY:

HCPNSP - WHEN THE USER PURGES THE DCSS.
HCPNSP - WHEN THE USER IPLS A SYSTEM, ALL SHRBKS FOR THAT USER ARE PURGED.

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

SHRBK - SHARE BLOCK



disp	name	length	description
000	SHRFWDPT	004	FORWARD POINTER TO THIS USER'S NEXT SHRBK.
004	SHRSNTPT	004	POINTER TO THE SNTBK FOR THIS NSS OR DCSS.
008	SHRNAME	008	THE NAME FOR THIS NSS OR DCSS.
010	SHRFLAGS	004	FLAGS FOR SHRBK.
010	SHRTYPE	001	TYPE INFORMATION BYTE.

BITS DEFINED IN SHRTYPE (AT HEX DISPLACEMENT: 10)

	01 SHREXCL		THIS BIT INDICATES THAT THE NSS OR DCSS IS AN EXCLUSIVE COPY.
011		3X	RESERVED FOR IBM USE.
014	SHRVMDBK	004	
018	SHRQUEFW	004	NEXT SHRBK ON A CHAIN OF SHRBKS ASSOCIATED WITH A SPECIFIC SNTBK.
01C	SHRQUEBK	004	PREV.SHRBK ON A CHAIN OF SHRBKS ASSOCIATED WITH A SPECIFIC SNTBK.
020	SHRLSSA	004	ADDRESS OF THE SNTBK DEFINING THE SEGMENT SPACE THROUGH WHICH THE NAMED MEMBER SEGMENT WAS LOADED. WHEN THIS FIELD IS EQUAL TO SHRSNTPT, SHRNAME IS NOT A MEMBER SEGMENT. IT IS A NAMED SAVED SEGMENT OR SEGMENT SPACE.
024		F	RESERVED FOR IBM USE

EQUATES

05	SHRSIZE	BLOCK IN DOUBLE WORDS.

CROSS REFERENCE

Name	Len	Val/Disp
SHRBK	001	000
SHREXCL	001	001
SHRFLAGS	004	010
SHRFWDPT	004	000
SHRLSSA	004	020
SHRNAME	008	008
SHRQUEBK	004	01C
SHRQUEFW	004	018
SHRSCALE	001	010
SHRSIZE	001	005
SHRSNTPT	004	004
SHRTYPE	001	010
SHRVMDBK	004	014

HCPSIABK— SPOOL ID ALLOCATION MAP

DSECT NAME: SIABK

DESCRIPTIVE NAME: SPOOL ID ALLOCATION MAP

FUNCTION: TO DETERMINE WHICH SPOOL FILE IDS HAVE BEEN ALLOCATED

LOCATED BY:

N/A

CREATED BY:

HCPFIT BITMAP SUBROUTINE

DELETED BY:

HCPFIT BITMAP SUBROUTINE

SIABK - SPOOL ID ALLOCATION MAP

REDEFINITION - REDEFINITION OF ONE BIT MAP

disp	name	length	description
000	SIAMAP	008	ENTIRE ALLOCATION MAP

EQUATES

9D	SIASIZE	SIZE IN DOUBLE WORDS

REDEFINITION - REDEFINITION OF ONE BIT MAP

000	SIABMAP	008	ONE 64 BIT MAP
008	SIANEXT	008	NEXT 64 BIT MAP

CROSS REFERENCE

Name	Len	Val/Disp
SIABK	001	000
SIABMAP	008	000
SIAMAP	008	000
SIANEXT	008	008
SIASIZE	001	09D

HCPSIDBK— SYSTEM ID LIST

DSECT NAME: SIDBK

DESCRIPTIVE NAME: SYSTEM ID LIST

FUNCTION: CONTAINS THE SYSTEM ID FOR EACH PROCESSOR UPON WHICH THE SYSTEM IS EXPECTED TO BE IPL'D. THIS ID WILL APPEAR ON THE LOGO PRIOR TO LOGGING ON A USER AND ON SEPARATOR PAGES OF SPOOLED PRINTER OUTPUT.

LOCATED BY:

SYSIDL FIELD OF HCPSYSCM

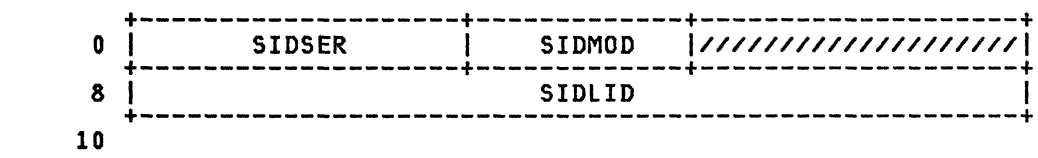
CREATED BY:

HCPSYS ASSEMBLY (SYSGEN) IF THERE IS A SYSID MACRO

DELETED BY:

NONE

SIDBK - SYSTEM ID LIST



disp	name	length	description
000	SIDCPU	008	CPUID - ALL F'S INDICATE DEFAULT ENTRY WHICH IS LAST
000	SIDSER	003	SERIAL NUMBER
003	SIDMOD	002	MODEL
005		XL3	RESERVED FOR HARDWARE USE
008	SIDLID	008	LOCAL ID

EQUATES

02	SIDSIZE	NUMBER OF DOUBLE WORDS PER ENTRY

CROSS REFERENCE

Name	Len	Val/Disp
SIDBK	001	000
SIDCPU	008	000
SIDLID	008	008
SIDMOD	002	003
SIDSER	003	000
SIDSIZE	001	002

HCPSIEBK— SIE STATE DESCRIPTOR BLOCK

DSECT NAME: SIEBK

DESCRIPTIVE NAME: SIE STATE DESCRIPTOR BLOCK

FUNCTION: THIS AREA DESCRIBES THE GUEST MACHINE TO THE EMULATION HARDWARE. THIS CONTROL BLOCK IS USED TO REFER TO A STATE DESCRIPTOR WHICH IS THE OPERAND OF A GUEST SIE INSTRUCTION. THE STATE DESCRIPTOR USED BY THE HOST CONTROL PROGRAM TO RUN A GUEST IS IMBEDDED AND DESCRIBED IN VMDBK COPY. THIS CONTROL BLOCK IS DEFINED BY PROCESSOR ARCHITECTURE.

LOCATED BY:

OFFSET 100 INTO THE V/SIE VMDBK (WHICH IS IDENTIFIED BY VMDTYPE = VMDTYPSI)

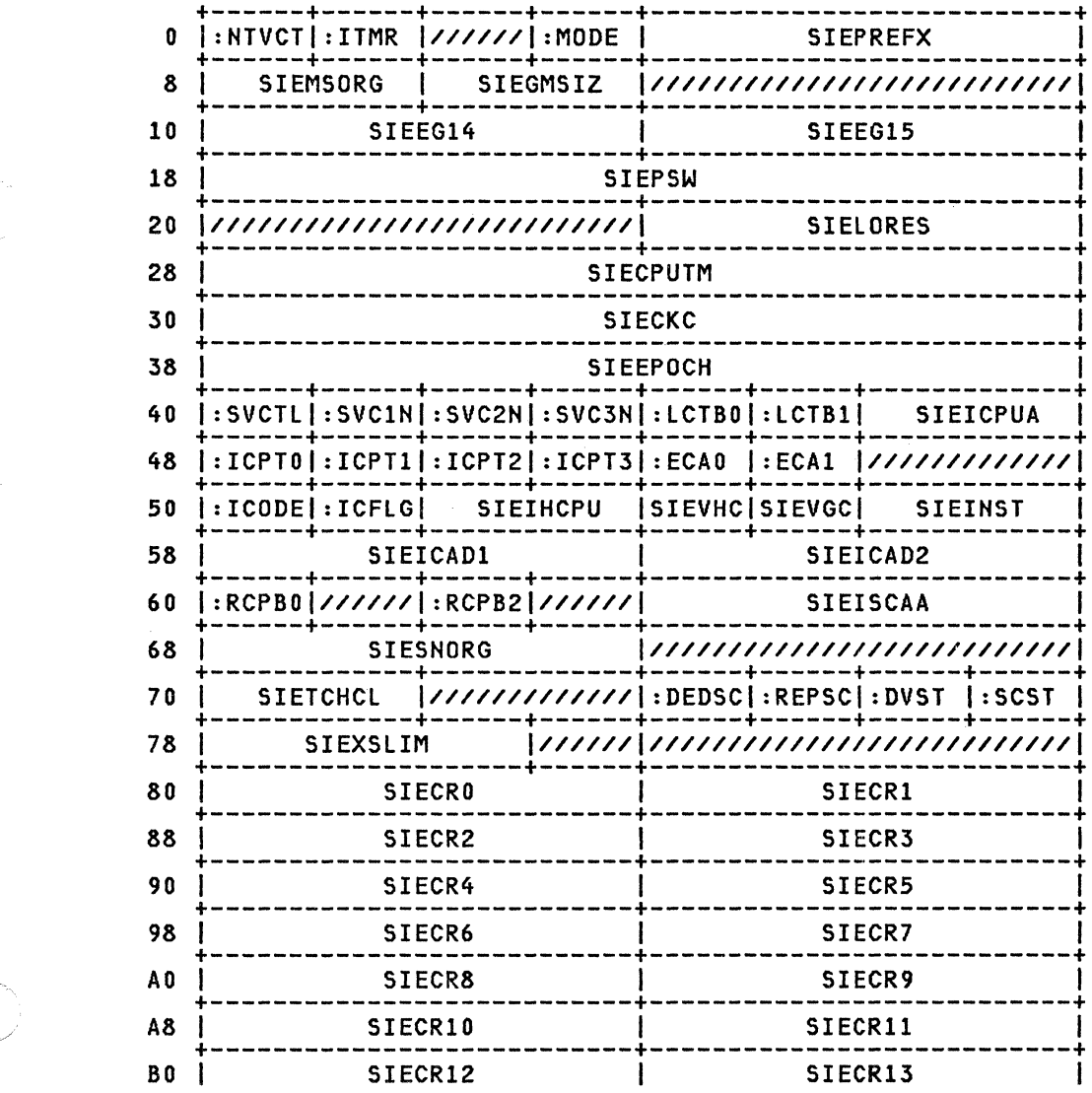
CREATED BY:

HCPWSIE

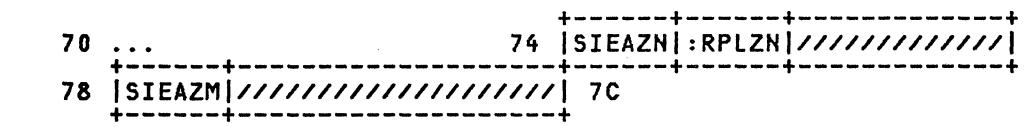
DELETED BY:

HCPWSIFR

SIEBK - SIE STATE DESCRIPTOR BLOCK



REDEFINITION - I/O PASSTHROUGH CONTROL LEVEL 2



disp	name	length	description
000	SIESDSC	256	GUEST MACHINE STATE DESCRIPTOR
000	SIENTVCT	001	EMULATION INTERVENTION CONTROL

BITS DEFINED IN SIENTVCT (AT HEX DISPLACEMENT: 0)

10	SIEIPWAI	WAIT/RUN BIT. WHEN THIS BIT IS ..SET, THE STATE DESCRIPTION IS ..."WAITING", AND HOST ..INTERVENTION IS NEEDED TO MAKE ..IT RUNNABLE.
08	SIEIPXTC	EXTERNAL CALL INTERRUPTION PENDING
04	SIEIPSTP	SIE STOPPING CONTROL
02	SIEIPVIO	I/O INTERRUPTION PENDING
01	SIEIPEXT	EXTERNAL INTERRUPTION PENDING

001	SIEITMR	001	INTERVAL TIMER INTERRUPT STATUS

BITS DEFINED IN SIEITMR (AT HEX DISPLACEMENT: 1)

80	SIEITMRI	INTERVAL TIMER IRPT PENDING

002		X	RESERVED FOR IBM HARDWARE USE
003	SIEMODE	001	GUEST MACHINE MODE CONTROLS

BITS DEFINED IN SIEMODE (AT HEX DISPLACEMENT: 3)

40	SIEVCCIN	VECTOR CHANGE CONTROL : INTERCEPTION MODE
20	SIEXA	SYS 370/XA MODE GUEST MACHINE
10	SIE370	SYSTEM/370 MODE GUEST MACHINE
08	SIEVR	V=R GUEST (PREFERRED STORAGE) STORAGE FOR THE V=R GUEST IS MAPPED SO THAT GUEST ABSOLUTE ADDRESSES ARE EQUAL TO HOST ABSOLUTE ADDRESSES.
04	SIEITMOF	GUEST INTERVAL TIMER DISABLED (APPLIES ONLY TO SYSTEM/370 MODE GUEST MACHINES)

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004   SIEPREFX   004      GUEST PREFIX REGISTER VALUE
008   SIEMSORG   002      GUEST REAL MAIN STORAGE ORIGIN
00A   SIEGMSIZ   002      GUEST REAL MAIN STORAGE EXTENT
                          THIS FIELD DEFINES THE GUEST STORAGE SIZE TO THE
                          EMULATION HARDWARE.  THE FIELD CONTAINS BITS 1-15 OF
                          THE HIGHEST ADDRESS WHICH MAY BE USED BY THE GUEST.
                          EMULATION CONSIDERS STORAGE TO BE IN 64K INCREMENTS.
                          THIS IS THE NUMBER OF 64K BLOCKS LESS ONE OF
                          GUEST STORAGE.
00C               F      RESERVED FOR IBM HARDWARE USE
010   SIEEG14    004      GUEST GPR 14 FOR SIE USE ONLY
014   SIEEG15    004      GUEST GPR 15 FOR SIE USE ONLY
018   SIEPSW     008      GUEST PSW
020               F      RESERVED FOR IBM SOFTWARE USE
024   SIELORES   004      INTERVAL TIMER RESIDUE COUNTER
                          THE INTERVAL TIMER RESIDUE COUNTER IS IN THE FORMAT
                          OF THE TOD CLOCK, AND CONTAINS GUEST CPU TIME
                          WHICH HAS NOT YET BEEN APPLIED TO THE GUEST INTERVAL
                          TIMER.  IT IS USED TO COLLECT SHORT INCREMENTS OF
                          CPU TIME UNTIL 3.333 MILLISECONDS HAS BEEN
                          ACCUMULATED, AT WHICH POINT THE GUEST INTERVAL TIMER
                          IS DECREMENTED AND THE RESIDUE COUNTER IS REDUCED
                          BY 3.333 MILLISECONDS
028   SIECPUTM   008      GUEST CPU TIMER VALUE
030   SIECKC     008      GUEST CLOCK COMPARATOR VALUE
038   SIEEPOCH   008      GUEST TIME-OF-DAY CLOCK EPOCH
                          TO DEFINE DELTA BETWEEN HOST
                          TOD CLOCK AND GUEST TOD CLOCK.
                          EPOCH IS ADDED TO HOST TOD CLOCK
                          VALUE TO OBTAIN GUEST TOD CLOCK
                          VALUE.
040   SIESVCTL   001      SVC INTERCEPTION CONTROLS

        BITS DEFINED IN SIESVCTL (AT HEX DISPLACEMENT: 40)

        80    SIESVCNN    INTERCEPT ALL SVC INSTRUCTIONS
        40    SIESVC1C    INTERCEPT ON SVC NUMBER IN SVC1N
        20    SIESVC2C    INTERCEPT ON SVC NUMBER IN SVC2N
        10    SIESVC3C    INTERCEPT ON SVC NUMBER IN SVC3N

041   SIESVC1N   001      INTERCEPT SVC NUMBER FIRST ID
042   SIESVC2N   001      INTERCEPT SVC NUMBER SECOND ID
043   SIESVC3N   001      INTERCEPT SVC NUMBER THIRD ID
044   SIELCTLS   002      LCTL INTERCEPTION CONTROLS
044   SIELCTB0   001      LCTL INTERCEPTION, CR0-CR7

        BITS DEFINED IN SIELCTB0 (AT HEX DISPLACEMENT: 44)

        80    SIELCTL0    INTERCEPT LCTL CR0
        40    SIELCTL1    INTERCEPT LCTL CR1
        20    SIELCTL2    INTERCEPT LCTL CR2
        10    SIELCTL3    INTERCEPT LCTL CR3
        08    SIELCTL4    INTERCEPT LCTL CR4
        04    SIELCTL5    INTERCEPT LCTL CR5
        02    SIELCTL6    INTERCEPT LCTL CR6
        01    SIELCTL7    INTERCEPT LCTL CR7

045   SIELCTB1   001      LCTL INTERCEPTION, CR8-CR15

        BITS DEFINED IN SIELCTB1 (AT HEX DISPLACEMENT: 45)

        80    SIELCTL8    INTERCEPT LCTL CR8
        40    SIELCTL9    INTERCEPT LCTL CR9
        20    SIELCTLA    INTERCEPT LCTL CR10
        10    SIELCTLB    INTERCEPT LCTL CR11
        08    SIELCTLC    INTERCEPT LCTL CR12
        04    SIELCTLD    INTERCEPT LCTL CR13
        02    SIELCTLE    INTERCEPT LCTL CR14
        01    SIELCTLF    INTERCEPT LCTL CR15

046   SIEICPUA   002      VIRTUAL CPU ADDRESS FOR
                          INTERPRETIVE EXECUTION (BITS
                          10-15); BITS 0-9 RESERVED FOR
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                        IBM HARDWARE USE
048   SIEICTLS   004    INTERCEPTION CONTROLS
048   SIEICPT0   001    INTERCEPTION CONTROLS, BYTE 0

      BITS DEFINED IN SIEICPT0 (AT HEX DISPLACEMENT: 48)

      80    SIEICPOP    INTERCEPT OPERATION EXCEPTION
                        PROGRAM INTERRUPTIONS
      40    SIEICPRO    INTERCEPT PRIVILEGED OPERATION
                        PROGRAM INTERRUPTIONS
      20    SIEICPRG    INTERCEPT PROGRAM INTERRUPTIONS
      08    SIEICTS     INTERCEPT TEST AND SET (TS)
                        INSTRUCTIONS WHEN CC=1
      04    SIEICCS     INTERCEPT COMPARE AND SWAP (CS)
                        INSTRUCTIONS WHEN CC=1
      02    SIEICCDS    INTERCEPT COMPARE DOUBLE AND
                        SWAP (CDS) INSTRUCTIONS WHEN
                        CC=1
      01    SIEICIPT    INTERCEPT INVALIDATE PAGE TABLE
                        ENTRY INSTRUCTIONS (IPTE)

049   SIEICPT1   001    INTERCEPTION CONTROLS, BYTE 1
                        X'80'          RESERVED FOR FUTURE IBM USE

      BITS DEFINED IN SIEICPT1 (AT HEX DISPLACEMENT: 49)

      40    SIEICLPS    INTERCEPT LOAD PSW (LPSW)
                        INSTRUCTIONS
      20    SIEICPTL    INTERCEPT PURGE TLB (PTLB)
                        INSTRUCTIONS
      10    SIEICSSM    INTERCEPT SET SYSTEM MASK (SSM)
                        INSTRUCTIONS
      04    SIEICSTC    INTERCEPT STORE CONTROL (STCTL)
                        INSTRUCTIONS
      02    SIEICSTN    INTERCEPT STORE-THEN-AND SYSTEM
                        MASK (STNSM) INSTRUCTIONS
      01    SIEICSTO    INTERCEPT STORE-THEN-OR SYSTEM
                        MASK (STOSM) INSTRUCTIONS

04A   SIEICPT2   001    INTERCEPTION CONTROLS, BYTE 2

      BITS DEFINED IN SIEICPT2 (AT HEX DISPLACEMENT: 4A)

      80    SIEICSTK    INTERCEPT STORE CLOCK (STCK)
                        INSTRUCTIONS
      40    SIEICISK    INTERCEPT INSERT STORAGE KEY
                        (ISK) AND INSERT STORAGE KEY
                        EXTENDED (ISKE) INSTRUCTIONS
      20    SIEICSSK    INTERCEPT SET STORAGE KEY (SSK)
                        AND SET STORAGE KEY EXTENDED
                        (SSKE) INSTRUCTIONS
      10    SIEICRRB    INTERCEPT RESET REFERENCE BIT
                        (RRB) AND RESET REFERENCE BIT
                        EXTENDED (RRBE) INSTRUCTIONS
      08    SIEICPC     INTERCEPT PROGRAM CALL (PC)
                        INSTRUCTIONS
      04    SIEICPT     INTERCEPT PROGRAM TRANSFER (PT)
                        INSTRUCTIONS
      02    SIEICTPT    INTERCEPT TEST PROTECTION
                        (TPROT) INSTRUCTIONS
      01    SIEICLSP    INTERCEPT LOAD ADDRESS SPACE
                        PARAMETERS (LASP) INSTRUCTIONS

04B   SIEICPT3   001    INTERCEPTION CONTROLS, BYTE 3

      BITS DEFINED IN SIEICPT3 (AT HEX DISPLACEMENT: 4B)

      80    SIEICVAS    INTERCEPT SAVE VECTOR ACTIVITY
                        COUNT (VACSV) INSTRUCTION
      40    SIEICSPT    INTERCEPT SET CPU TIMER (SPT)
                        AND STORE CPU TIMER (STPT)
                        INSTRUCTIONS
      20    SIEICSCK    INTERCEPT SET CLOCK COMPARATOR
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                                (SCKC) AND STORE CLOCK
                                COMPARATOR (STCKC) INSTRUCTIONS
          10     SIEICVAR       INTERCEPT RESTORE VECTOR
                                ACTIVITY COUNT (VACRS)
                                INSTRUCTION
          02     SIEICPG        INTERCEPT PAGE-IN (PGIN) AND
                                PAGE-OUT (PGOUT) INSTRUCTIONS.

04C   SIEECA       004          EXECUTION CONTROLS
04C   SIEECA0      001          EXECUTION CONTROLS, BYTE 0

          BITS DEFINED IN SIEECA0  (AT HEX DISPLACEMENT: 4C)

          80     SIEECEXT       EXTERNAL INTERRUPTION
                                INTERPRETATION ASSIST
          40     SIEECINT       INTERVENTION BYPASS ASSIST
          20     SIEECWAI       GUEST WAIT-STATE ASSIST
          10     SIEECSGP       SIGP INTERPRETATION ASSIST
          08     SIEECALT       ALERT MONITORING BIT
          04     SIEECIO2       I/O INTERPRETATION LEVEL 2
                                ACTIVATION BIT

04D   SIEECA1      001          EXECUTION CONTROLS, BYTE 1

          BITS DEFINED IN SIEECA1  (AT HEX DISPLACEMENT: 4D)

          20     SIEEC370       ENABLE  370 GUEST I/O INTERRUPTS

04E                 2X          RESERVED FOR IBM HARDWARE USE
050   SIEICODE      001          INTERCEPTION EVENT CODE.
                                THIS FIELD DESCRIBES A GUEST
                                CONDITION DETECTED BY THE
                                EMULATION HARDWARE (USUALLY)
                                WHICH REQUIRES SOFTWARE
                                INTERVENTION OR SIMULATION.
                                SIEICODE CODE DEFINITIONS   EMULATION INTERCEPT EVENT CODE

          CODES DEFINED IN SIEICODE (AT HEX DISPLACEMENT: 50)

          00     SIEENDOP       RESERVED FOR IBM SOFTWARE USE
          04     SIEICNTC       INSTRUCTION INTERCEPTION.
                                A GUEST INSTRUCTION WAS FOUND BY
                                EMULATION HARDWARE WHICH IS NOT
                                EMULATED, OR WHICH WAS REQUESTED
                                FOR INTERCEPTION IN THE
                                INTERCEPTION CONTROLS.
          08     SIEICPNT       PROGRAM INTERRUPT INTERCEPTION
          0C     SIEICBOT       BOTH INSTRUCTION AND PROGRAM
                                INTERRUPT INTERCEPTIONS
                                (OCCURRS WITH LCTL, TS, CS, CDS
                                INSTRUCTIONS WITH A PER EVENT.)
          10     SIEICPEX       PENDING EXTERNAL INTERRUPT
          14     SIEICXNT       EXTERNAL INTERRUPT INTERCEPTION
          18     SIEICPIO       PENDING I/O INTERRUPT INTERCEPT
          1C     SIEICWT        WAIT STATE INTERCEPTION
          20     SIEICVAL       VALIDITY INTERCEPTION
          24     SIEIMISC       SOFTWARE USE ONLY
          28     SIEICSTP       STOP INTERCEPTION
          2C     SIEICOUO       OPERATION EXCEPTION INTERCEPTION
          30     SIEICALT       ALERT INTERCEPTION
          38     SIEICPIX       PARTIAL INSTRUCTION-EXECUTION
                                INTERCEPTION
          3C     SIEICIOR       I/O INTERRUPTION INTERCEPTION
          40     SIEICION       I/O INSTRUCTION INTERCEPTION

051   SIEICFLG      001          INSTRUCTION INTERCEPT MODIFIER

          BITS DEFINED IN SIEICFLG (AT HEX DISPLACEMENT: 51)

          80     SIEICIN        INTERCEPT FORMAT 2 (INSTR TEXT);
                                0 FOR FORMAT 1 (EFFECTIVE ADDRS)
          02     SIEICIF        INSTRUCTION FETCH EVENT (P.E.R)
          01     SIEICEX        THE INTERCEPTED INSTRUCTION WAS
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                              THE SUBJECT OF AN EXECUTE INST.

052   SIEIHCPU    002         HOST CPU ADDRESS THAT LAST
                              ENTERED EMULATION MODE FOR THIS
                              STATE DESCRIPTION
054   SIEVCP      002         VECTOR CHANGE PRESERVATION AREA
054   SIEVHC      001         VECTOR HOST CHANGE BIT
                              PRESERVATION
055   SIEVGC      001         VECTOR GUEST CHANGE BIT
                              PRESERVATION
056   SIEIPA      002         INTERCEPTION PARAMETER A
                              FOR INSTR INTERCEPT FORMAT 2:
056   SIEINSTR    006         ENTIRE INSTRUCTION TEXT
                              FOR INSTR INTERCEPT FORMAT 1:
056   SIEINST     002         INTERCEPTED INSTRUCTION BIT 0-15
058   SIEIPB      004         INTERCEPTION PARAMETER B
058   SIEICAD1    004         INTERCEPTED INSTRUCTION OPERAND
                              EFFECTIVE ADDRESS (RS, RX)
                              OR 000000R1R2 (RRE)
05C   SIEIPC      004         INTERCEPTION PARAMETER C
05C   SIEICAD2    004         INTERCEPTED INSTR OPERAND ADDR.
                              (SS FORMAT INSTRUCTIONS)
060   SIERCP      004         RCP-AREA HOST VIRTUAL ADDRESS

        BITS DEFINED IN SIERCPB0 (AT HEX DISPLACEMENT: 60)

060   SIERCPB0    001         BYTE ZERO, FLAGS FOR STORAGE KEY
                              ASSIST

        BITS DEFINED IN SIERCPB0 (AT HEX DISPLACEMENT: 60)

        80     SIEASIST     AN ASSIST IS ENABLED
        80     SIESKAEN     STORAGE KEY ASSIST ENABLED
        40     SIESKAIP     STORAGE KEY ASSIST IN PROGRESS

061               X         RESERVED WITH ASSISTS ENABLED
062   SIERCPB2    001         BYTE TWO, FLAGS ASSISTS

        BITS DEFINED IN SIERCPB2 (AT HEX DISPLACEMENT: 62)

        10     SIERCPBY     BYPASS USE OF RCP FOR GUEST

063               X         RESERVED WITH ASSISTS ENABLED
064   SIEISCAA    004         SYSTEM CONTROL AREA ADDRESS
068   SIESNORG    004         SUBCHANNEL NUMBER TABLE ORIGIN
06C               F         RESERVED FOR IBM HARDWARE USE
070   SIETCHCL    002         TCH INTERCEPTION CONTROLS
072               H         RESERVED FOR IBM HARDWARE USE
074   SIEIOPCT    004         I/O PASSTHROUGH CONTROL
074   SIEDEDSC    001         DEDICATED SUBCLASS CONTROL

        BITS DEFINED FOR SIEDEDSC BY HCPEQUAT CR6B0

075   SIEREPSC    001         REPLACEMENT ISC NUMBER

        CODES DEFINED FOR SIEREPSC BY HCPEQUAT CSWIRCF

076   SIEDVSCS    002         IRB DS MASK
076   SIEDVST     001         DEVICE STATUS BYTE OF THE IRB DS
                              MASK. THE CONTENTS OF THIS FIELD
                              ARE ANDED WITH THE DEVICE STATUS
                              BYTE OF THE IRB BY TSCH TO SEE
                              IF TYPE B INFORMATION IS PRESENT.

        BITS DEFINED FOR SIEDVST BY HCPEQUAT CSWDVST

077   SIESCST     001         SUBCHANNEL STATUS BYTE OF THE
                              IRB DS MASK.  THE CONTENTS OF
                              THIS FIELD ARE ANDED WITH THE
                              SUBCHANNEL STATUS BYTE OF THE
                              IRB BY TSCH TO SEE IF TYPE B
                              INFORMATION IS PRESENT.
```


BITS DEFINED FOR SIESCST BY HCPEQUAT CSWSCST

078	SIEXSLIM	003	EXTENDED STORAGE UPPER LIMIT BLOCK ADDRESS.
07B		X	RESERVED FOR IBM HARDWARE USE
07C		F	RESERVED FOR IBM HARDWARE USE
080	SIECRS	064	GUEST CONTROL REGISTERS 0-16
080	SIECR0	004	GUEST CONTROL REGISTER 0
084	SIECR1	004	GUEST CONTROL REGISTER 1
088	SIECR2	004	GUEST CONTROL REGISTER 2
08C	SIECR3	004	GUEST CONTROL REGISTER 3
090	SIECR4	004	GUEST CONTROL REGISTER 4
094	SIECR5	004	GUEST CONTROL REGISTER 5
098	SIECR6	004	GUEST CONTROL REGISTER 6
09C	SIECR7	004	GUEST CONTROL REGISTER 7
0A0	SIECR8	004	GUEST CONTROL REGISTER 8
0A4	SIECR9	004	GUEST CONTROL REGISTER 9
0A8	SIECR10	004	GUEST CONTROL REGISTER 10
0AC	SIECR11	004	GUEST CONTROL REGISTER 11
0B0	SIECR12	004	GUEST CONTROL REGISTER 12
0B4	SIECR13	004	GUEST CONTROL REGISTER 13
0B8	SIECR14	004	GUEST CONTROL REGISTER 14
0BC	SIECR15	004	GUEST CONTROL REGISTER 15
			INTERRUPTION INTERCEPTION AREA (APPROXIMATELY MAPS GUEST STORAGE X'80' TO X'9F')
0C0		F	RESERVED FOR IBM HARDWARE USE
0C4	SIEIEXCA	002	EXTERNAL INTERRUPTION CPU ADDR
0C6	SIEIEXCD	002	EXTERNAL INTERRUPTION CODE
0C8		F	RESERVED FOR IBM HARDWARE USE
0CC	SIEIPRCD	004	PROGRAM INTERRUPT ILC AND CODE
0D0	SIEITRAD	004	TRANSLATION EXCEPTION ADDRESS
0D4	SIEIMNCL	002	MONITOR CLASS CODE
0D6	SIEPERCD	002	PER CLASS CODE
0D8	SIEPERAD	004	PER EVENT INSTRUCTION ADDRESS
0DC	SIEIMNCD	004	MONITOR CODE
0E0		D	RESERVED FOR IBM HARDWARE USE
0E8		D	RESERVED FOR IBM HARDWARE USE
0F0		D	RESERVED FOR IBM HARDWARE USE
0F8		D	RESERVED FOR IBM HARDWARE USE

EQUATES

00	SIEBLEN	BLOCK SIZE IN BYTES

REDEFINITION - I/O PASSTHROUGH CONTROL LEVEL 2

074	SIEAZN	001	ACTIVE ZONE NUMBER
075	SIERPLZN	001	REPLACEMENT ZONE NUMBER
076		H	IRB DS MASK (UNCHANGED FROM I/O INTERPRETATION LEVEL 1)
078	SIEAZM	001	ALERT GENERATING ZONE MASK
079		3X	RESERVED FOR IBM HARDWARE USE

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SIEASIST	001	080	SIECPUTM	008	028	SIECR12	004	0B0
SIEAZM	001	078	SIECRS	064	080	SIECR13	004	0B4
SIEAZN	001	074	SIECR0	004	080	SIECR14	004	0B8
SIEBK	001	000	SIECR1	004	084	SIECR15	004	0BC
SIEBLEN	001	100	SIECR10	004	0A8	SIECR2	004	088
SIECKC	008	030	SIECR11	004	0AC	SIECR3	004	08C

Name	Len	Val/Disp
SIECR4	004	090
SIECR5	004	094
SIECR6	004	098
SIECR7	004	09C
SIECR8	004	0A0
SIECR9	004	0A4
SIEDEDSC	001	074
SIEDVSCS	002	076
SIEDVST	001	076
SIEECA	004	04C
SIEECALT	001	008
SIEECA0	001	04C
SIEECA1	001	04D
SIEECEXT	001	080
SIEECINT	001	040
SIEECIO2	001	004
SIEECSGP	001	010
SIEECWAI	001	020
SIEEC370	001	020
SIEEG14	004	010
SIEEG15	004	014
SIEENDOP	001	000
SIEEPOCH	008	038
SIEGMSIZ	002	00A
SIEICAD1	004	058
SIEICAD2	004	05C
SIEICALT	001	030
SIEICBOT	001	00C
SIEICCDS	001	002
SIEICCS	001	004
SIEICEX	001	001
SIEICFLG	001	051
SIEICIF	001	002
SIEICIN	001	080
SIEICION	001	040
SIEICIOR	001	03C
SIEICIPT	001	001
SIEICISK	001	040
SIEICLPS	001	040
SIEICLSP	001	001
SIEICNTC	001	004
SIEICODE	001	050
SIEICOUO	001	02C
SIEICPC	001	008
SIEICPEX	001	010
SIEICPG	001	002
SIEICPIO	001	018
SIEICPIX	001	038
SIEICPNT	001	008
SIEICPOP	001	080
SIEICPRG	001	020
SIEICPRO	001	040
SIEICPT	001	004
SIEICPTL	001	020
SIEICPT0	001	048
SIEICPT1	001	049
SIEICPT2	001	04A
SIEICPT3	001	04B
SIEICPUA	002	046
SIEICRRB	001	010
SIEICSCK	001	020
SIEICSPT	001	040
SIEICSSK	001	020
SIEICSSM	001	010
SIEICSTC	001	004
SIEICSTK	001	080
SIEICSTN	001	002
SIEICSTO	001	001
SIEICSTP	001	028
SIEICTLS	004	048
SIEICTPT	001	002
SIEICTS	001	008
SIEICVAL	001	020
SIEICVAR	001	010
SIEICVAS	001	080
SIEICWT	001	01C
SIEICXNT	001	014
SIEIEXCA	002	0C4
SIEIEXCD	002	0C6
SIEIHCPU	002	052
SIEIMISC	001	024
SIEIMNCD	004	0DC
SIEIMNCL	002	0D4
SIEINST	002	056
SIEINSTR	006	056
SIEIOPCT	004	074
SIEIPA	002	056
SIEIPB	004	058
SIEIPC	004	05C
SIEIPEXT	001	001
SIEIPRCD	004	0CC
SIEIPSTP	001	004
SIEIPVIO	001	002
SIEIPWAI	001	010
SIEIPXTC	001	008
SIEISCAA	004	064
SIEITMOF	001	004
SIEITMR	001	001
SIEITMRI	001	080
SIEITRAD	004	0D0
SIELCTB0	001	044
SIELCTB1	001	045
SIELCTLA	001	020
SIELCTLB	001	010
SIELCTLC	001	008
SIELCTLD	001	004
SIELCTLE	001	002
SIELCTLF	001	001
SIELCTLS	002	044
SIELCTL0	001	080
SIELCTL1	001	040
SIELCTL2	001	020
SIELCTL3	001	010
SIELCTL4	001	008
SIELCTL5	001	004
SIELCTL6	001	002
SIELCTL7	001	001
SIELCTL8	001	080
SIELCTL9	001	040
SIELORES	004	024
SIEMODE	001	003
SIEMSORG	002	008
SIENTVCT	001	000
SIEPERAD	004	0D8
SIEPERCD	002	0D6
SIEPREFX	004	004
SIEPSW	008	018
SIERCP	004	060
SIERCPBY	001	010
SIERCPB0	001	060
SIERCPB2	001	062
SIEREPSC	001	075
SIERPLZN	001	075
SIESCST	001	077
SIESDSC	256	000
SIESKAEN	001	080
SIESKAIP	001	040
SIESNORG	004	068
SIESVCNN	001	080
SIESVCTL	001	040
SIESVC1C	001	040
SIESVC1N	001	041
SIESVC2C	001	020
SIESVC2N	001	042
SIESVC3C	001	010
SIESVC3N	001	043
SIETCHCL	002	070
SIEVCCIN	001	040
SIEVCP	002	054
SIEVGC	001	055
SIEVHC	001	054
SIEVR	001	008
SIEXA	001	020
SIEXSLIM	003	078
SIE370	001	010

HCPSILBK— SPOOL 3800 IMAGE LOAD BLOCK

DSECT NAME: SILBK

DESCRIPTIVE NAME: SPOOL 3800 IMAGE LOAD BLOCK

FUNCTION: TO CONTAIN INFORMATION INDICATING WHAT IMAGES OR CONTROL DATA ARE CURRENTLY LOADED IN THE 3800 PRINTER.

LOCATED BY:

RSPSIL FIELD IN THE RSPBK

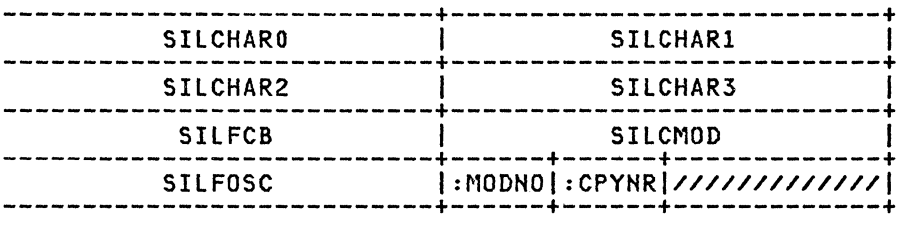
CREATED BY:

HCPSILOP - OPEN IMAGE LIBRARY ROUTINE

DELETED BY:

HCPSLDCP - SPOOL CLOSE 3800 PRINTER ROUTINE

SILBK - SPOOL 3800 IMAGE LOAD BLOCK



disp	name	length	description
000	SILCHARS	016	LENGTH OF CHAR. ARR. TBL. NAMES
000	SILCHAR0	004	1ST CHAR. ARR. TBL. NOW IN 3800
004	SILCHAR1	004	2NT CHAR. ARR. TBL. NOW IN 3800
008	SILCHAR2	004	3RT CHAR. ARR. TBL. NOW IN 3800
00C	SILCHAR3	004	4TH CHAR. ARR. TBL. NOW IN 3800
010	SILFCB	004	FCB NOW LOADED IN THE 3800
014	SILCMOD	004	COPY MODIF. NOW LOADED IN 3800

EQUATES

18	SILLSIZE	SILBK LIBRARY IMAGES SIZE

018	SILFOSC	004	FORMS OVERLAY SEQ. CTL. BYTES
01C	SILMODNO	001	COPY MODIF. INDEX NOW LOADED
01D	SILCPYNR	001	COPY NUMBER NOW LOADED
01E		XL2	RESERVED FOR FUTURE IBM USE

EQUATES

20	SILBSIZE	SILBK SIZE IN BYTES
04	SILSIZE	SILBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
SILBK	001	000
SILBSIZE	001	020
SILCHARS	016	000
SILCHAR0	004	000
SILCHAR1	004	004
SILCHAR2	004	008
SILCHAR3	004	00C
SILCMOD	004	014
SILCPYNR	001	01D
SILFCB	004	010
SILFOSC	004	018
SILLSIZE	001	018
SILMODNO	001	01C
SILSIZE	001	004

HCPSKRBK— STORAGE KEY RECORD BLOCK

DSECT NAME: SKRBK

DESCRIPTIVE NAME: STORAGE KEY RECORD BLOCK

FUNCTION: HCPSKRBK HOLDS THE STORAGE KEY OF THE CORRESPONDING PAGE IN STORAGE IF THE PAGE WAS DUMPED. ONE STORAGE KEY RECORD CAN HOLD THE KEYS FOR 16 MEGS OF STORAGE.

LOCATED BY:

FOLLOWS THE DUMP SYMPTOM RECORD (HCPDSRBK), THE DUMP FILE INFORMATION RECORD (DFIR), AND THE BIT MAP RECORDS IN THE DUMP SENT TO TAPE OR TO SYSTEM DUMP FILE (DASD).

CREATED BY:

THE SOFT ABEND PROCESSOR. THIS BLOCK IS NOT OBTAINED FROM FREE STORAGE.

DELETED BY:

NOT APPLICABLE

SKRBK - STORAGE KEY RECORD BLOCK

REDEFINITION -

disp	name	length	description
000	SKRBKLST	001	START OF VARIABLE LENGTH DATA
	REDEFINITION -		
000	SKRENTRY	001	STORAGE KEY ENTRY
	BITS DEFINED IN SKRENTRY (AT HEX DISPLACEMENT: 0)		
	01 SKRMSINC		TEST FOR INCONSISTENT DATA
	FE SKRMSKIN		MASK INCONSISTENT BIT OFF
001	SKRNEXT	001	NEXT STORAGE KEY ENTRY

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SKRBK	001	000	SKRBKLST	001	000	SKRENTRY	001	000

Name	Len	Val/Disp
SKRMSINC	001	001
SKRMSKIN	001	0FE
SKRNEXT	001	001

SLHREC— SUBCHANNEL LOGOUT ERROR RECORD

DSECT NAME: SLHREC

DESCRIPTIVE NAME: SUBCHANNEL LOGOUT ERROR RECORD

FUNCTION: CONTAINS SUBCHANNEL LOGOUT DATA FOR ERROR RECORDING.

LOCATED BY:

GPR6 IN HCPIOE. THE ADDRESS IS PASSED TO HCPREC IN GPR1, AND HCPVER USES GPR9 TO ADDRESS THIS BLOCK.

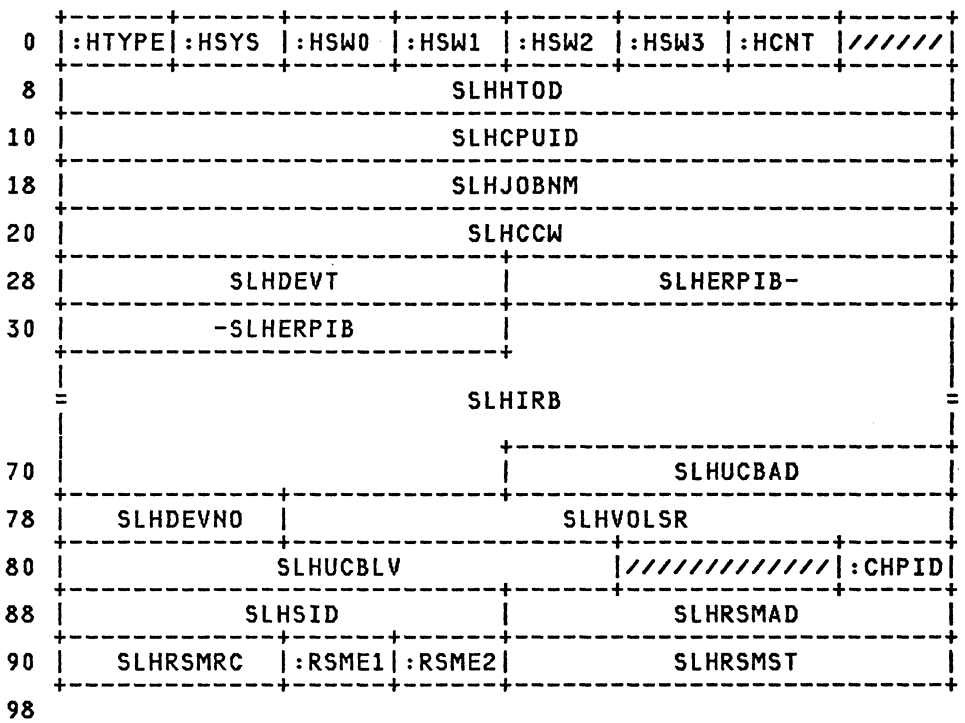
CREATED BY:

HCPRFC

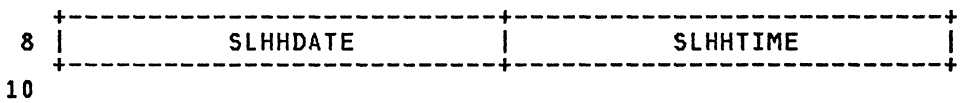
DELETED BY:

HCPIOE AFTER HCPREC HAS COPIED IT INTO A GSDBK.

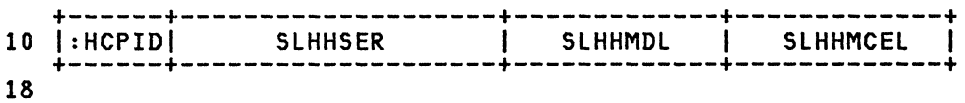
SLHREC - SUBCHANNEL LOGOUT ERROR RECORD



REDEFINITION - SLHHTOD



REDEFINITION - SLHCPUID



disp	name	length	description
000	SLHHTYPE	001	CLASS/SOURCE
	CODES DEFINED IN SLHHTYPE (AT HEX DISPLACEMENT: 0)		
	23 SLHHTYSR		SLH RECORD
001	SLHHSYS	001	SYSTEM/RELEASE LEVEL
	BITS DEFINED FOR SLHHSYS BY HDRREC HDRHSYS		
002	SLHHSW0	001	RECORD INDEPENDENT SWITCHES
	BITS DEFINED FOR SLHHSW0 BY HDRREC HDRHSW0		
003	SLHHSW1	001	RESERVED REC DEPENDENT SWITCH 1
004	SLHHSW2	001	RESERVED REC DEPENDENT SWITCH 2
005	SLHHSW3	001	RESERVED REC DEPENDENT SWITCH 3
	EQUATES		
	01 SLHHARDF		HARD FAILURE - NOT RECOVERED - OPERATING SYSTEM MAY HAVE BEEN IMPACTED - A HARDWARE RESOURCE MAY HAVE BEEN LOST
	02 SLHDGRAD		DEGRADATION - FAILURE RECOVERED - NO FUNCTIONAL IMPACT - PERFORMANCE MAY BE DEGRADED - HARDWARE RESOURCE MAY HAVE BEEN LOST
	03 SLHSOFTF		SOFT FAILURE - FAILURE RECOVERED - NO FUNCTIONAL IMPACT - PERFORMANCE NOT DEGRADED - HARDWARE RESOURCE(S) NOT LOST
006	SLHHCNT	001	RECORD COUNT
	BITS DEFINED FOR SLHHCNT BY HDRREC HDRHCNT		
007		XL1	RESERVED FOR FUTURE IBM USE
008	SLHHTOD	008	TOD OF SYSTEM FAILURE
010	SLHCPUID	008	CPU ID
018	SLHJOBNM	008	JOBNAME OR USERID
020	SLHCCW	008	LAST EXECUTED CCW IF AVAILABLE
028	SLHDEVT	004	DEVICE TYPE
02C	SLHERPIB	008	ERP INFORMATION BLOCK (MVS ONLY)
034	SLHIRB	064	IRB - INCLUDES SCSW & ESW
074	SLHUCBAD	004	UCB ADDRESS / RDEV ADDRESS
078	SLHDEVNO	002	DEVICE NUMBER
07A	SLHVOLSR	006	VOLUME SERIAL NUMBER
080	SLHUCBLV	005	UCB LEVEL BYTE AND MASK (MVS ONLY)
085		XL2	RESERVED FOR FUTURE IBM USE
087	SLHCHPID	001	CHANNEL PATH ID
088	SLHSID	004	SUBCHANNEL ID NUMBER
08C	SLHRSMAD	004	ABSOLUTE ADDR OF STORAGE OR KEY ERRORS, IF AVAILABLE
090	SLHRSMRC	002	RSM RTN CODE FOR STORAGE OR KEY ERROR (MVS ONLY)
092	SLHRSME1	001	ERROR TYPE
093	SLHRSME2	001	ERROR TYPE
	BITS DEFINED IN SLHRSME2 (AT HEX DISPLACEMENT: 93)		
	02 SLHRSMKE		KEY ERROR
	01 SLHRSMSE		STORAGE ERROR
094	SLHRSMST	004	RSM STATUS INFORMATION (MVS ONLY)
	EQUATES		
	98 SLHLEN		LENGTH OF SLRREC

```
        13    SLHSIZE     SLHREC SIZE IN DOUBLE WORDS


         REDEFINITION - SLHHTOD

008   SLHHDATE   004       SYSTEM DATE OF FAILURE
00C   SLHHTIME   004       SYSTEM TIME OF FAILURE

         REDEFINITION - SLHCPUID

010   SLHHCPID   001       MACHINE VERSION CODE
011   SLHHSER    003       CPU SERIAL NUMBER
014   SLHHMDL    002       CPU MACHINE MODEL NUMBER
016   SLHHMCEL   002       MAX LENGTH OF MACHINE-DEPENDENT
                           MACHINE CHECK EXTENDED LOGOUT
```

CROSS REFERENCE

Name	Len	Val/Disp
SLHCCW	008	020
SLHCHPID	001	087
SLHCPUID	008	010
SLHDEVNO	002	078
SLHDEVT	004	028
SLHDGRAD	001	002
SLHERPIB	008	02C
SLHHARDF	001	001
SLHHCNT	001	006
SLHHCPID	001	010
SLHHDATE	004	008
SLHHMCEL	002	016
SLHHMDL	002	014
SLHHSER	003	011
SLHHSW0	001	002
SLHHSW1	001	003
SLHHSW2	001	004
SLHHSW3	001	005
SLHHSYS	001	001
SLHHTIME	004	00C
SLHHTOD	008	008
SLHHTYPE	001	000
SLHHTYSR	001	023
SLHIRB	064	034
SLHJOBNM	008	018
SLHLEN	001	098
SLHREC	001	000
SLHRSMAD	004	08C
SLHRSME1	001	092
SLHRSME2	001	093
SLHRSMKE	001	002
SLHRSMRC	002	090
SLHRSMSE	001	001
SLHRSMST	004	094
SLHSID	004	088
SLHSIZE	001	013
SLHSOFTF	001	003
SLHUCBAD	004	074
SLHUCBLV	005	080
SLHVOLSR	006	07A

HCPSNABK— SNA RESOURCE BLOCK

DSECT NAME: SNABK

DESCRIPTIVE NAME: SNA RESOURCE BLOCK

FUNCTION: TO CONTAIN INFORMATION PERTAINING TO A SINGLE SNA TERMINAL (LU) CONNECTED THROUGH A VSM

LOCATED BY:

VSMTREE IS THE ANCHOR FIELD FOR THE SNABK RADIX TREE STRUCTURE.
RDEVSNA FIELD OF RDEV
VSMSEVRQ FIELD OF VSMBK, DURING PORTIONS OF LOGOFF
SNASEVRQ FIELD OF SNABK, DURING PORTIONS OF LOGOFF

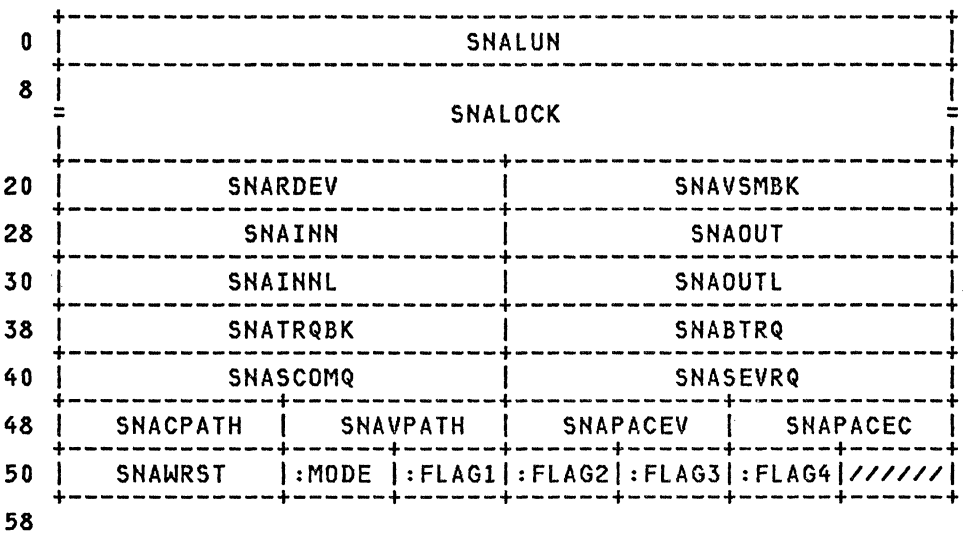
CREATED BY:

HCPVCTCN DURING IUCV CONNECT FOR AN LU

DELETED BY:

HCPVCZRL DURING SNA/CCS LOGOFF PROCESSING
HCPVCZRS DURING SNA/CCS LOGOFF PROCESSING

SNABK - SNA/CCS RESOURCE BLOCK



disp	name	length	description
000	SNALUN	008	LOGICAL UNIT NAME FOR SNA CONSOLE
008	SNALOCK	008	SNABK LOCK
020	SNARDEV	004	ADDRESS OF THE RDEV
024	SNAVSMBK	004	ADDRESS OF THE VSMBK
028	SNAINN	004	INPUT WEIBK READ CHAIN ADDRESS
02C	SNAOUT	004	OUTPUT WEIBK WRITE CHAIN ADDRESS
030	SNAINNL	004	LAST IN INPUT WEIBK READ CHAIN
034	SNAOUTL	004	LAST IN OUTPUT WEIBK WRITE CHAIN
038	SNATRQBK	004	ADDRESS OF REDISPLAY TRQBK
03C	SNABTRQ	004	ADDRESS OF BATCH WRITE TRQBK
040	SNASCOMQ	004	COMBK QUEUE OF SPLIT TASKS
044	SNASEVRQ	004	NEXT SNABK ON PENDING SEVER QUEUE
048	SNACPATH	002	IUCV PATHID FOR CCS
04A	SNAVPATH	002	IUCV PATHID FOR THE VSM
04C	SNAPACEV	002	PACE VALUE FOR THE CONSOLE
04E	SNAPACEC	002	CURRENT PACE COUNTER
050	SNAWRST	002	COUNT OF WEIBKS NEEDING RESTART
052	SNAMODE	001	MODE OF OPERATION


```
053   SNAFLAG1   001      STATUS FLAGS
054   SNAFLAG2   001      STATUS FLAGS
055   SNAFLAG3   001      STATUS FLAGS
056   SNAFLAG4   001      STATUS FLAGS
057              1X       RESERVED FOR FUTURE IBM USE
```

EQUATES

```
 0B    SNASIZE     SNABK SIZE IN DOUBLEWORDS
```

MORE EQUATES

```
000    SNACONS     CONSOLE MODE
001    SNACMS      CMS MODE
002    SNAFSSM     FULL-SCREEN SUPPORT MODE
080    SNAPFKEY    PF KEY INDICATOR
040    SNABATCH    BATCHING IN PROGRESS
020    SNABPND     LINE STILL TO BE BATCHED
010    SNADISC     DISCONNECT STATE - RELEASE CB'S
008    SNAERRSM    ERROR RESUME STATE
004    SNASSPND    USER SUSPENDED
002    SNAPRMT     SIGNAL INITIAL LOGON PROMPT
001    SNASEVER    PATH HAS BEEN SEVERED
080    SNATRPND    REDISPLAY TIMER REQUEST PENDING
040    SNADIAL     USER DIALED TO VIRTUAL MACHINE
020    SNAPFKIM    READ GETS IMMEDIATE PF KEY DATA
010    SNAPA1      NOTIFY USER OF PA1 KEY IN FSSM
008    SNANPRTY    NO PRIORITY MESSAGES TO BE SENT
004    SNAFORCE    USER BEING FORCED BY CCS
002    SNA
001    SNAINITF    INITIALIZATION FINISHED
080    SNAEXWT     CCS SET ON EXECUTION PSWWAIT BIT
040    SNAENTTY    ENHANCED TTY DEVICE
020    SNANOMSG    SUPPRESS LOGOFF/DISC/DROP MSGS
010    SNAIRAWT    WAIT FOR AN IRA TO COMPLETE TO PUR
008    SNAIRADN    ALL IRAS ARE DONE, CAN PURGE SNABK
004    SNABTPND    BATCH WRITE TIMER REQUEST PENDING
002    SNASVPND    SEVER IS/WAS PENDING FOR PATH
001    SNAMORRD    READ PENDING UNTIL *MORE* CLEARED
080    SNARLVSM    SYSVSMLK TO BE RELEASED BY CLEANUP
                   HANDLER
040    SNAEDISC    ERROR DISCONNECT IN PROGRESS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SNA			SNAFLAG2	001	054	SNAOUT	004	02C
SNABATCH	001	040	SNAFLAG3	001	055	SNAOUTL	004	034
SNABK	001	000	SNAFLAG4	001	056	SNAPACEC	002	04E
SNABPND	001	020	SNAFORCE	001	004	SNAPACEV	002	04C
SNABTPND	001	004	SNAFSSM	001	002	SNAPA1	001	010
SNABTRQ	004	03C	SNAINITF	001	001	SNAPFKEY	001	080
SNACMS	001	001	SNAINN	004	028	SNAPFKIM	001	020
SNACONS	001	000	SNAINNL	004	030	SNAPRMT	001	002
SNACPATH	002	048	SNAIRADN	001	008	SNARDEV	004	020
SNADIAL	001	040	SNAIRAWT	001	010	SNARLVSM	001	080
SNADISC	001	010	SNALOCK	008	008	SNASCOMQ	004	040
SNAEDISC	001	040	SNALUN	008	000	SNASEVER	001	001
SNAENTTY	001	040	SNAMODE	001	052	SNASEVRQ	004	044
SNAERRSM	001	008	SNAMORRD	001	001	SNASIZE	001	00B
SNAEXWT	001	080	SNANOMSG	001	020	SNASSPND	001	004
SNAFLAG1	001	053	SNANPRTY	001	008	SNASVPND	001	002

Name	Len	Val/Disp
SNATRPND	001	080
SNATRQBK	004	038
SNAVPATH	002	04A
SNAVSMBK	004	024
SNAWRST	002	050

HCPSNSBK— SENSE DATA BLOCK

DSECT NAME: SNSBK

DESCRIPTIVE NAME: SENSE DATA BLOCK

FUNCTION: THE SENSE DATA DEFINITION BLOCK.

LOCATED BY:

N/A

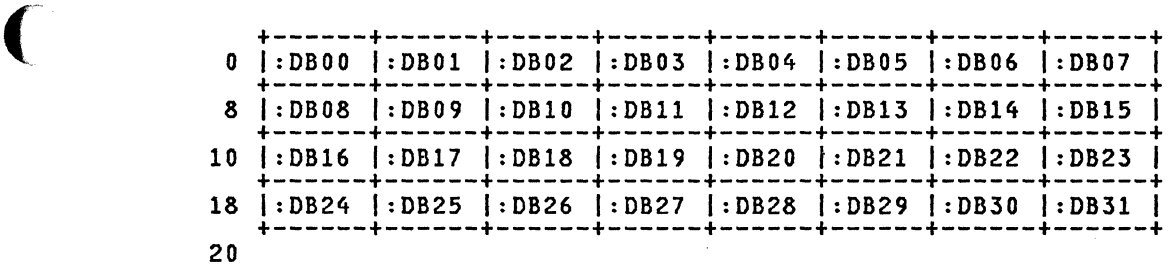
CREATED BY:

N/A

DELETED BY:

N/A

SNSBK - SENSE DATA BLOCK



disp	name	length	description
000	SNSDATA	001	
000	SNSDB00	001	SENSE DATA BYTE 0
001	SNSDB01	001	SENSE DATA BYTE 1
002	SNSDB02	001	SENSE DATA BYTE 2
003	SNSRCNT	001	SENSE RESIDUAL COUNT (DASD)
003	SNSDB03	001	SENSE DATA BYTE 3
004	SNSDB04	001	SENSE DATA BYTE 4
005	SNSBKID	002	SENSE BLOCK LOCATION ID (TAPE)
005	SNSSEEK	002	SENSE SEEK ADDRESS (DASD)
005	SNSDB05	001	SENSE DATA BYTE 5
006	SNSDB06	001	SENSE DATA BYTE 6
007	SNSDB07	001	SENSE DATA BYTE 7
008	SNSEARCH	005	SENSE SEARCH ARGUMENT (DASD)
008	SNSDB08	001	SENSE DATA BYTE 8
009	SNSDB09	001	SENSE DATA BYTE 9
00A	SNSDB10	001	SENSE DATA BYTE 10
00B	SNSDB11	001	SENSE DATA BYTE 11
00C	SNSDB12	001	SENSE DATA BYTE 12
00D	SNSDB13	001	SENSE DATA BYTE 13
00E	SNSDB14	001	SENSE DATA BYTE 14
00F	SNSDB15	001	SENSE DATA BYTE 15
010	SNSDB16	001	SENSE DATA BYTE 16
011	SNSDB17	001	SENSE DATA BYTE 17
012	SNSDB18	001	SENSE DATA BYTE 18
013	SNSDB19	001	SENSE DATA BYTE 19
014	SNSDB20	001	SENSE DATA BYTE 20
015	SNSDB21	001	SENSE DATA BYTE 21
016	SNSDB22	001	SENSE DATA BYTE 22
017	SNSDB23	001	SENSE DATA BYTE 23
018	SNSDB24	001	SENSE DATA BYTE 24
019	SNSDB25	001	SENSE DATA BYTE 25
01A	SNSDB26	001	SENSE DATA BYTE 26
01B	SNSDB27	001	SENSE DATA BYTE 27
01C	SNSDB28	001	SENSE DATA BYTE 28
01D	SNSDB29	001	SENSE DATA BYTE 29

01E	SNSDB30	001	SENSE DATA BYTE 30
01F	SNSDB31	001	SENSE DATA BYTE 31

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SNSABORT	001	001	SNSDMOP	001	010	SNSPEFRM	001	004
SNSBCKA4	001	004	SNSDNRF	001	008	SNSPEIML	001	00D
SNSBK	001	000	SNSDPERM	001	080	SNSPELFL	001	020
SNSBKID	002	005	SNSDRPS	001	080	SNSPENDF	001	001
SNSBSCK	001	020	SNSDSHFT	001	003	SNSPEQHW	001	080
SNSCED40	001	800	SNSDSKCK	001	001	SNSPEQPM	001	040
SNSCED50	001	230	SNSDTCK	001	008	SNSPFCB	001	020
SNSCH9AA	001	00A	SNSDTRKC	001	002	SNSPFCBB	001	0E6
SNSCMPAT	001	008	SNSDTRKO	001	040	SNSPFCBC	001	0E7
SNSCMREJ	001	080	SNSDWRIN	001	002	SNSPFCBL	001	008
SNSCNTLR	001	0C0	SNSD35MB	001	001	SNSPFCBM	001	0E4
SNSCUTOF	001	001	SNSD40CE	001	010	SNSPFCBS	001	0E8
SNSDAHED	001	01F	SNSD50CE	001	080	SNSPFCBT	001	0E5
SNSDATA	001	000	SNSD70MB	001	002	SNSPFHIE	001	020
SNSDA256	001	020	SNSEARCH	005	008	SNSPFLCK	001	023
SNSDA512	001	040	SNSECCC	001	050	SNSPFOIL	001	0E0
SNSDBLF	001	080	SNSECCU	001	040	SNSPFOSI	001	0F0
SNSDB00	001	000	SNSEOT	001	020	SNSPGCSF	001	0F2
SNSDB01	001	001	SNSEQCAB	001	00B	SNSPHMRF	001	008
SNSDB02	001	002	SNSEQCA5	001	005	SNSPHYSA	001	007
SNSDB03	001	003	SNSEQCA6	001	006	SNSPIFCC	001	010
SNSDB04	001	004	SNSEQCA7	001	007	SNSPIFOS	001	010
SNSDB05	001	005	SNSEQCK	001	010	SNSPILPI	001	040
SNSDB06	001	006	SNSFORMT	001	0F0	SNSPIMCH	001	0F6
SNSDB07	001	007	SNSHCYLD	001	060	SNSPINCM	001	020
SNSDB08	001	008	SNSHCYL3	001	040	SNSPINVC	001	080
SNSDB09	001	009	SNSHCYL7	001	0C0	SNSPINVL	001	080
SNSDB10	001	00A	SNSHCYL8	001	030	SNSPINVW	001	080
SNSDB11	001	00B	SNSHCY8E	001	070	SNSPINV3	001	001
SNSDB12	001	00C	SNSHCY8X	001	0F0	SNSPINWG	001	0EB
SNSDB13	001	00D	SNSICMDS	001	002	SNSPIRBC	001	012
SNSDB14	001	00E	SNSINCOM	001	001	SNSPIRBT	001	014
SNSDB15	001	00F	SNSINTNR	001	006	SNSPIRFW	001	011
SNSDB16	001	010	SNSINTRQ	001	040	SNSPIRNB	001	013
SNSDB17	001	011	SNSIPLRQ	001	002	SNSPIRPB	001	008
SNSDB18	001	012	SNSIRA2	001	002	SNSPLDCK	001	002
SNSDB19	001	013	SNSIRA3	001	003	SNSPLOVR	001	001
SNSDB20	001	014	SNSLAPUA	001	007	SNSPLPER	001	010
SNSDB21	001	015	SNSOVRUN	001	004	SNSPMCHR	001	008
SNSDB22	001	016	SNSPARCK	001	00F	SNSPMLCH	001	084
SNSDB23	001	017	SNSPBDCK	001	020	SNSPMOTN	001	002
SNSDB24	001	018	SNSPBLKD	001	040	SNSPNCCM	001	083
SNSDB25	001	019	SNSPBTS	001	010	SNSPNCHM	001	022
SNSDB26	001	01A	SNSPBTTP	001	0FA	SNSPNFCM	001	010
SNSDB27	001	01B	SNSPCHK1	001	001	SNSPNOTR	001	081
SNSDB28	001	01C	SNSPCHN9	001	001	SNSPNOTT	001	020
SNSDB29	001	01D	SNSPCH9	001	00A	SNSPNRDY	001	080
SNSDB30	001	01E	SNSPCMRT	001	080	SNSPNTRT	001	082
SNSDB31	001	01F	SNSPCMSP	001	004	SNSPNWCG	001	004
SNSDCKA1	001	001	SNSPCNCL	001	010	SNSPNWC0	001	040
SNSDENVD	001	010	SNSPCOIL	001	010	SNSPNWG0	001	0EC
SNSDEOC	001	020	SNSPCPML	001	0E3	SNSPOIOB	001	002
SNSDFLOG	001	020	SNSPCTLC	001	002	SNSPOPIN	001	003
SNSDFPE	001	004	SNSPDATE	001	0DE	SNSPPGM	001	001
SNSDFXER	001	040	SNSPDREC	001	009	SNSPPLB	001	040
SNSDIMPE	001	004	SNSPDXCT	001	0FB	SNSPPPER	001	00B
SNSDINTV	001	008	SNSPEFM2	001	001	SNSPPRPI	001	0ED

Name	Len	Val/Disp
SNSPPRTL	001	0EE
SNSPRBNZ	001	0F1
SNSPREDY	001	080
SNSPRELF	001	007
SNSPRPA	001	020
SNSPRTCK	001	040
SNSPRTQL	001	020
SNSPSYNC	001	002
SNSPSYSR	001	008
SNSPTRNL	001	0E2
SNSPTXTL	001	0EF
SNSPUCDE	001	006
SNSPUCNO	001	005
SNSPUCSB	001	080
SNSPUCSP	001	004
SNSPUNGC	001	002
SNSPUNPC	001	080
SNSPUNP3	001	0FC
SNSPWCGL	001	0E1
SNSPWGNL	001	0E9
SNSPWNSP	001	001
SNSP3203	001	084
SNSP3262	001	022
SNSP4245	001	023
SNSRCNT	001	003
SNSRGCOL	001	086
SNSRGCS	001	085
SNSRGEXH	001	087
SNSRGIRM	001	088
SNSRGNUL	001	000
SNSRGPSS	001	030
SNSRGPT	001	084
SNSRGUA	001	081
SNSRGVAL	001	08A
SNSRPRMK	001	001
SNSRPRMS	001	080
SNSRRTAI	001	010
SNSRSNT	001	008
SNSRUNUS	001	002
SNSSDCC	001	030
SNSSEEK	002	005
SNSTAAEW	001	001
SNSTBISE	001	041
SNSTBLDA	001	02A
SNSTBLDB	001	02B
SNSTBUSO	001	049
SNSTBWAB	001	039
SNSTCCRR	001	048
SNSTCMDR	001	027
SNSTCUA	001	04B
SNSTCUE	001	047
SNSTCUF	001	04A
SNSTDAE	001	045
SNSTDCRO	001	026
SNSTDDA	001	040
SNSTDEC	001	035
SNSTDEGR	001	042
SNSTDNO	001	046
SNSTDPL	001	036
SNSTDRBO	001	03A
SNSTDSE	001	02D
SNSTDSNO	001	021
SNSTDTCV	001	001
SNSTFPRO	001	002
SNSTFPRT	001	030
SNSTF21	001	021
SNSTIREQ	001	043
SNSTLAST	001	032
SNSTLBUS	001	044
SNSTLDPT	001	008
SNSTLDSP	001	024
SNSTLOAD	001	033
SNSTMUNL	001	034
SNSTNCBE	001	02E
SNSTNES	001	000
SNSTNOCP	001	001
SNSTNOIS	001	080
SNSTPEBM	001	010
SNSTPEC	001	022
SNSTPEO	001	038
SNSTPEQ	001	02C
SNSTRCHK	001	04C
SNSTRDC	001	023
SNSTSECE	001	008
SNSTTAU	001	020
SNSTTLE	001	037
SNSTVOID	001	031
SNSTVRBO	001	03B
SNSTWDC	001	025
SNSTWIM	001	028
SNST7TRK	001	010
SNSUSOE	001	060
SNSXCTLC	001	002
SNSXLDTA	001	002
SNSXOPCH	001	001
SNSXTIME	001	001
SNSXUNSP	001	004
SNS3SHFT	001	002
SNS30256	001	040
SNS3344	001	008
SNS40HED	001	00F
SNS7SHFT	001	002
SNS75HED	001	00F
SNS75256	001	040
SNS75512	001	080
SNS8SHFT	001	004
SNS80HED	001	00F
SNS801K	001	040
SNS802K	001	080
SNS80256	001	010
SNS80512	001	020

HCPSNSEQ— CONSTANTS FOR DEVICE SENSE INFORMATION

DSECT NAME: SNSEQ

DESCRIPTIVE NAME: Constants For Device Sense Information

FUNCTION: Contains constants for device sense use.

LOCATED BY:

Every Host Control Program (HCP) Module

CREATED BY:

This file contains only constants
and definitions to be used elsewhere.
Therefore, it takes up no space
and requires no storage.

DELETED BY:

None

Value	Name	Description
00000080	SNSCMREJ	BIT 0 - COMMAND REJECT
00000040	SNSINTRQ	BIT 1 - INTERVENTION RSNSIRED
00000020	SNSBSCK	BIT 2 - BUS OUT PARITY CHECK
00000010	SNSEQCK	BIT 3 - SNSIPMENT CHECK
00000008	SNSDTCK	BIT 4 - DATA CHECK
00000004	SNSOVRUN	BIT 5 - OVERRUN CONDITION
		SNSB0DA BIT DEFINITIONS SENSE BYTE 0 FOR DASD
00000002	SNSDTRKC	DASD - TRACK CONDITION
00000001	SNSDSKCK	DASD - SEEK CHECK
		SNSB0RM BIT DEFINITIONS SENSE BYTE 0 FOR REMOTE 3270 TCU
00000002	SNSXLDTA	3270 - LOST DATA CONDITION
00000001	SNSXTIME	3270 - TIMEOUT CONDITION
		SENSE BYTE 0 FOR 327X LOCAL CONTROLLERS SNSB0CL BIT DEFINITIONS
00000004	SNSXUNSP	327X - UNIT SPECIFY
00000002	SNSXCTLC	327X - CONTROL CHECK
00000001	SNSXOPCH	327X - OPERATION CHECK
		SNSB0TA BIT DEFINITIONS SENSE BYTE 0 FOR TAPE
00000001	SNSTDTCV	TAPE - DATA CONVERTER
00000001	SNSTAAEW	3480 TAPE ALREADY ASSIGNED ELSEWHERE
		SENSE BYTE 0 FOR PRINTERS AND PUNCHES SNSB0PR BIT DEFINITIONS
00000004	SNSPUCSP	P/PU - UCS PARITY ERROR
00000002	SNSPLDCK	P/PU - LOAD CHECK
00000001	SNSPCHN9	P/PU - CHANNEL 9 (END OF PAGE)
		SNSB0RD BIT DEFINITIONS SENSE BYTE 0 FOR READERS
00000002	SNSRUNUS	RDRS - UNUSUAL SSNSENCE
00000001	SNSRPRMK	RDRS - 3505 PERM ERROR KEY SET
		SENSE BYTE 0 FOR 3704/3705 CONTROLLERS SNSB0LN BIT DEFINITIONS
00000002	SNSIPLRQ	370X - IPL RSNSIRED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00000001    SNSABORT    370X  - CONTROL PROG FAILURE

                        SNSB1DA BIT DEFINITIONS   SENSE BYTE 1 FOR DASD

00000080    SNSDPERM    DASD  - PERMANENT ERROR
00000040    SNSDTRKO    DASD  - TRACK OVERFLOW
00000020    SNSDEOC     DASD  - END OF CYLINDER
00000010    SNSDMOP     DASD  - MESSAGE TO OPERATOR
00000008    SNSDNRF     DASD  - NO RECORD FOUND
00000004    SNSDFPE     DASD  - FILE PROTECT ERROR
00000002    SNSDWRIN    DASD  - WRITE INHIBITED
00000001    SNSINCOM    DASD  - INCOMPLETE I/O TRANSFER

                        SNSB1TA BIT DEFINITIONS   SENSE BYTE 1 FOR TAPE

00000080    SNSTNOIS    TAPE  - NOISE RECORD
00000020    SNSTTAU     TAPE  - TAPE UNIT STATUS B
00000010    SNST7TRK    TAPE  - SEVEN TRACK TAPE
00000008    SNSTLDPT    TAPE  - LOAD POINT
00000002    SNSTFPRO    TAPE  - FILE PROTECTED
00000001    SNSTNOCP    TAPE  - NOT CAPABLE CHECK

                        SENSE BYTE 1 FOR PRINTERS AND PUNCHES
                        SNSB1PR BIT DEFINITIONS

000000FC    SNSPUNP3    P/PU  - 3800-3 UNPRINTABLE CHARACTER
000000FB    SNSPDXCT    P/PU  - 3800-3 INVALID DATA TRANSFER
                        COUNT
000000FA    SNSPBTTP    P/PU  - 3800-3 NO VALID TRANSLATE
                        TABLE OR INVALID PITCH
000000F6    SNSPIMCH    P/PU  - 3800-3 MODIFIED CHAR CAN NOT
                        BE CONTAINED IN A CHAR CELL
                        OF 40 SCAN LINES
000000F2    SNSPGCSF    P/PU  - 3800-3 GRAPHIC CHAR MOD SCAN
                        FIELDS INCORRECT
000000F1    SNSPRBNZ    P/PU  - 3800-3 LOAD GCM, RESERVED
                        BITS NOT ZEROS
000000F0    SNSPFOSI    P/PU  - 3800-3 FORMS OVERLAY SEQUENCE
                        INVALID
000000EF    SNSPTXTL    P/PU  - 3800-3 LOAD COPY MOD, TEXT
                        LENGTH FIELD INVALID
000000EE    SNSPPRTL    P/PU  - 3800-3 LOAD COPY MOD, SUM OF
                        STARTING PRINT POSITION AND
                        TEXT LENGTH FIELD INVALID
000000ED    SNSPPRPI    P/PU  - 3800-3 LOAD COPY MOD, PRINT
                        POSITION INVALID
000000EC    SNSPNWG0    P/PU  - 3800-3 NO ID FOR WCGM 0
000000EB    SNSPINWG    P/PU  - 3800-3 INVALID CHAR SET ID
000000E9    SNSPWGNL    P/PU  - 3800-3 WCGM NOT LOADED
000000E8    SNSPFCBS    P/PU  - 3800-3 FCB LENGTH INCORRECT
000000E7    SNSPFCBC    P/PU  - 3800-3 FCB CHAN CODES INVALID
000000E6    SNSPFCBB    P/PU  - 3800-3 FCB BOT 1/2 INCH ERROR
000000E5    SNSPFCBT    P/PU  - 3800-3 FCB TOP 1/2 INCH ERROR
000000E4    SNSPFCBM    P/PU  - 3800-3 INCORRECT MULTIPLE OF
                        6, 8, 10, OR 12 LPI
000000E3    SNSPCPML    P/PU  - 3800-3 LOAD COPY MOD, LENGTH
                        IS INCORRECT
000000E2    SNSPTRNL    P/PU  - 3800-3 TRANS TBL LENGTH < 256
000000E1    SNSPWCGL    P/PU  - 3800-3 WCGM LENGTH < 4
000000E0    SNSPFOIL    P/PU  - 3800-3 FORMS OVERLAY SEQUENCE
                        LENGTH INVALID
00000084    SNSPMLCH    P/PU  - 3800-3 MULTIPLE CHARACTERS
00000083    SNSPNCCM    P/PU  - 3800-3 NO FCB CHAN CODE MATCH
00000082    SNSPNTRT    P/PU  - 3800-3 NO TRANSLATE TABLE
                        SELECTED FOR WRITING
00000081    SNSPNOTR    P/PU  - 3800-3 LOAD COPY MOD, NO
                        TRANSLATE TABLE SELECTED
0000000B    SNSEQCAB    PRT   - 4248 ACTION CODE 0B - RETRIABL
0000000A    SNSCH9AA    PRT   - 4248 ACTION CODE 0A - CHANNEL
00000007    SNSEQCA7    PRT   - 4248 ACTION CODE 07 - NON-RETR
00000006    SNSEQCA6    PRT   - 4248 ACTION CODE 06 - NON-RETR
00000005    SNSEQCA5    PRT   - 4248 ACTION CODE 05 - RETRIABL
00000003    SNSIRA3     PRT   - 4248 ACTION CODE 03 - OPERATOR
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00000080    SNSPCMRT    P/PU  - 3211 COMMAND RETRY
00000080    SNSPEQHW    P/PU  - 3800 HARDWARE error
00000080    SNSPINVC    P/PU  - 3800 invalid command
00000080    SNSPINVL    P/PU  - 3800 invalid length
00000080    SNSPNRDY    P/PU  - 3800 not ready
00000080    SNSPUNPC    P/PU  - 3800 unprintable character
00000040    SNSPEQPM    P/PU  - 3800 PERMANENT error
00000040    SNSPILPI    P/PU  - 3800  incorrect multiple of
                        6,8, or 12 lpi
00000040    SNSPRTCK    P/PU  - 3211 PRINT CHECK
00000020    SNSPELFL    P/PU  - 3800 INTERNAL ERROR LOG FULL
00000020    SNSPFHIE    P/PU  - 3800 FCB half-inch error
00000020    SNSPNOTT    P/PU  - 3800 no translate table
00000020    SNSPRTQL    P/PU  - 3211 PRINT QUALITY
00000010    SNSPCNCL    P/PU  - 3800 CANCEL KEY
00000010    SNSPIFCC    P/PU  - 3800 INVALID FCB CHANNEL CODE
00000010    SNSPLPER    P/PU  - LINE PLACEMENT ERROR
00000010    SNSPNFCM    P/PU  - 3800 No FCB channel code match
00000008    SNSPFCBL    P/PU  - 3800 FCB length check
00000008    SNSPMCHR    P/PU  - 3800 multiple characters
00000004    SNSPCMSP    P/PU  - 3211 COMMAND SUPPRESS
00000004    SNSPEFRM    P/PU  - 3800 end of forms
00000004    SNSPNWCG    P/PU  - 3800 WCGM not loaded
00000004    SNSBCKA4    PRT   - 4248 ACTION CODE 04 - BUSOUT P
00000002    SNSPMOTN    P/PU  - MOTION ERROR
00000002    SNSPCTLC    P/PU  - CONTROLLER CHECK
00000002    SNSPUNGC    P/PU  - 3800 UNASSIGNED GRAPHIC CHAR
00000002    SNSIRA2     PRT   - 4248 ACTION CODE 02 - OPERATOR
00000001    SNSPINV3    P/PU  - 3800-3 INVALID COMMAND
00000001    SNSPENDF    P/PU  - 3800-3 END OF FORMS
00000001    SNSDCKA1    PRT   - 4248 ACTION CODE 01 - DATA CK.

                        SNSB1RD BIT DEFINITIONS   SENSE BYTE 1 FOR READERS

00000080    SNSRPRMS    RDRS  - 3505 INTERNAL PERM ERROR
00000010    SNSRRTAI    RDRS  - RETRY AFTER INTERVENTION

                        SNSB2DA BIT DEFINITIONS   SENSE BYTE 2 FOR DASD

00000080    SNSDRPS     DASD  - ROTATE. POSITION SENSING
00000080    SNSDBLF     DASD  - 2305 LOG BUFFER FULL
00000040    SNSDFXER    DASD  - CORRECTABLE ERROR
00000020    SNSDFLOG    DASD  - FIRST LOGGED ERROR
00000010    SNSDENVD    DASD  - ENVIRONMENTAL DATA PRESENT
00000008    SNSCMPAT    DASD  - 3330 COMPATIBILITY MODE
00000008    SNS3344     DASD  - 3344 DEVICE
00000008    SNSDINTV    DASD  - 3380 DEVICE INTENT VIOLATION
00000004    SNSDIMPE    DASD  - 3380 DEVICE IMPRECISE ENDING
00000002    SNSD70MB    DASD  - 3340 70MB PACK PRESENT
00000001    SNSD35MB    DASD  - 3340 35MB PACK PRESENT

                        SNSB2PR BIT DEFINITIONS   SENSE BYTE 2 FOR PRINTERS

00000080    SNSPINVW    P/PU 3800 INVALID WCGM ID
00000040    SNSPNWC0    P/PU 3800 NO ID FOR WCGM 00
00000020    SNSPINCM    P/PU 3800 INVALID COPY MODIFICATION
00000014    SNSPIRBT    P/PU 3800-3 INTERVENTION REQUIRED FOR
                        BTS STACKER OR TRIMMER CHECK
00000013    SNSPIRNB    P/PU 3800-3 INTERVENTION REQUIRED FOR
                        NO BURST CHECK
00000012    SNSPIRBC    P/PU 3800-3 INTERVENTION REQUIRED FOR
                        BURSTER INPUT CHECK
00000011    SNSPIRFW    P/PU 3800-3 INTERVENTION REQUIRED FOR
                        CFS FOLD WRONG
00000010    SNSPIFOS    P/PU 3800 INVALID FORMS OVERLAY
                        SEQUENCE
0000000F    SNSPARCK    P/PU 3800-3 ACCUMULATOR READ CHECK
0000000D    SNSPEIML    P/PU 3800-3 EQUIPMENT CHECK AFTER
                        AUTOMATIC IML
0000000B    SNSPPPER    P/PU 3800-3 PROCESS POWER ERROR
0000000A    SNSPCH9     P/PU 3800-3,4248 CHANNEL 9 SENSED
00000009    SNSPDREC    P/PU 3800-3 DATA RELATED EQUIPMENT
                        CHECK AT PRINT TIME
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00000008	SNSPIRPB	P/PU 3800-3 INTERVENTION REQUIRED FOR PAGE BACKUP
00000007	SNSPRELF	P/PU 3800-3 RETRY ERROR LOG FULL
00000006	SNSPUCDE	P/PU 3800-3 UNIT CHECK/DEVICE END
00000006	SNSINTNR	P/PU 4248 OPER. INTERV. NO RETRY
00000005	SNSPUCNO	P/PU 3800-3 UNIT CHECK/DEVICE END(OBR)
00000003	SNSPOPIN	P/PU 3800-3,4248 OPERATOR INTERV (NO O
00000002	SNSPOIOB	P/PU 3800-3,4248 OPERATOR INTERV (OBR
00000001	SNSPLOVR	P/PU 3800 LINE OVERRUN
00000001	SNSPPGM	P/PU 3800-3 PROGRAMMING ERROR

SNSB3PR BIT DEFINITIONS SENSE BYTE 3 FOR PRINTERS

00000080	SNSPREDY	P/PU - 3800 PRINTER READY
00000080	SNSPUCSB	P/PU - UCSB PARITY ERROR
00000040	SNSPPLB	P/PU - PLB PARITY ERROR
00000020	SNSPBDCK	P/PU - 3800 BLOCK DATA CHECK
00000020	SNSPFCB	P/PU - FCB PARITY ERROR
00000010	SNSPBTS	P/PU - 3800 PAPER THREADED FOR BTS
00000010	SNSPCOIL	P/PU - COIL PROTECTION ERROR
00000008	SNSPHMRF	P/PU - HAMMER FIRE CHECK
00000008	SNSPSYSR	P/PU - 3800 SYSTEM RESTART
00000002	SNSPSYNC	P/PU - SYNC CHECK

SNSB3TA BIT DEFINITIONS SENSE BYTE 3 FOR 3480 TAPE SUBSYSTEM

00000000	SNSTNES	3480 NON ERROR SENSE
00000021	SNSTDSNO	3480 DATA STREAM NOT OPERATIONAL
00000022	SNSTPEC	3480 PATH EQUIPMENT CHECK
00000023	SNSTRDC	3480 READ DATA CHECK
00000024	SNSTLDSP	3480 LOAD DISPLAY
00000025	SNSTWDC	3480 WRITE DATA CHECK
00000026	SNSTDCRO	3480 DATA CHECK READ OPPOSITE
00000027	SNSTCMDR	3480 COMMAND REJECT
00000028	SNSTWIM	3480 WRITE ID MARK CHECK
0000002A	SNSTBLDA	3480 BUFFERED LOG DATA PRESENT
0000002B	SNSTBLDB	3480 BUFFERED LOG DATA PREAENT
0000002C	SNSTPEQ	3480 PATH EQUIPMENT CHECK
0000002D	SNSTDSE	3480 DATA SECUTITY ERASE
0000002E	SNSTNCBE	3480 NOT CAPABLE BOT ERROR
00000030	SNSTFPRT	3480 FILE PROTECTED
00000031	SNSTVOID	3480 TAPE VOID
00000032	SNSTLAST	3480 LOAD ASSISTANCE
00000033	SNSTLOAD	3480 LOAD FAILURE
00000034	SNSTMUNL	3480 MANUAL UNLOAD
00000035	SNSTDEC	3480 DRIVE EQUIPMENT CHECK
00000036	SNSTDPL	3480 DRIVE PATCH LOAD FAILURE
00000037	SNSTTLE	3480 TAPE LENGTH ERROR
00000038	SNSTPEO	3480 PHYSICAL END OF TAPE
00000039	SNSTBWAB	3480 BACKWARD AT BOT
0000003A	SNSTDRBO	3480 DRIVE RESET BY OPERATOR
0000003B	SNSTVRBO	3480 VOLUME REMOVE BY OPERATOR
00000040	SNSTDDA	3480 DEVICE DEFERRED ACCESS (OVERRUN)
00000041	SNSTBISE	3480 BLOCK ID SEQUENCE ERROR
00000042	SNSTDEGR	3480 DEGRADED MODE
00000043	SNSTIREQ	3480 INTERVENTION REQUIRED
00000044	SNSTLBUS	3480 LOCATE BLOCK UNSUCCESSFUL
00000045	SNSTDAE	3480 DRIVE ASSIGNED ELSEWHERE
00000046	SNSTDNO	3480 DRIVE NOT ONLINE
00000047	SNSTCUE	3480 CONTROL UNIT ERROR
00000048	SNSTCCRR	3480 CONTROLLING COMPUTER RETRY REQUEST
00000049	SNSTBUSO	3480 BUS OUT PARITY
0000004A	SNSTCUF	3480 CONTROL UNIT ERP FAILURE
0000004B	SNSTCUA	3480 CONTROL UNIT & DRIVE INCOMPATIBLE
0000004C	SNSTRCHK	3480 RECOVERY CHECK ONE FAILURE

SNSB4DA BIT DEFINITIONS SENSE BYTE 4 FOR DASD DEVICES

00000020	SNSPRPA	3380 - PERMANENT PATH ERROR
00000007	SNSLAPUA	3330 - MASK FOR LAP UNIT ADDRESS
000000C0	SNSCNTLR	3344 - CONTROLLER ADDRESS
00000007	SNSPHYSA	3344 - PHYSICAL DRIVE ADDRESS

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                        SNSB4PR BIT DEFINITIONS   SENSE BYTE 4 FOR PRINTERS

000000DE    SNSPDATE    P/PU  - DATA ERROR
00000084    SNSP3203    P/PU  - PRINTER ID NOT 3211

                        SNSB4TA BIT DEFINITIONS   SENSE BYTE 4 FOR TAPE DRIVES

00000020    SNSEOT      3420  - TAPE INDICATE  (END-OF-TAPE)

                        SNSB5TA BIT DEFINITIONS   SENSE BYTE 5 FOR TAPE

00000010    SNSTPEBM    TAPE  - PE BURST MODE

                        SNSB6DA BIT DEFINITIONS   SENSE BYTE 6 FOR DASD DEVICES

00000080    SNS75512    3375 - ADD 512 TO CYLINDER BITS
00000080    SNSD50CE    CE CYLINDER INDICATOR FOR 3350
00000080    SNS802K     ADD 2048 TO CYLINDER BITS FOR 3380
00000040    SNSDA512    ADD 512 TO CYLINDER BITS FOR 3330-11,
                        3340, 3350, 3350 IN 3330-11
                        COMPATIBILITY MODE
00000040    SNS30256    ADD 256 TO CYLINDER BITS FOR 3330-1,
                        3350 IN 3330-1 COMPATIBILITY MODE
00000040    SNS75256    3375 - ADD 256 TO CYLINDER BITS
00000040    SNSHCYL3    3330-1, 3350 IN 3330-1 COMPATIBILITY
                        MODE - HI-ORDER CYLINDER ADDRESS BIT
00000040    SNS801K     ADD 1024 TO CYLINDER BITS FOR 3380
00000020    SNSDA256    ADD 256 TO CYLINDER BITS FOR 3330-11,
                        3340, 3350, 3350 IN 3330-11
                        COMPATIBILITY MODE
00000020    SNS80512    3380 - ADD 512 TO CYLINDER BITS
00000010    SNSD40CE    CE CYLINDERS INDICATOR FOR 3340
00000010    SNS80256    3380 - ADD 256 TO CYLINDER BITS

                        SNSB6DA1 BIT DEFINITIONS

000000C0    SNSHCYL7    3375 - HI-ORDER CYLINDER ADDRESS BITS

                        SNSB6DA2 BIT DEFINITIONS

00000060    SNSHCYLD    3340, 3350, 3330-11, 3350 IN 3330-11
                        COMPATIBILITY MODE - HI-ORDER
                        CYLINDER ADDRESS BITS

                        SNSB6DA3 BIT DEFINITIONS

00000030    SNSHCYL8    3380 - HI-ORDER CYLINDER ADDRESS BIT
00000070    SNSHCY8E    3380E - HI-ORDER CYLINDER ADDRESS BIT
000000F0    SNSHCY8X    3380X - HI-ORDER CYLINDER ADDRESS BIT
                        MASK FOR ALL 3380'S
0000001F    SNSDAHED    HEAD ADDRESS BITS FOR 3330, 3350,
                        3350 IN 3330 COMPATIBILITY MODE
0000000F    SNS40HED    HEAD ADDRESS BITS FOR 3340
0000000F    SNS75HED    HEAD ADDRESS BITS FOR 3375
0000000F    SNS80HED    HEAD ADDRESS BITS FOR 3380

                        CE CYLINDER VALUES DEFINED BY SNSB6DA

00000230    SNSCED50    CYLINDER VALUE FOR 3350 CE CYLINDER
00000800    SNSCED40    VALUE TO ADD TO CYLINDER BITS FOR
                        3340 CE CYLINDERS

                        SHIFT COUNTS FOR SNSB6DA

00000002    SNS3SHFT    NUMBER OF BITS TO SHIFT SNSHCYL3 TO
                        GENERATE THE CYLINDER ADDRESS FOR
                        3330-1, 3350 IN 3330-1 COMPATIBILITY
                        MODE
00000002    SNS7SHFT    3375 - NUMBER OF BITS TO SHIFT
                        SNSHCYL7
00000003    SNSDSHFT    NUMBER OF BITS TO SHIFT SNSHCYLD TO
                        GENERATE THE CYLINDER ADDRESS FOR
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                                3330-11, 3340, 3350, 3350 IN 3330-11
                                COMPATIBILITY MODE
00000004    SNS8SHFT            3380 - NUMBER OF BITS TO SHIFT
                                SNSHCYL8

                                SNSB6PR BIT DEFINITIONS   SENSE BYTE 6 FOR PRINTERS

00000001    SNSPWNSP            P/PU - 3800-3 CURRENT LINE IS A
                                WRITE NO SPACE

                                SNSB7DA BIT DEFINITIONS   SENSE BYTE 7 FOR DASD DEVICES

000000F0    SNSFORMT            FORMAT OF REMAINING SENSE BYTES
00000002    SNSICMDS            INVALID COMMAND SEQUENCE
00000008    SNSRSNT             RESET NOTIFICATION INDICATION
00000030    SNSSDCC             STORAGE DIRECTOR CONTROL CHECK
00000040    SNSECCU             ECC UNCORRECTABLE DATA CHECKS
00000050    SNSECCC             ECC CORRECTABLE DATA CHECKS
00000060    SNSUSOE             USAGE STATISTICS/OVERRUN ERRORS

                                SNSB7PR BIT DEFINITIONS   SENSE BYTE 7 FOR PRINTERS

00000040    SNSPBLKD            P/PU - 3800-3 DATA CHECKS BLOCKED

                                SNSB7TA BIT DEFINITIONS   SENSE BYTE 7 FOR TAPE

00000008    SNSTSECE            TAPE  - SECURITY ERASE COMMAND
00000021    SNSTF21             3480 -  FORMAT 21 SENSE BYTES

                                SNSB18PR BIT DEFINITIONS  SENSE BYTE 18 FOR PRINTERS

00000001    SNSPEFM2            P/PU - 3262 END OF FORMS
00000022    SNSPNCHM            P/PU - 4245 NO FCB CHANNEL CODE MATCH
00000023    SNSPFLCK            P/PU - FCB LOAD CHECK

                                SNSB19PR BIT DEFINITIONS  SENSE BYTE 19 FOR PRINTERS

00000001    SNSPCHK1            P/PU - 3800-3 CHECK GROUP 1

                                SNSB23DA BIT DEFINITIONS  SENSE BYTE 23 FOR DASD

00000001    SNSCUTOF            CHANNEL CUTOFF

                                SNSB23PR BIT DEFINITIONS  SENSE BYTE 23 FOR PRINTERS

00000022    SNSP3262            P/PU - 3262 PRINTER INDICATOR
00000023    SNSP4245            P/PU - 4245 PRINTER INDICATOR

00000000    SNSRGNUL            NULL RESPONSE
00000081    SNSRGUA             USABLE AREA
00000084    SNSRGPT             PARTITIONS
00000085    SNSRGCS             CHARACTER SETS
00000086    SNSRGCOL            COLOR
00000087    SNSRGEXH            EXTENDED HILIGHT
00000088    SNSRGIRM            INBOUND REPLY MODE
0000008A    SNSRGVAL            FIELD VALIDATION
00000030    SNSRGPSS            PSS FEATURE
```

HCPSNSID— SENSE ID DATA MAPPING

DSECT NAME: SNSID

DESCRIPTIVE NAME: SENSE ID DATA MAPPING

FUNCTION: MAP THE DATA RETURNED BY A SENSE ID CCW

LOCATED BY:

NONE

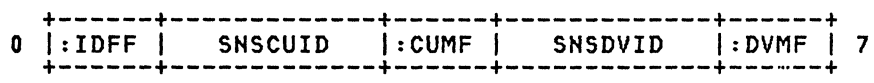
CREATED BY:

NONE

DELETED BY:

NONE

SNSID - SENSE ID DATA MAPPING



disp	name	length	description
000	SNSIDFF	001	X'FF' FILLER
001	SNSIDATA	006	DATA PORTION OF SENSE ID DATA
001	SNSCUID	002	CONTROL UNIT ID
003	SNSCUMF	001	CONTROL UNIT MODEL/FEATURE CODES
004	SNSDVID	002	DEVICE ID
006	SNSDVMF	001	DEVICE MODEL/FEATURE CODES

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SNSABORT	001	001	SNSDIMPE	001	004	SNSEQCA5	001	005
SNSBCKA4	001	004	SNSDINTV	001	008	SNSEQCA6	001	006
SNSBSCK	001	020	SNSDMOP	001	010	SNSEQCA7	001	007
SNSCED40	001	800	SNSDNRF	001	008	SNSEQCK	001	010
SNSCED50	001	230	SNSDPERM	001	080	SNSFORMT	001	0F0
SNSCH9AA	001	00A	SNSDRPS	001	080	SNSHCYLD	001	060
SNSCMPAT	001	008	SNSDSHFT	001	003	SNSHCYL3	001	040
SNSCMREJ	001	080	SNSDSKCK	001	001	SNSHCYL7	001	0C0
SNSCNTLR	001	0C0	SNSDTCK	001	008	SNSHCYL8	001	030
SNSCUID	002	001	SNSDTRKC	001	002	SNSHCY8E	001	070
SNSCUMF	001	003	SNSDTRKO	001	040	SNSHCY8X	001	0F0
SNSCUTOF	001	001	SNSDVID	002	004	SNSICMDS	001	002
SNSDAHED	001	01F	SNSDVMF	001	006	SNSID	001	000
SNSDA256	001	020	SNSDWRIN	001	002	SNSIDATA	006	001
SNSDA512	001	040	SNSD35MB	001	001	SNSIDFF	001	000
SNSDBLF	001	080	SNSD40CE	001	010	SNSINCOM	001	001
SNSDCKA1	001	001	SNSD50CE	001	080	SNSINTNR	001	006
SNSDENVD	001	010	SNSD70MB	001	002	SNSINTRQ	001	040
SNSDEOC	001	020	SNSECCC	001	050	SNSIPLRQ	001	002
SNSDFLOG	001	C20	SNSECCU	001	040	SNSIRA2	001	002
SNSDFPE	001	004	SNSEOT	001	020	SNSIRA3	001	003
SNSDFXER	001	040	SNSEQCAB	001	00B	SNSLAPUA	001	007

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SNSOVRUN	001	004	SNSPNWG0	001	0EC	SNSTFPRT	001	030
SNSPARCK	001	00F	SNSPOIOB	001	002	SNSTF21	001	021
SNSPBDCK	001	020	SNSPOPIN	001	003	SNSTIREQ	001	043
SNSPBLKD	001	040	SNSPPGM	001	001	SNSTLAST	001	032
SNSPBTS	001	010	SNSPPLB	001	040	SNSTLBUS	001	044
SNSPBTTP	001	0FA	SNSPPPER	001	00B	SNSTLDPT	001	008
SNSPCHK1	001	001	SNSPPRPI	001	0ED	SNSTLDSP	001	024
SNSPCHN9	001	001	SNSPPRTL	001	0EE	SNSTLOAD	001	033
SNSPCH9	001	00A	SNSPRBNZ	001	0F1	SNSTMUNL	001	034
SNSPCMRT	001	080	SNSPREDY	001	080	SNSTNCBE	001	02E
SNSPCMSP	001	004	SNSPRELF	001	007	SNSTNES	001	000
SNSPCNCL	001	010	SNSPRPA	001	020	SNSTNOCP	001	001
SNSPCOIL	001	010	SNSPRTCK	001	040	SNSTNOIS	001	080
SNSPCPML	001	0E3	SNSPRTQL	001	020	SNSTPEBM	001	010
SNSPCTLC	001	002	SNSPSYNC	001	002	SNSTPEC	001	022
SNSPDATE	001	0DE	SNSPSYSR	001	008	SNSTPEO	001	038
SNSPDREC	001	009	SNSPTRNL	001	0E2	SNSTPEQ	001	02C
SNSPDXCT	001	0FB	SNSPTXTL	001	0EF	SNSTRCHK	001	04C
SNSPEFM2	001	001	SNSPUCDE	001	006	SNSTRDC	001	023
SNSPEFRM	001	004	SNSPUCNO	001	005	SNSTSECE	001	008
SNSPEIML	001	00D	SNSPUCSB	001	080	SNSTTAU	001	020
SNSPELFL	001	020	SNSPUCSP	001	004	SNSTTLE	001	037
SNSPENDF	001	001	SNSPUNGC	001	002	SNSTVOID	001	031
SNSPEQHW	001	080	SNSPUNPC	001	080	SNSTVRBO	001	03B
SNSPEQPM	001	040	SNSPUNP3	001	0FC	SNSTWDC	001	025
SNSPFCB	001	020	SNSPWCGL	001	0E1	SNSTWIM	001	028
SNSPFCBB	001	0E6	SNSPWGNL	001	0E9	SNST7TRK	001	010
SNSPFCBC	001	0E7	SNSPWNSP	001	001	SNSUSOE	001	060
SNSPFCBL	001	008	SNSP3203	001	084	SNSXCTLC	001	002
SNSPFCBM	001	0E4	SNSP3262	001	022	SNSXLDTA	001	002
SNSPFCBS	001	0E8	SNSP4245	001	023	SNSXOPCH	001	001
SNSPFCBT	001	0E5	SNSRGCOL	001	086	SNSXTIME	001	001
SNSPFHIE	001	020	SNSRGCS	001	085	SNSXUNSP	001	004
SNSPFLCK	001	023	SNSRGEXH	001	087	SNS3SHFT	001	002
SNSPFOIL	001	0E0	SNSRGIRM	001	088	SNS30256	001	040
SNSPFOSI	001	0F0	SNSRGNUL	001	000	SNS3344	001	008
SNSPGCSF	001	0F2	SNSRGPSS	001	030	SNS40HED	001	00F
SNSPHMRF	001	008	SNSRGPT	001	084	SNS7SHFT	001	002
SNSPHYSA	001	007	SNSRGUA	001	081	SNS75HED	001	00F
SNSPIFCC	001	010	SNSRGVAL	001	08A	SNS75256	001	040
SNSPIFOS	001	010	SNSRPRMK	001	001	SNS75512	001	080
SNSPILPI	001	040	SNSRPRMS	001	080	SNS8SHFT	001	004
SNSPIMCH	001	0F6	SNSRRTAI	001	010	SNS80HED	001	00F
SNSPINCM	001	020	SNSRSNT	001	008	SNS801K	001	040
SNSPINVC	001	080	SNSRUNUS	001	002	SNS802K	001	080
SNSPINVL	001	080	SNSSDCC	001	030	SNS80256	001	010
SNSPINVW	001	080	SNSTAAEW	001	001	SNS80512	001	020
SNSPINV3	001	001	SNSTBISE	001	041			
SNSPINWG	001	0EB	SNSTBLDA	001	02A			
SNSPIRBC	001	012	SNSTBLDB	001	02B			
SNSPIRBT	001	014	SNSTBUSO	001	049			
SNSPIRFW	001	011	SNSTBWAB	001	039			
SNSPIRNB	001	013	SNSTCCRR	001	048			
SNSPIRPB	001	008	SNSTCMDR	001	027			
SNSPLDCK	001	002	SNSTCUA	001	04B			
SNSPLOVR	001	001	SNSTCUE	001	047			
SNSPLPER	001	010	SNSTCUF	001	04A			
SNSPMCHR	001	008	SNSTDAE	001	045			
SNSPMLCH	001	084	SNSTDCRO	001	026			
SNSPMOTN	001	002	SNSTDDA	001	040			
SNSPNCCM	001	083	SNSTDEC	001	035			
SNSPNCHM	001	022	SNSTDEGR	001	042			
SNSPNFCM	001	010	SNSTDNO	001	046			
SNSPNOTR	001	081	SNSTDPL	001	036			
SNSPNOTT	001	020	SNSTDRBO	001	03A			
SNSPNRDY	001	080	SNSTDSE	001	02D			
SNSPNTRT	001	082	SNSTDSNO	001	021			
SNSPNWCG	001	004	SNSTDTCV	001	001			
SNSPNWC0	001	040	SNSTFPRO	001	002			

HCPSNTBK— SYSTEM NAME TABLE BLOCK

DSECT NAME: SNTBK

DESCRIPTIVE NAME: SYSTEM NAME TABLE BLOCK

FUNCTION: THIS BLOCK IS USED TO KEEP TRACK OF A SYSTEM DATA FILE THAT IS BROUGHT INTO THE SYSTEM.

LOCATED BY:

THE POINTER TO THIS CHAIN OF BLOCKS IS LOCATED IN HCPNSU, USING NSUNSYAN FOR NSSS, NSUNSGAN FOR DCSSS, NSUIMGAN FOR IMAGES, AND NSUNLSAN FOR NLS FILES.
- IN HCPSHRBK, POINTER SHRSNTPT WILL POINT TO THE ASSOCIATED HCPSNTBK. POINTER SHRLSSA WILL POINT TO THE SEGMENT SPACE THROUGH WHICH THE SHARED SEGMENT WAS LOADED.
- IN HCPPGMBK, USING THE PGMVM POINTER WILL POINT TO THE ASSOCIATED HCPSNTBK.
- SNTFWDPT WILL POINT TO THE NEXT HCPSNTBK IN THE CHAIN.
- THE END OF CHAIN IS LOCATED WHEN THE SNTFWDPT EQUALS THE ADDRESS OF NSUNSYAN, NSUNSGAN OR NSUIMGAN.
- IN HCPIMGBK, IMGSNTBK WILL POINT TO THE ASSOCIATED HCPSNTBK.

CREATED BY:

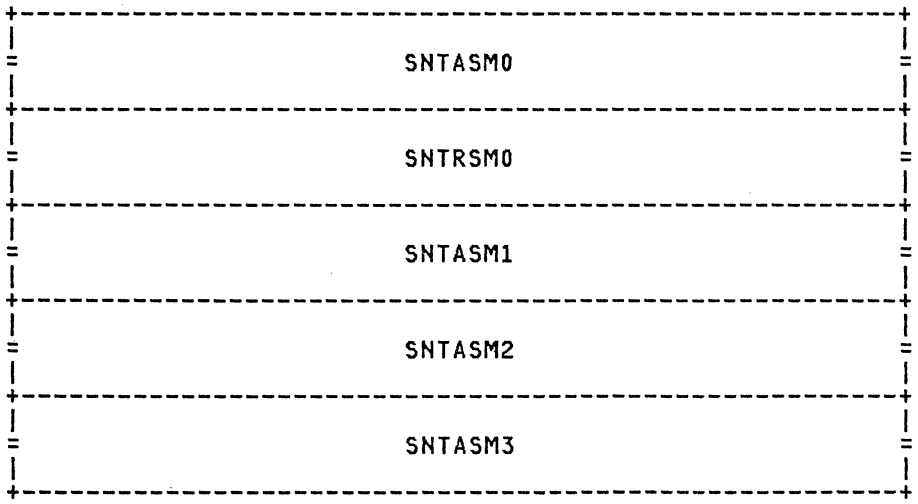
HCPNSL WHEN LOADING THE NSS OR DCSS FOR THE FIRST TIME.
- HCPNSD WILL BUILD THIS BLOCK FOR THE DURATION OF THE PROCESSING OF THE DEFSEG AND DEFSYS COMMANDS.
- HCPNSS WILL BUILD THIS BLOCK FOR THE DURATION OF THE PROCESSING OF THE SAVESEG AND SAVESYS COMMANDS.
- HCPNSI WILL BUILD THIS BLOCK FOR THE DURATION OF PROCESSING OF THE DIAGNOSE X'74' INSTRUCTION TO SAVE OR LOAD AN IMAGE, AND THE DIAGNOSE X'CC' INSTRUCTION TO CREATE AN NLS MESSAGE REPOSITORY.
- HCPNSR WILL BUILD THIS BLOCK WHEN OPENING AN IMAGE LIBRARY OR NLS MESSAGE REPOSITORY FILE.

DELETED BY:

HCPNSP WILL DELETE THIS BLOCK WHEN THE COUNT FIELDS OF AN NSS OR DCSS GO TO ZERO. THE FIELDS ARE

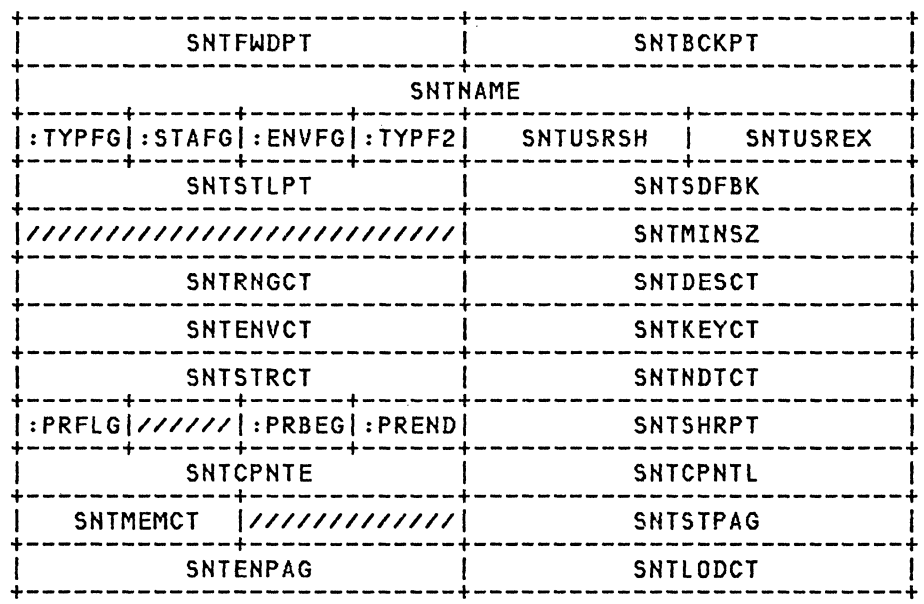
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

SNTBK - SYSTEM NAME TABLE BLOCK

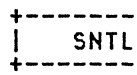


1000

REDEFINITION - GENERAL INFORMATION

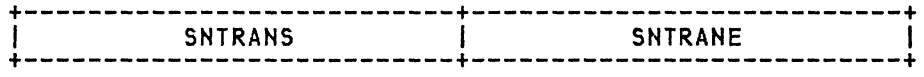


REDEFINITION - COUNT FIELD

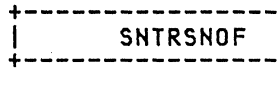


REDEFINITION - PAGE RANGE INFORMATION.

REDEFINITION - PAGE RANGE PAIR.



REDEFINITION - START PAGE OF RANGE PAIR.



REDEFINITION - SEGMENT SPACE MEMBER LIST

```
     |                                                     |
     +-----------------------------------------------------+
820
```

REDEFINITION - INDIVIDUAL MEMBER ENTRY

```
     +-----------------------------------------------------+
800  |                        SNTMSSNM                     |
     +-------------------------+---------------------------+
808  |         SNTMEMST        |          SNTMEMEN         |
     +-------------------------+---------------------------+
810  |         SNTMSSA         |///////////////////////////|
     +-------------------------+---------------------------+
818  |/////////////////////////////////////////////////////|
     +-----------------------------------------------------+
820
```

REDEFINITION - FIRST PAGE OF RANGE W/ STATUS FLG

```
     +--------------------+------+
808  |      SNTMEMSP      |:MSTAT| 80C
     +--------------------+------+
```

REDEFINITION - MEMBER'S SEGMENT SPACE LIST

```
     +-----------------------------------------------------+
C00  |                        SNTLGSEG                     |
     |                                                     |
     +-----------------------------------------------------+
C10
```

REDEFINITION - INDIVIDUAL SEGMENT SPACE ENTRY

```
     +-----------------------------------------------------+
C00  |                        SNTLSSNM                     |
     +-------------------------+------+--------------------+
C08  |         SNTLSSA         |:LSTAT|////////////////////|
     +-------------------------+------+--------------------+
C10
```

REDEFINITION - VARIABLE LIST OF ASAS FOR IMAGE FILES

```
     +--------------------------+
C00  |         SNTASALT         | C04
     +--------------------------+
```

disp	name	length	description
000	SNTASM0	008	GENERAL INFORMATION
638	SNTRSM0	008	REAL STORAGE MANAGEMENT (RSM) AREA
700	SNTASM1	008	RESERVED FOR IBM USE
800	SNTASM2	008	PAGE RANGE INFORMATION
C00	SNTASM3	008	IMAGE LIBRARY SPECIFIC INFORMATION

REDEFINITION - GENERAL INFORMATION

000	SNTFWDPT	004	FORWARD POINTER TO THE NEXT SNTBK.
004	SNTBCKPT	004	BACKWARD POINTER TO THE NEXT SNTBK.
008	SNTNAME	008	NAME OF THE NSS, DCSS, IMAGE, OR NLS.

010	SNTFLAGS	004	FLAGS FOR THE SNTBK.
010	SNTTYPFG	001	TYPE INFORMATION FLAG.
	BITS DEFINED FOR SNTTYPFG BY HCPEQUAT SNTTYPFG		
011	SNTSTAFG	001	STATUS INFORMATION FLAG.
	BITS DEFINED IN SNTSTAFG (AT HEX DISPLACEMENT: 11)		
012	SNTENVFG	001	FLAG INFORMATION BYTE.
	CODES DEFINED IN SNTENVFG (AT HEX DISPLACEMENT: 12)		
013	SNTTYPF2	001	TYPE INFORMATION BYTE 2.
	BITS DEFINED FOR SNTTYPF2 BY HCPEQUAT SNTTYPF2		
014	SNTUSRSH	002	COUNT OF NSS OR DCSS USERS IN SHARED MODE OR COUNT OF ALL USERS OF AN IMAGE LIBRARY.
016	SNTUSREX	002	COUNT OF NSS OR DCSS USERS IN EXCLUSIVE MODE. NOTE: SNTUSRSH + SNTUSREX = THE NUMBER OF LOADS OF THIS NAME. THIS IS THE NUMBER OF SHRBKS ON THIS SNTBK'S SHRBK CHAIN.
018	SNTSTLPT	004	POINTER TO THE STLBK. IT CONTAINS PGMBK INFO
01C	SNTSDFBK	004	POINTER TO THE SDFBK. USED TO COMMUNICATE WITH THE SDF SYSTEM.
020		F	RESERVED FOR IBM USE.
024	SNTMINSZ	004	INDICATES THE MINIMUM SIZE IN WHICH THE NSS CAN BE IPLED.
028	SNTRNGCT	004	COUNT OF VALID PAGE RANGE ENTRIES FOR AN NSS OR DCSS.
02C	SNTDESCT	004	COUNT OF DESCRIPTOR PAGES DEFINED FOR AN NSS, DCSS, IMAGE, OR NLS FILE.
030	SNTENVCT	004	COUNT OF ENVIRONMENT PAGES FOR AN NSS.
034	SNTKEYCT	004	COUNT OF KEY PAGES FOR AN NSS OR DCSS.
038	SNTSTRCT	004	COUNT OF STORAGE PAGES SAVED FOR AN NSS, DCSS, IMAGE, OR NLS FILE.
03C	SNTNDTCT	004	COUNT OF STORAGE PAGES DEFINED WITH THE NO-DATA-SAVED ATTRIBUTE. THIS COUNT IS NOT CALCULATED UNTIL THE NSS OR DCSS IS SAVED. THE TOTAL NUMBER OF PAGES DEFINED IS SNTSTRCT+SNTNDTCT
040	SNTPRFLG	001	PARMREGS FLAGS
	BITS DEFINED FOR SNTPRFLG BY HCPEQUAT SNTPRFLG		
041		X	RESERVED FOR IBM USE
042	SNTPREGS	002	PARMREGS REGISTERS
042	SNTPRBEG	001	PARMREGS BEGINNING REGISTER
043	SNTPREND	001	PARMREGS ENDING REGISTER
044	SNTSHRPT	004	FORWARD ANCHOR FOR SHRBK CHAIN.
048	SNTCPNTE	004	CP NOTIFICATION ADDRESS - THIS ADDRESS WILL BE CALLED EACH TIME A VIRTUAL MACHINE RELEASES THE SYSTEM DATA FILE.
04C	SNTMEMCT	002	COUNT OF MEMBER SAVED SEGMENTS WITHIN THIS SEGMENT SPACE. THIS FIELD IS ONLY VALID IF SNTLSS IS ON. THIS FIELD INDICATES THE NUMBER OF MEMBER SAVED SEGMENT DIRECTORY ENTRIES LOCATED IN THE DIRECTORY AREA (SNTASM2 & SNTASM3). IT MAY NOT BE LARGER THAN SNTMAXCT.
04E		H	RESERVED FOR IBM USE
050	SNTSTPAG	004	THE LOWEST PAGE DEFINED FOR THIS SEGMENT. THIS PAGE NUMBER HAS NOT BEEN ROUNDED DOWN TO THE NEAREST MEGABYTE BOUNDARY FOR SEGMENT SPACES.
054	SNTENPAG	004	THE HIGHEST PAGE DEFINED FOR THIS SEGMENT. THIS PAGE NUMBER HAS NOT BEEN ROUNDED UP TO THE NEAREST MEGABYTE BOUNDARY FOR SEGMENT SPACES.
058	SNTLODCT	004	THE NUMBER OF LOADS VIA THIS SEGMENT SPACE. THIS IS THE NUMBER OF SHRBKS THAT POINT TO THIS SEGMENT SPACE. THIS

COUNT IS ONLY VALID IF SNTLSS IS ON.

EQUATES

40	SNTMAXCT	THE MAXIMUM NUMBER OF MEMBERS IN A SEGMENT SPACE AND THE MAXIMUM NUMBER OF SEGMENT SPACE THAT MAY BE ASSOCIATED WITH A MEMBER SAVED SEGMENT.

05C	SNTCPNTL	004	CP NOTIFICATION ADDRESS - THIS ADDRESS WILL BE CALLED WHEN THE LAST VIRTUAL MACHINE RELEASES THE SYSTEM DATA FILE.

REDEFINITION - COUNT FIELD

04C	SNTLOGCT	002	COUNT OF SEGMENT SPACES CONTAINING THIS MEMBER SAVE SEGMENT. THIS FIELD IS ONLY VALID IF SNTMSS IS ON. THIS FIELD INDICATES THE NUMBER OF SEGMENT SPACE DIRECTORY ENTRIES LOCATED IN THE DIRECTORY AREA (SNTASM3). IT MAY NOT BE LARGER THAN SNTMAXCT.

REDEFINITION - PAGE RANGE INFORMATION.

800	SNTRANGE	008	A PAIR OF START/END PAGE RANGES.

EQUATES

80	SNTPRMAX	THE MAXIMUM NUMBER OF PAGE RANGE ENTRIES PLUS ONE ENTRY FOR THE FENCE FOR NSSS AND DCSSS. IMAGES HAVE ONLY ONE PAGE RANGE.

REDEFINITION - PAGE RANGE PAIR.

800	SNTRANS	004	FIRST PAGE OF RANGE. THIS FIELD FOR NSSS AND DCSSS WILL CONTAIN A FLAG IN THE RIGHTMOST BYTE.
804	SNTRANE	004	LAST PAGE OF RANGE.

REDEFINITION - START PAGE OF RANGE PAIR.

800	SNTRSNOF	003	THE START PAGE RANGE MINUS THE FLAG BYTE. THE PAGE RANGE WILL BE IN THE FORM SSSPP0FF, WHERE SSS = SEGMENT NUMBER PP = PAGE NUMBER 0 = ALWAYS 0 FF = FLAG BYTE
803	SNTRNGFG	001	PAGE RANGE STORAGE TYPE FLAG FOR NSSS AND DCSSS.

BITS DEFINED IN SNTRNGFG (AT HEX DISPLACEMENT: 803)

01	SNTEXCL	THIS BIT INDICATES SEGMENTS THAT MAY NOT BE SHARED AMONG SEVERAL USERS. EACH USER GETS A SEPARATE COPY OF THIS SEGMENT.
02	SNTPROT	THIS BIT INDICATES PAGE RANGES THAT ARE PAGE PROTECTED. USERS MAY ACCESS THESE PAGES ONLY IN READ-ONLY MODE.
04	SNTNDAT	THIS BIT INDICATES PAGE RANGES WHOSE DATA IS NOT SAVED INTO THE SDF (NO DATA).

HOW PAGE DESCRIPTOR CODES CORRESPOND TO SETTINGS OF SNTRNGFG:

CODE	SNTRNGFG	SNTNDAT	SNTPROT	SNTEXCL
SW	000	0=DATA	0=UNPROTECTED (READ/WRITE)	0=SHARED
EW	001	0=DATA	0=UNPROTECTED (READ/WRITE)	1=EXCLUSIVE
SR	010	0=DATA	1=PROTECTED (READ-ONLY)	0=SHARED
ER	011	0=DATA	1=PROTECTED (READ-ONLY)	1=EXCLUSIVE
SN	100	1=NODATA	0=UNPROTECTED (READ/WRITE)	0=SHARED

```
                              EN    101     1=NODATA 0=UNPROTECTED (READ/WRITE) 1=EXCLUSIVE
                              SC    110     1=NODATA 1=PROTECTED   (READ-ONLY)  0-SHARED
                              111     (RESERVED)
          00     SNTRNGSW     RANGE FLAG VALUE FOR 'SW'
          01     SNTRNGEW     RANGE FLAG VALUE FOR 'EW'
          02     SNTRNGSR     RANGE FLAG VALUE FOR 'SR'
          03     SNTRNGER     RANGE FLAG VALUE FOR 'ER'
          04     SNTRNGSN     RANGE FLAG VALUE FOR 'SN'
          05     SNTRNGEN     RANGE FLAG VALUE FOR 'EN'
          06     SNTRNGSC     RANGE FLAG VALUE FOR 'SC'
          07     SNTRNGR2     RESERVED


            REDEFINITION - SEGMENT SPACE MEMBER LIST

800     SNTMEMBR    032       MEMBER ENTRY

            REDEFINITION - INDIVIDUAL MEMBER ENTRY

800     SNTMSSNM    008       NAME OF THE MEMBER SAVED SEGMENT
808     SNTMEMST    004       FIRST PAGE OF RANGE.  THIS FIELD
                              WILL CONTAIN STATUS INFORMATION
                              IN THE RIGHTMOST BYTE.
                              THE PAGE NUMBER WILL BE IN FORM:
                              SSSPP0FF, WHERE SSS = SEGMENT NUMBER
                              PP  = PAGE NUMBER
                              0   = ALWAYS 0
                              FF  = STATUS BYTE
80C     SNTMEMEN    004       LAST PAGE OF RANGE
810     SNTMSSA     004       ADDRESS OF THE SNTBK DEFINING THE
                              MEMBER SAVED SEGMENT.
814                 F         RESERVED FOR IBM USE
818                 D         RESERVED FOR IBM USE

                        EQUATES

            20      SNTNTSZM    LENGTH OF A MEMBER SAVED SEG ENTRY


            REDEFINITION - FIRST PAGE OF RANGE W/ STATUS FLG

808     SNTMEMSP    003       STARTING PAGE NUMBER FOR THE MEMBER
80B     SNTMSTAT    001       MEMBER SAVED SEGMENT STATUS BYTE

          BITS DEFINED IN SNTMSTAT (AT HEX DISPLACEMENT: 80B)

            04      SNTMQNTF    FLAG TO INDICATE THIS ENTRY NOT FOUND
                                DURING QUERY NAMES COMMAND PROCESSING
            02      SNTMSAVD    THIS MEMBER SAVED SEGMENT HAS BEEN SAVED
            01      SNTMPENP    THIS MEMBER SAVED SEGMENT IS IN PENDING
                                PURGE STATUS.


            REDEFINITION - MEMBER'S SEGMENT SPACE LIST

C00     SNTLGSEG    016       SEGMENT SPACE ENTRY

            REDEFINITION - INDIVIDUAL SEGMENT SPACE ENTRY

C00     SNTLSSNM    008       NAME OF THE SEGMENT SPACE
C08     SNTLSSA     004       ADDRESS OF THE SEGMENT SPACE'S SNTBK.
                              THIS FIELD IS ZERO IF THE SEGMENT
                              SPACE IS NOT BEING USED.
C0C     SNTLSTAT    001       SEGMENT SPACE STATUS BYTE

          BITS DEFINED IN SNTLSTAT (AT HEX DISPLACEMENT: C0C)

            04      SNTLQNTF    FLAG TO INDICATE THIS ENTRY NOT FOUND
                                DURING QUERY NAMES COMMAND PROCESSING.
            01      SNTLPENP    THIS SEGMENT SPACE IS IN PENDING
                                PURGE STATUS.

C0D                 XL3       RESERVED FOR IBM USE
```

EQUATES

10	SNTNTSZL	THE SIZE OF A SEGMENT SPACE DIRECTORY ENTRY.

REDEFINITION - VARIABLE LIST OF ASAS FOR IMAGE FILES

C00	SNTASALT	004	ADDRESS OF THE NEXT PAGE IN THE ASA/VIRTUAL ADDRESS TABLE. THIS FIELD APPLIES ONLY TO IMAGE AND NLS FILES.

EQUATES

04	SNTNASA	NEXT ASA IN THE TABLE FOR IMAGE FILES.

MORE EQUATES

004	SNTABEND	THIS BIT INDICATES THAT AN ABEND SHOULD BE ISSUED WHEN THE AUXILIARY STORAGE MANAGER OR REAL STORAGE MANAGER IN USE COUNTS ARE NOT THE SAME.
001	SNTPENDP	THIS BIT INDICATES THAT THE NSS, DCSS, IMAGE, OR NLS FILE SHOULD BE PURGED WHEN THE TOTAL USER COUNT GOES TO ZERO.
001	SNT370MD	THIS BIT INDICATES 370 MODE MACHINE.
002	SNTXAMD	THIS BIT INDICATES XA MODE MACHINE.
00A	SNTAPMAX	THE MAXIMUM NUMBER OF ADDRESS ENTRIES IN THIS ASA/VIRTUAL ADDRESS TABLE FOR AN IMAGE OR NLS FILE.

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SNTABEND	001	004	SNTLSSA	004	C08	SNTPREGS	002	042
SNTAPMAX	001	00A	SNTLSSNM	008	C00	SNTPREND	001	043
SNTASALT	004	C00	SNTLSTAT	001	C0C	SNTPRFLG	001	040
SNTASM0	008	000	SNTMAXCT	001	040	SNTPRMAX	001	080
SNTASM1	008	700	SNTMEMBR	032	800	SNTPRNO	001	040
SNTASM2	008	800	SNTMEMCT	002	04C	SNTPROT	001	002
SNTASM3	008	C00	SNTMEMEN	004	80C	SNTRANE	004	804
SNTBCKPT	004	004	SNTMEMSP	003	808	SNTRANGE	008	800
SNTBK	001	000	SNTMEMST	004	808	SNTRANS	004	800
SNTCPNTE	004	048	SNTMINSZ	004	024	SNTRNGCT	004	028
SNTCPNTL	004	05C	SNTMPENP	001	001	SNTRNGEN	001	005
SNTCPUSE	001	040	SNTMQNTF	001	004	SNTRNGER	001	003
SNTDESCT	004	02C	SNTMSAVD	001	002	SNTRNGEW	001	001
SNTENPAG	004	054	SNTMSS	001	010	SNTRNGFG	001	803
SNTENVCT	004	030	SNTMSSA	004	810	SNTRNGR2	001	007
SNTENVFG	001	012	SNTMSSNM	008	800	SNTRNGSC	001	006
SNTEXCL	001	001	SNTMSTAT	001	80B	SNTRNGSN	001	004
SNTFLAGS	004	010	SNTNAME	008	008	SNTRNGSR	001	002
SNTFWDPT	004	000	SNTNASA	001	C04	SNTRNGSW	001	000
SNTIMG	001	004	SNTNDAT	001	004	SNTRSM0	008	638
SNTKEYCT	004	034	SNTNDTCT	004	03C	SNTRSNOF	003	800
SNTLGSEG	016	C00	SNTNLS	001	008	SNTRSTD	001	080
SNTLODCT	004	058	SNTNTSZL	001	010	SNTSDFBK	004	01C
SNTLOGCT	002	04C	SNTNTSZM	001	020	SNTSEG	001	001
SNTLPENP	001	001	SNTPENDP	001	001	SNTSHRPT	004	044
SNTLQNTF	001	004	SNTPRBEG	001	042	SNTSTAFG	001	011
SNTLSS	001	020	SNTPRDEF	001	080	SNTSTLPT	004	018

Name	Len	Val/Disp
SNTSTPAG	004	050
SNTSTRCT	004	038
SNTSYS	001	002
SNTTYPFG	001	010
SNTTYPF2	001	013
SNTUSREX	002	016
SNTUSRSH	002	014
SNTVMGRP	001	040
SNTXAMD	001	002
SNT370MD	001	001

HCPSOTBK— SPOOL OPTIONS TABLE ENTRY BLOCK

DSECT NAME: SOTBK

DESCRIPTIVE NAME: SPOOL OPTIONS TABLE ENTRY BLOCK

FUNCTION: COMMUNICATION BLOCK BETWEEN SPOOLING COM- MAND PARSER / PROCESSOR ROUTINES AND PARSE TABLE SCANNER ROUTINES. THIS BLOCK MAPS ONE PARSE TABLE ENTRY FOR THE SELECTED SPOOLING COMMAND OPTION.

LOCATED BY:

GENERAL REGISTER 2 IN THE FOLLOWING ENTRY POINTS:
HCPCSPSP
HCPCSLOS
HCPSCSDT
HCPCSCOT

CREATED BY:

HCPCSPSP - SPOOL COMMAND PARSER / PROCESSOR
HCPCSLOS - CLOSE COMMAND PARSER / PROCESSOR

DELETED BY:

HCPCSPSP - SPOOL COMMAND PARSER / PROCESSOR
HCPCSLOS - CLOSE COMMAND PARSER / PROCESSOR

SOTBK - SPOOL OPTIONS TABLE ENTRY BLOCK

REDEFINITION - DEVICE TABLE ENTRY

disp	name	length	description
000	SOTMINL	001	MINIMUM LENGTH OF ARGUMENT
001	SOTMAXL	001	MAXIMUM LENGTH OF ARGUMENT
002	SOTECMDS	001	ELIGIBLE COMMANDS FOR ARG

BITS DEFINED IN SOTECMDS (AT HEX DISPLACEMENT: 2)

80	SOTSPOOL	SPOOL COMMAND ELIGIBLE
40	SOTCLCMD	CLOSE COMMAND ELIGIBLE
20	SOTSPTAP	SPTAPE COMMAND ELIGIBLE
10	SOTTRAN	TRANSFER COMMAND ELIGIBLE
04	SOTACTV	VALID FOR ACTIVE FILE
08	SOTCHAN	CHANGE COMMAND ELIGIBLE

003	SOTEDEVS	001	ELIGIBLE DEVICES FOR ARGUMENT (TYPRDR, TYPPUN, TYPPRT)
004	SOTOPON	001	SET OPTION ON

BITS DEFINED IN SOTOPON (AT HEX DISPLACEMENT: 4)

80	SOTHOLD	HOLD OR NOHOLD OPTION
40	SOTKEEP	KEEP OR NOKEEP OPTION
20	SOTMSG	MSG OR NOMSG OPTION
10	SOTCONT	CONT OR NOCONT OPTION
08	SOTEOF	EOF OR NOEOF OPTION NOTE: IT ALSO USED FOR


```
                              SYS OR NOSYS OPTION
          04     SOTNAME      NAME OR NONAME OPTION
          02     SOTTERM      TERM OR NOTERM OPTION
          01     SOTSTART     START OR STOP OPTION

005    SOTOPOFF    001        SET OPTION ON

          BITS DEFINED FOR SOTOPOFF BY HCPSOTBK SOTOPON

006    SOTOPT      001        OPTIONS TO SET ON

          BITS DEFINED IN SOTOPT   (AT HEX DISPLACEMENT: 6)

          80     SOTCLOSE     CLOSE OPTION
          40     SOTPURGE     PURGE OPTION
          20     SOTLEAVE     LEAVE OPTION
          10     SOTREWND     REWIND OPTION
          08     SOTRUN       RUN OPTION
          04     SOTUSERH     USERHOLD OPTION
          02     SOTSYSH      SYSHOLD OPTION
          01     SOTALL       ALL OPTION

007    SOTRETCD    001        RETURN CODE FOR THIS ARGUMNT
008    SOTARG      001        ARGUMENT STARTS HERE

                      EQUATES

          08     SOTBSIZE     SIZE OF SOTBK IN BYTES
          01     SOTSIZE      SIZE OF SOTBK IN DBLWORDS


           REDEFINITION - DEVICE TABLE ENTRY

004    SOTDCLAS    001        DEVICE CLASS
005    SOTDTYP     001        DEVICE TYPE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
SOTACTV	001	004	SOTPURGE	001	040
SOTALL	001	001	SOTRETCD	001	007
SOTARG	001	008	SOTREWND	001	010
SOTBK	001	000	SOTRUN	001	008
SOTBSIZE	001	008	SOTSIZE	001	001
SOTCHAN	001	008	SOTSPOOL	001	080
SOTCLCMD	001	040	SOTSPTAP	001	020
SOTCLOSE	001	080	SOTSTART	001	001
SOTCONT	001	010	SOTSYSH	001	002
SOTDCLAS	001	004	SOTTERM	001	002
SOTDTYP	001	005	SOTTRAN	001	010
SOTECMDS	001	002	SOTUSERH	001	004
SOTEDEVS	001	003			
SOTEOF	001	008			
SOTHOLD	001	080			
SOTKEEP	001	040			
SOTLEAVE	001	020			
SOTMAXL	001	001			
SOTMINL	001	000			
SOTMSG	001	020			
SOTNAME	001	004			
SOTOPOFF	001	005			
SOTOPON	001	004			
SOTOPT	001	006			

HCPSPABK— SPOOL FILE ALLOCATION BLOCK

DSECT NAME: SPABK

DESCRIPTIVE NAME: SPOOL FILE ALLOCATION BLOCK

FUNCTION: TO CONTAIN A RECORD OF SYSTEM RESOURCES ALLOCATED TO A SPOOL FILE WHILE IT IS ACTIVE; EITHER BEING CREATED OR PROCESSED ON THE DESTINATION DEVICE. THESE RESOUCES INCLUDE ASA ALLOCATION AND RESERVED CP VIRTUAL PAGES.

LOCATED BY:

RSPSPA - FOR A SPOOL FILE ACTIVE ON A REAL SPOOLING DEVICE
VSPSPA - FOR A SPOOL FILE ACTIVE ON A VIRTUAL SPOOLING DEVICE

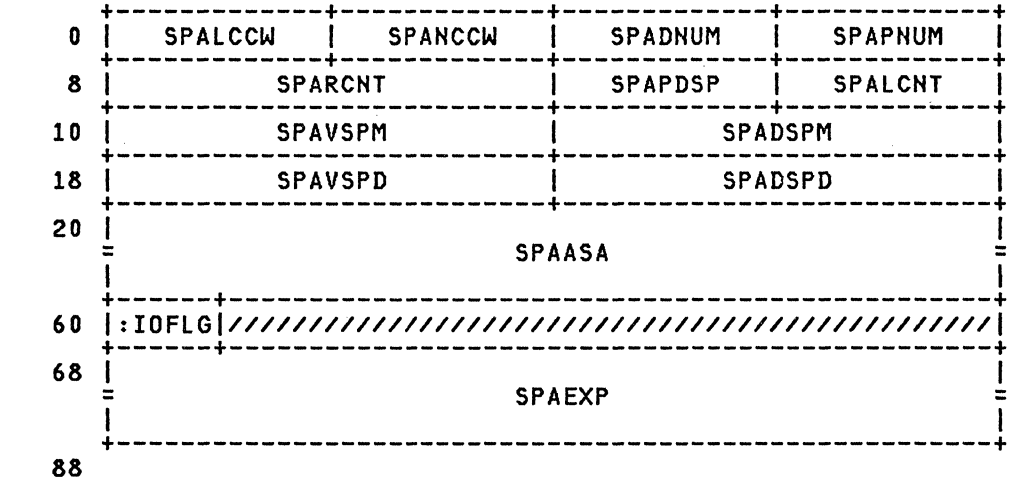
CREATED BY:

HCPSFPON - WHEN OPENING A NEW SPOOL FILE FOR CREATION
HCPSFPOR - WHEN OPENING A NEW SPOOL FILE FOR READING
HCPSFPOW - WHEN OPENING A NEW SPOOL FILE FOR WRITING

DELETED BY:

HCPSFRCL - WHEN PROCESSING IS COMPLETE FOR A SPOOL FILE ACTIVE ON A REAL SPOOL DEVICE, AND THE FILE IS TO BE PURGED
HCPSFPCN - WHEN A NEW OR UPDATED SPOOL FILE IS CLOSED
HCPSFPCR - WHEN A SPOOL FILE OPEN FOR READING IS CLOSED
HCPSFPON - WHEN AN ERROR OPENING A NEW SPOOL FILE IS ENCOUNTERED
HCPSFPOR - WHEN AN ERROR OPENING A SPOOL FILE FOR READING IS ENCOUNTERED
HCPSFPOW - WHEN AN ERROR OPENING A SPOOL FILE FOR WRITING IS ENCOUNTERED

SPABK - SPOOL FILE ALLOCATION BLOCK



REDEFINITION - REDEFINITION OF EXP BUFFER ASSIGNMENT


```
78 |                          SPAEXPB                          |
   |                                                           |
   +-----------------------------------------------------------+
88
```

REDEFINITION - REDEFINITION OF EXP BUFFER SLOT

```
   +---------------------------+---------------------------+
68 |          SPAEXPV          |          SPAEXPF          |
   +---------------------------+---------------------------+
70
```

disp	name	length	description
000	SPALCCW	002	DISPLACEMENT TO WHERE LAST CCW WAS PUT
002	SPANCCW	002	DISPLACEMENT OF WHERE TO PUT NEXT CCW
004	SPADNUM	002	RELATIVE SPDBK NUMBER BEING PROCESSED
006	SPAPNUM	002	RELATIVE PAGE NUMBER OF CURRENT SPMBK
008	SPARCNT	004	NUMBER OF LOGICAL RECS PROCESSED SO FAR
00C	SPAPDSP	002	WHERE TO GET(PUT) NEXT 16 ASA'S
00E	SPALCNT	002	NO. LOGICAL RECS. LEFT THIS PAGE
010	SPAVSPM	004	VIRTUAL ADDRESS OF THE SPMBK
014	SPADSPM	004	DASD ADDRESS OF THE SPMBK
018	SPAVSPD	004	VIRTUAL ADDRESS OF THE SPDBK
01C	SPADSPD	004	DASD ADDRESS OF THE SPDBK
020	SPAASA	004	16 ASA'S OF SPDBK'S (SPOOL FILE DATA)
			EQUATES
	40	SPAMAPSZ	SIZE OF ASA MAP AREA
060	SPAIOFLG	001	IO PENDING FLAG
			BITS DEFINED IN SPAIOFLG (AT HEX DISPLACEMENT: 60)
	80	SPAIOACT	IO ACTIVE - CANNOT START ANOTHER BUF
	40	SPAREADY	NEXT BUFFER READY TO GO
061		7X	RESERVED FOR FUTURE IBM USE
068	SPAEXP	008	3800 EXPANSION BUFFERS FOR LONG DATA
			EQUATES
	11	SPASIZE	BLOCK SIZE IN DOUBLEWORDS
			REDEFINITION - REDEFINITION OF EXP BUFFER ASSIGNMENT
068	SPAEXA	008	TWO EXPANSION SLOTS FOR BUFFER A
078	SPAEXB	008	TWO EXPANSION SLOTS FOR BUFFER B
			REDEFINITION - REDEFINITION OF EXP BUFFER SLOT
068	SPAEXPVF	008	VIRTUAL PAGE / REAL FRAME PAIR
068	SPAEXPV	004	VIRTUAL PAGE ADDRESS, MUST BE FIRST
06C	SPAEXPF	004	REAL FRAME ADDRESS, MUST FOLLOW VPAGE
			EQUATES
	08	SPALSLOT	LENGTH OF A SLOT FOR CLEAR
			MORE EQUATES
	010	SPAXBOFF	OFFSET TO B SECTION OF SPAEXP

CROSS REFERENCE

Name	Len	Val/Disp
SPAASA	004	020
SPABK	001	000
SPADNUM	002	004
SPADSPD	004	01C
SPADSPM	004	014
SPAEXP	008	068
SPAEXPA	008	068
SPAEXPB	008	078
SPAEXPF	004	06C
SPAEXPV	004	068
SPAEXPVF	008	068
SPAIOACT	001	080
SPAIOFLG	001	060
SPALCCW	002	000
SPALCNT	002	00E
SPALSLOT	001	008
SPAMAPSZ	001	040
SPANCCW	002	002
SPAPDSP	002	00C
SPAPNUM	002	006
SPARCNT	004	008
SPAREADY	001	040
SPASIZE	001	011
SPAVSPD	004	018
SPAVSPM	004	010
SPAXBOFF	008	010

HCPSPDBK— SPOOL FILE DATA PAGE BLOCK

DSECT NAME: SPDBK

DESCRIPTIVE NAME: SPOOL FILE DATA PAGE BLOCK

FUNCTION: CONTAINS THE ACTUAL SPOOL FILE DATA, AND THE ASSOCIATED CCW'S TO PROCESS THAT INFORMATION.

LOCATED BY:

(1) LOCATED IN SYSTEM VIRTUAL STORAGE BY:
SPAVSPD - ANCHOR FOR THE CURRENT SPDBK
(2) LOCATED ON DASD BY:
SPADSPD - THE ASA (DASD ADDRESS) OF THE SPDBK CURRENTLY IN VIRTUAL STORAGE.
SPAASA - 1 TO 16 ASA'S SPECIFYING THE DASD ADDRESSES OF THE CURRENT SET OF SPDBK'S. THIS LIST IS COPIED FROM THE SPMBK.
SPMASA - MASTER LIST OF ALL THE SPDBK'S NEEDED TO COMPRISE A SPOOL FILE.

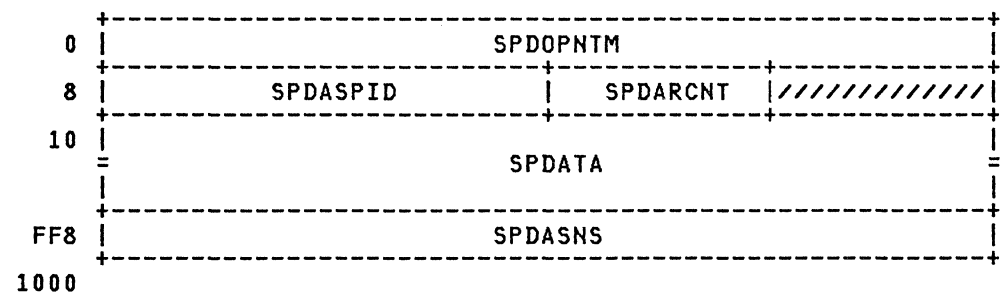
CREATED BY:

(1) CREATED IN SYSTEM VIRTUAL STORAGE BY:
HCPSFROP - WHEN A SPOOL FILE IS OPENED AND SENT TO A REAL OUTPUT DEVICE.
HCPSFPON - WHEN A SPOOL FILE IS OPENED FOR CREATION.
HCPSFVOP - WHEN A SPOOL FILE IS OPENED FOR READING BY A VIRTUAL READER.
(2) CREATED ON DASD BY:
HCPVSPPW - WRITES THE SPDBKS TO DASD (FOR ALL TYPES OF SPOOL FILES).
HCPRSPEX - REWRITES THE FIRST SPDBK WITH TAG
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

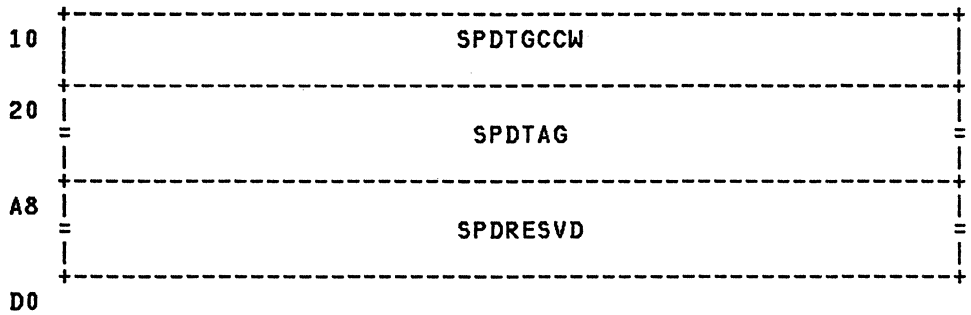
DELETED BY:

(1) DELETED IN SYSTEM VIRTUAL STORAGE BY:
HCPSFRCL - WHEN A SPOOL FILE CREATED ON A REAL CARD READER IS CLOSED.
HCPSFVCL - WHEN A SPOOL FILE CREATED ON A VIRTUAL PRINTER OR PUNCH IS CLOSED.
HCPSFPON - WHEN AN ERROR OCCURS OPENING A SPOOL FILE FOR CREATION.
(2) DELETED ON DASD BY:
HCPRSPIO - WHEN AN SPDBK CREATED ON A REAL CARD READER NEVER GETS DATA.
HCPSDFCL - WHEN THE LAST SPDBK ALLOCATED FOR A SYSTEM DATA FILE NEVER GETS DATA.
HCPSFRDL - WHENEVER A SPOOL FILE IS DELETED.

SPDBK - SPOOL FILE DATA PAGE BLOCK



REDEFINITION - TAG DATA FOR THE 1ST SPDBK



disp	name	length	description
000	SPDOPNTM	008	TOD (FULL) WHEN FILE WAS OPENED
008	SPDASPID	004	SYSTEM SPOOLID FOR THIS FILE
00C	SPDARCNT	002	NUMBER OF LOGICAL RECORDS IN THIS PAGE
00E		1H	RESERVED FOR FUTURE IBM USE

EQUATES

10	SPDHDRSZ	SIZE OF SPDBK HEADER

010	SPDATA	008	CCW'S AND ASSOCIATED DATA
FF8	SPDASNS	008	ENDING SENSE CCW FOR THE PAGE

EQUATES

00	SPDASIZE	BLOCK SIZE IN DOUBLEWORDS

THE FOLLOWING REDEFINITION IS FOR THE TAG RECORD *

010	SPDTGCCW	008	TAG CCWS
020	SPDTAG	001	TAG TEXT

EQUATES

11	SPDTGSIZ	TAG RECORD SIZE IN DW'S

0A8	SPDRESVD	008	RESERVED FIELD TO INSURE THE DATA IN THE 1ST SPDBK DOES NOT EXCEED WHAT WILL FIT IN THE FIRST VM/SP SPLINK, IN CASE THE TRANSLATION IS MADE

EQUATES

C0	SPDSKIP	OFFSET TO 1ST DATA CCW IN 1ST DATA PG

0D0	SPDP1D	008	ADDRESS OF 1ST DATA CCW IN 1ST DATA PG

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SPDARCNT	002	00C	SPDASIZE	001	200	SPDASNS	008	FF8

Name	Len	Val/Disp
SPDASPID	004	008
SPDATA	008	010
SPDBK	001	000
SPDHDRSZ	001	010
SPDOPNTM	008	000
SPDP1D	008	0D0
SPDRESVD	008	0A8
SPDSKIP	001	0C0
SPDTAG	001	020
SPDTGCCW	008	010
SPDTGSIZ	001	011

HCPSPFBK— SPOOL FILE DESCRIPTOR (OR CONTROL) BLOCK

DSECT NAME: SPFBK

DESCRIPTIVE NAME: SPOOL FILE DESCRIPTOR (OR CONTROL) BLOCK

FUNCTION: TO CONTAIN SPOOL FILE CHARACTERISTICS, SUCH AS CLASS, DISTRIBUTION CODE, SPOOLID, ETC.

LOCATED BY:

(1) ROUTINES:
- HCPSCSGN - WILL RETURN THE ADDRESS OF THE NEXT SPFBK ON THE QUEUE(S) SPECIFIED IN THE CALLERS R1.
- HCPSCSNM - WILL RETURN THE ADDRESS OF THE NEXT SPFBK WITH THE SPECIFIED FILENAME/FILETYPE ON THE QUEUE(S) SPECIFIED BY THE CALLERS R1.
- HCPSCSPF - WILL RETURN THE ADDRESS OF THE SPFBK FOR THE SPOOLID SPECIFIED IN THE CALLERS R1.

(2) FIELDS:
- SPFPNT - POINTS TO THE NEXT SPFBK ON THE QUEUE. IF SPFPNT IS ZERO, IT IS THE LAST FILE.
- SYSOUTQ - POINTS TO THE FIRST SPFBK ON THE OUTPUT QUEUE. THE FIRST WORD IN THE SPFBK POINTS TO THE NEXT SPFBK. IF THAT FIELD IS ZERO, IT IS THE LAST FILE ON THE OUTPUT QUEUE. THE OUTPUT QUEUE CONSISTS OF PRINTER AND PUNCH FILES.
- SYSINQ - POINTS TO THE FIRST SPFBK ON THE INPUT QUEUE. THE FIRST WORD IN THE SPFBK POINTS TO THE NEXT SPFBK. IF THAT FIELD IS ZERO, IT IS THE LAST FILE ON THE INPUT QUEUE. THE INPUT QUEUE CONSISTS OF READER FILES.
- SYSDATAQ - POINTS TO THE FIRST SPFBK ON THE

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

CREATED BY:

- HCPDMQSD - WHEN A CP ABEND DUMP READER FILE IS OPENED
- HCPSDFON - WHEN A NEW SYSTEM DATA FILE IS CREATED
- HCPSFROP - WHEN A SPOOL FILE IS CREATED BY A REAL READER
- HCPSFVOP - WHEN A SPOOL FILE IS CREATED ON A VIRTUAL PRINTER OR CARD PUNCH OR A CP ABEND DUMP FILE IS OPEN
- HCPSPSLD - WHEN CREATING A SPOOL FILE FROM A TAPE VIA THE SPTAPE COMMAND
- HCPVDUMP - WHEN A VMDUMP READER SPOOL FILE IS OPENED
- HCPWRSST - WHEN THE SYSTEM IS WARM STARTED, HCPWRS RECREATES THE SPFBK'S FOR ALL SPOOL FILES THAT EXISTED WHEN THE SYSTEM WAS BROUGHT DOWN

DELETED BY:

- HCPSFPON - IF THERE IS NO DASD OR SYSTEM VIRTU SPACE WHEN A SPOOL FILE IS BEING CREATED
- HCPSFRDL - WHEN A SPOOL FILE IS TO BE DELETED FROM THE SYSTEM
- HCPSPDMP - WHEN A SPOOL FILE IS DUMPED TO TAPE VIA THE SPTAPE COMMAND AND THE PURGE OPTION WAS SPECIFIED
- HCPWRSST - WHEN THE SYSTEM IS WARM STARTED, HCPWRS CHECKS TO SEE IF A SPOOL FILE CONTAINED ANY DATA. IF IT DIDN'T, IT DELETES THE SPFBK

SPFBK - SPOOL FILE CONTROL BLOCK

```
   +-----------------------------+-----------------------------+
 0 |           SPFFPNT           |           SPFBPNT           |
   +-----------------------------+-----------------------------+
 8 |           SPFPNT            |           SPFSYSID          |
   +-------+-------+-------+-------+-------+-------+-------+-------+
10 |:STAT  |:FLAG  |:TYPE  |:QUEUE|:OVER  |:SYSTY|:PRTFL|:SPCL  |
   +-------+-------+-------+-------+-------+-------+-------+-------+
18 |:COPY  |:STCPY|:PGCPY|:MODNO|:FLSHC|:DVTYP|:PGLEN|//////|
   +-------+-------+-------+-------+-------+-------+-------+-------+
20 |   SPFSPID    |    SPFDEV    |   SPFPCNT    |   SPFLRECL   |
   +--------------+--------------+--------------+--------------+
28 |           SPFRCNT           |           SPFSTART          |
   +-----------------------------+-----------------------------+
30 |                          SPFCLKOP                          |
   +-----------------------------+-----------------------------+
38 |           SPFCLKCL          |           SPFFLASH          |
   +-----------------------------+-----------------------------+
40 |                          SPFUSER                           |
   +-----------------------------------------------------------+
48 |                          SPFDIST                           |
   +-----------------------------------------------------------+
50 |                          SPFORIG                           |
   +-----------------------------------------------------------+
58 |                          SPFFINAM                          |
   +-----------------------------------------------------------+
60 |                          SPFFITYP                          |
   +-----------------------------------------------------------+
68 |                          SPFUFORM                          |
   +-----------------------------------------------------------+
70 |                          SPFOFORM                          |
   +-----------------------------+-----------------------------+
78 |           SPFCHAR0          |           SPFCHAR1          |
   +-----------------------------+-----------------------------+
80 |           SPFCHAR2          |           SPFCHAR3          |
   +-----------------------------+-----------------------------+
88 |           SPFFCB            |           SPFCMOD           |
   +-----------------------------+-----------------------------+
90 |///////////////////////////////////////////////////////////|
   +-----------------------------+-----------------------------+
98 |/////////////////////////////|           SPFAUDIT          |
   +-----------------------------+-----------------------------+
A0 |///////////////////////////////////////////////////////////|
   +-----------------------------+-----------------------------+
A8 |           SPFSPABK          |/////////////////////////////|
   +-----------------------------+-----------------------------+
B0
```

REDEFINITION - REDEFINITION OF SPFSTART

```
                                 +--------------+-------+-------+
28 ...                        2C |    SPFCYL    |///////|///////|
                                 +--------------+-------+-------+
30
```

disp	name	length	description
000	SPFFPNT	004	POINTER TO THE NEXT SPFBK ON SYSTEM QUEUE
004	SPFBPNT	004	POINTER TO PREVIOUS SPFBK ON SYSTEM QUEUE
008	SPFPNT	004	POINTER TO NEXT SPFBK ON USER QUEUE
00C	SPFSYSID	004	SYSTEM SPOOL FILE ID NUMBER (UNIQUE)
010	SPFSTAT	001	SPOOL FILE STATUS FLAGS

BITS DEFINED IN SPFSTAT (AT HEX DISPLACEMENT: 10)

80 SPFINUSE CLOSED FILE IS IN USE.

40	SPFOPEN	FILE IS OPEN (BEING CREATED)
20	SPFUHOLD	FILE HAS USER HOLD
10	SPFSHOLD	FILE HAS SYSTEM HOLD
08	SPFKEEP	FILE HAS 'KEEP' OPTION SET
04	SPFMSG	FILE HAS 'MSG' OPTION SET
02	SPFERRPU	PURGE FILE BLOCKS BUT NOT DASD
01	SPFNOREL	DON'T RELEASE SPFBK IF NO USER SPIDS SPTAPE WILL RE-USE THIS SPFBK

011 SPFFLAG 001 SPOOL FILE ACTION FLAGS

BITS DEFINED IN SPFFLAG (AT HEX DISPLACEMENT: 11)

80	SPFPURGE	FILE IS TO BE PURGED
40	SPFEOF	LAST RECORD PROCESSED (USUALLY RDR FILES)
20	SPFBKWD	BACKSPACE BASED UPON 'PCNT'
10	SPFFWD	FWD SPACE BASED UPON 'PCNT'
08	SPFSEEN	FILE HAS PREVIOUSLY BEEN SEEN BY DIAGNOSE X'14'
04	SPFTAGM	'TAG' MODIFIED WHILE FILE 'OPEN'
02	SPFBKEOF	BACKSPACE REQUEST FROM END-OF-FILE
01	SPFDPOS	FILE IS POSITIONED AT A LINE WITH DATA ON IT - LAST CCW WAS 'WRITE NO SPACE'. USED TO PREVENT TRACE OUTPUT OVERLAY

012 SPFTYPE 001 SPOOL FILE ORIGINATING DEVICE TYPE

BITS DEFINED IN SPFTYPE (AT HEX DISPLACEMENT: 12)

80	SPFORDR	CAME FROM REAL READER
40	SPFOPUN	CAME FROM VIRTUAL PUNCH
22	SPFOPRT	CAME FROM VIRTUAL PRINTER
23	SPFO383	CAME FROM VIRTUAL 3800 MODEL 3 PRINTER
20	SPFOCON	CAME FROM VIRTUAL CONSOLE
10	SPFOSYS	SYSTEM CREATED SPOOL FILE

013 SPFQUEUE 001 SPOOL FILE QUEUE LOCATION

BITS DEFINED IN SPFQUEUE (AT HEX DISPLACEMENT: 13)

80	SPFRDRQ	FILE IS ON THE RDR QUEUE
40	SPFPUNQ	FILE IS ON THE PUNCH QUEUE
20	SPFPRTQ	FILE IS ON THE PRINTER QUEUE
10	SPFNSSQ	FILE IS ON THE NSS/DCSS QUEUE
08	SPFIMGQ	FILE IS ON THE IMAGE LIBRARY QUEUE
04	SPFTRFQ	FILE IS ON THE SYSTEM TRACE FILE QUEUE
02	SPFUCRQ	FILE IS ON THE UCR QUEUE
01	SPFNLSQ	FILE IS ON THE NLS QUEUE
1F	SPFDATA	SDF

014 SPFOVER 001 OVERRIDE FLAGS USED AT 'CLOSE'

BITS DEFINED IN SPFOVER (AT HEX DISPLACEMENT: 14)

80	SPFORDQ	CLOSE FILE 'TO RDR' QUEUE
40	SPFOPUQ	CLOSE FILE 'TO PUN' QUEUE
20	SPFOPRQ	CLOSE FILE 'TO PRT' QUEUE
08	SPFSETHO	KEEP RDR FILE IN USERHOLD
04	SPFNOPUR	DO NOT PURGE RDR FILE WHEN CLOSED
02	SPFIGNRK	IGNORE KEEP ON RDR WHEN CLOSED
01	SPFIGNRH	IGNORE HOLD ON RDR WHEN CLOSED

015 SPFSYSTY 001 SYSTEM DATA FILE FLAG

BITS DEFINED IN SPFSYSTY (AT HEX DISPLACEMENT: 15)

80	SPFCPDMP	FILE IS A CP ABEND DUMP FILE
40	SPFVMDMP	FILE IS A VIRTUAL MACHINE DUMP (VMDUMP)
20	SPFPPEND	FILE IS MARKED FOR PENDING PURGE
10	SPFVOLAF	VOLUME AFFINITY - FILE SHOULD BE WRITTEN ON ONE VOLUME IF POSSIBLE
04	SPFNORTN	DUMP FILE CREATED WITH NORETURN OPTION

```
         02     SPFSFTDP     FILE IS A SOFT ABEND TYPE FILE

016    SPFPRTFL    001       FLAGS FOR ADVANCED FUNCTION PRINTERS

         BITS DEFINED IN SPFPRTFL (AT HEX DISPLACEMENT: 16)

         80     SPFBEG       3800 LOAD CCWS APPEAR AT BEGINNING
         40     SPFANY       3800 LOAD CCWS APPEAR THROUGHOUT FILE
         20     SPFLDCHR     LOAD WCGM OR GRAPHMOD CCWS APPEAR
         08     SPFFLALL     FLASH ALL COPIES OF THE FILE

017    SPFSPCL     001       SPOOL FILE CLASS
018    SPFCOPY     001       FILE COPY COUNT
019    SPFSTCPY    001       NUMBER OF COPIES AT PRINT START
01A    SPFPGCPY    001       PAGE COPY COUNT (USED ONLY FOR 3800)
01B    SPFMODNO    001       COPY MOD CHARACTER SET NUMBER (0-3)
01C    SPFFLSHC    001       FLASH COUNT
01D    SPFDVTYP    001       DEVICE TYPE OF ORIGINATING DEVICE

         BITS DEFINED FOR SPFDVTYP BY HCPDVTYP DEVTYPE

01E    SPFPGLEN    001       PAPER LENGTH
01F                1X        RESERVED FOR FUTURE IBM USE
020    SPFSPID     002       USER SPOOL FILE ID NUMBER (NOT UNIQUE)
022    SPFDEV      002       REAL OR VIRTUAL NUMBER
                             OF DEVICE PROCESSING FILE
024    SPFPCNT     002       PAGE CNT FOR FWD OR BKWD SPACE
026    SPFLRECL    002       LENGTH OF SPOOL FILE RECORDS
028    SPFRCNT     004       TOTAL NUMBER OF LOGICAL RECORDS
02C    SPFSTART    004       ASA OF FIRST SPMBK FOR THE FILE
030    SPFCLKOP    008       TOD (FULL) AT 'OPEN' TIME
038    SPFCLKCL    004       TOD HIGH ORDER WORD AT 'CLOSE' TIME

                       EQUATES

         3C     SPFCFLDS     START OF CHARACTER FIELDS

03C    SPFFLASH    004       FORMS OVERLAY (FLASH) NAME
040    SPFUSER     008       USER IDENTIFICATION OF FILE OWNER
048    SPFDIST     008       DISTRIBUTION CODE
050    SPFORIG     008       USER IDENTIFICATION
                             OF FILE ORIGINATOR
058    SPFFINAM    008       FILE NAME
060    SPFFITYP    008       FILE TYPE
068    SPFUFORM    008       USER FORM NAME
070    SPFOFORM    008       OPERATOR FORM NUMBER
078    SPFCHARS    016       LENGTH ATTRIBUTE TO CLEAR CHAR SETS
078    SPFCHAR0    004       CHARACTER SET NAME - FIRST
07C    SPFCHAR1    004       CHARACTER SET NAME - SECOND
080    SPFCHAR2    004       CHARACTER SET NAME - THIRD
084    SPFCHAR3    004       CHARACTER SET NAME - FOURTH
088    SPFFCB      004       FCB NAME OR LINES/INCH
08C    SPFCMOD     004       COPY MODIFICATION MODULE NAME
090                1D        RESERVED FOR IBM USE

                       EQUATES

         6C     SPFBLANK     LENGTH OF FIELDS TO BLANK

098                1F        RESERVED FOR IBM USE
09C    SPFAUDIT    004       RESERVED FOR IBM USE
0A0                1D        RESERVED FOR IBM USE

                       EQUATES

         A8     SPFEND       END OF SPFBK - SIZE IN BYTES

0A8    SPFSPABK    004       ADDRESS OF SPABK (NOT SAVED IN SPMBK)
0AC                1F        RESERVED FOR IBM USE

                       EQUATES

         16     SPFDSIZE     DOUBLE WORD SIZE FOR GETST
```

REDEFINITION - REDEFINITION OF SPFSTART

```
02C   SPFCYL      002       CYLINDER OF 1ST SFPAGMAP FOR DUMP
02E               XL1       PAGE OF 1ST SFPAGMAP FOR DUMP
02F               XL1       VOLUME OF 1ST SFPAGMAP FOR DUMP
```

MORE EQUATES

```
      FFF     SPFSIZCK
      015     SPFSIZE     SIZE IN DOUBLE WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SPFANY	001	040	SPFNLSQ	001	001	SPFUCRQ	001	002
SPFAUDIT	004	09C	SPFNOPUR	001	004	SPFUFORM	008	068
SPFBEG	001	080	SPFNOREL	001	001	SPFUHOLD	001	020
SPFBK	001	000	SPFNORTN	001	004	SPFUSER	008	040
SPFBKEOF	001	002	SPFNSSQ	001	010	SPFVMDMP	001	040
SPFBKWD	001	020	SPFOCON	001	020	SPFVOLAF	001	010
SPFBLANK	001	06C	SPFOFORM	008	070			
SPFBPNT	004	004	SPFOPEN	001	040			
SPFCFLDS	001	03C	SPFOPRQ	001	020			
SPFCHARS	016	078	SPFOPRT	001	022			
SPFCHAR0	004	078	SPFOPUN	001	040			
SPFCHAR1	004	07C	SPFOPUQ	001	040			
SPFCHAR2	004	080	SPFORDQ	001	080			
SPFCHAR3	004	084	SPFORDR	001	080			
SPFCLKCL	004	038	SPFORIG	008	050			
SPFCLKOP	008	030	SPFOSYS	001	010			
SPFCMOD	004	08C	SPFOVER	001	014			
SPFCOPY	001	018	SPFO383	001	023			
SPFCPDMP	001	080	SPFPCNT	002	024			
SPFCYL	002	02C	SPFPGCPY	001	01A			
SPFDATA	001	01F	SPFPGLEN	001	01E			
SPFDEV	002	022	SPFPNT	004	008			
SPFDIST	008	048	SPFPPEND	001	020			
SPFDPOS	001	001	SPFPRTFL	001	016			
SPFDSIZE	001	016	SPFPRTQ	001	020			
SPFDVTYP	001	01D	SPFPUNQ	001	040			
SPFEND	001	0A8	SPFPURGE	001	080			
SPFEOF	001	040	SPFQUEUE	001	013			
SPFERRPU	001	002	SPFRCNT	004	028			
SPFFCB	004	088	SPFRDRQ	001	080			
SPFFINAM	008	058	SPFSEEN	001	008			
SPFFITYP	008	060	SPFSETHO	001	008			
SPFFLAG	001	011	SPFSFTDP	001	002			
SPFFLALL	001	008	SPFSHOLD	001	010			
SPFFLASH	004	03C	SPFSIZCK	001	FFF			
SPFFLSHC	001	01C	SPFSIZE	001	015			
SPFFPNT	004	000	SPFSPABK	004	0A8			
SPFFWD	001	010	SPFSPCL	001	017			
SPFIGNRH	001	001	SPFSPID	002	020			
SPFIGNRK	001	002	SPFSTART	004	02C			
SPFIMGQ	001	008	SPFSTAT	001	010			
SPFINUSE	001	080	SPFSTCPY	001	019			
SPFKEEP	001	008	SPFSYSID	004	00C			
SPFLDCHR	001	020	SPFSYSTY	001	015			
SPFLRECL	002	026	SPFTAGM	001	004			
SPFMODNO	001	01B	SPFTRFQ	001	004			
SPFMSG	001	004	SPFTYPE	001	012			

SPLINK— VM/SP 370 SPOOL FILE DATA BLOCK

DSECT NAME: SPLINK

DESCRIPTIVE NAME: VM/SP 370 SPOOL FILE DATA BLOCK

FUNCTION: THIS DSECT WHEN SPOOL FILES NEED TO BE TRANS- LATED TO VM/SP FORMAT. (IT IS ANALOGOUS TO THE VM/XA SPDBK.)

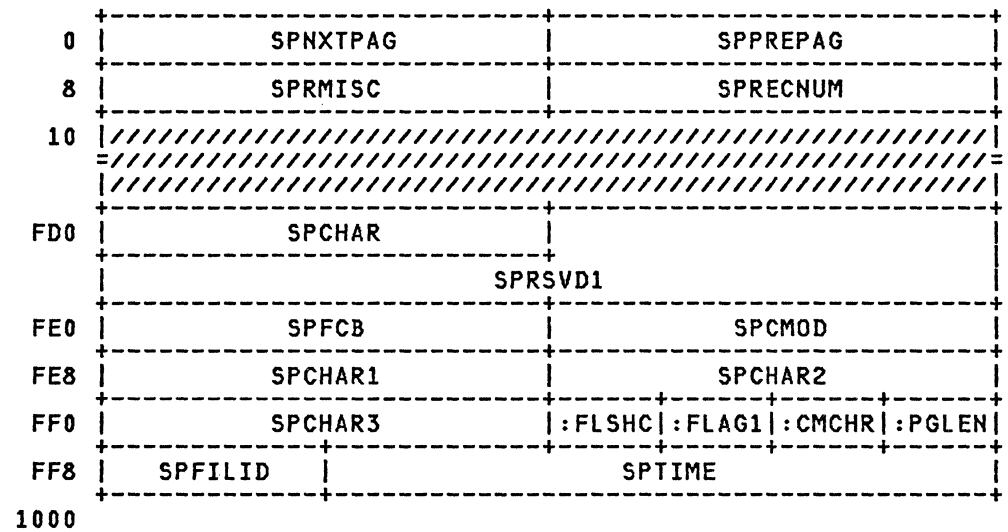
CREATED BY:

HCPSXSPL FOR DIAGNOSE X'14' AND SPTAPE COMMANDS.

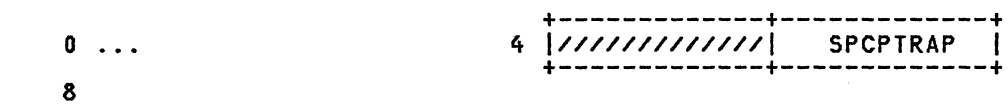
DELETED BY:

NOT APPLICABLE

SPLINK - VM/SP 370 SPOOL FILE DATA BLOCK



REDEFINITION - REDEFINITION OF PREVIOUS PAGE POINTER



disp	name	length	description
000	SPNXTPAG	004	DASD LOC. (DCHR) OF NEXT PAGE
004	SPPREPAG	004	DASD LOC. (DCHR) OF PREV PAGE
008	SPRMISC	004	USE VARIES ACCORDING TO CALLER
00C	SPRECNUM	004	NUMBER OF DATA RECORDS IN BUFFER
010	SPLKDATA	001	START OF SPLINK DATA AREA

EQUATES

10	SPSIZE		SIZE IN BYTES
010		1008F	AREA FOR CCW'S AND DATA
FD0	SPCHAR	004	3800 CHAR ARR TABLE 0 FOR FILE
FD4	SPRSVD1	012	RESERVED FOR FUTURE USE
FE0	SPFCB	004	3800 FCB FOR FILE
FE4	SPCMOD	004	3800 COPY MOD FOR FILE
FE8	SPCHAR1	004	3800 ARR TABLE 1 FOR FILE
FEC	SPCHAR2	004	3800 ARR TABLE 2 FOR FILE
FF0	SPCHAR3	004	3800 ARR TABLE 3 FOR FILE

```
FF4   SPFLSHC    001       S*1  3800 FLASH COUNT
FF5   SPFLAG1    001       S*2  3800 FLAG BYTE

        BITS DEFINED IN SPFLAG1  (AT HEX DISPLACEMENT: FF5)

        80    SPCOPYFG    MULT COPIES IN ONE TRANSMISSION

FF6   SPCMCHR    001       S*3  COPY MODIFICATION TRANSLATE NUM
FF7   SPPGLEN    001       S*4  PAPER LENGTH (1/2 - INCHES)
FF8   SPFILID    002       FILID USED FOR VERIFICATION
FFA   SPTIME     006       SFBTIME- USED FOR VERIFICATION

                    EQUATES

        30    SPENDSIZ    END OF BUFFER SIZE IN BYTES


         REDEFINITION - REDEFINITION OF PREVIOUS PAGE POINTER

004               1H
006   SPCPTRAP    002       CPTRAP SPANNED RECORD LENGTH

                    EQUATES

        88    SPTAGSZ     VM/SP 370 TAG RECORD LENGTH
        0C    SPTAG       OFFSET BEYOND SPDATA TO TAG DATA
```

CROSS REFERENCE

Name	Len	Val/Disp
SPCHAR	004	FD0
SPCHAR1	004	FE8
SPCHAR2	004	FEC
SPCHAR3	004	FF0
SPCMCHR	001	FF6
SPCMOD	004	FE4
SPCOPYFG	001	080
SPCPTRAP	002	006
SPENDSIZ	001	030
SPFCB	004	FE0
SPFILID	002	FF8
SPFLAG1	001	FF5
SPFLSHC	001	FF4
SPLINK	001	000
SPLKDATA	001	010
SPNXTPAG	004	000
SPPGLEN	001	FF7
SPPREPAG	004	004
SPRECNUM	004	00C
SPRMISC	004	008
SPRSVD1	012	FD4
SPSIZE	001	010
SPTAG	001	00C
SPTAGSZ	001	088
SPTIME	006	FFA

HCPSPMBK— SPOOL FILE MAP PAGE BLOCK

DSECT NAME: SPMBK

DESCRIPTIVE NAME: SPOOL FILE MAP PAGE BLOCK

FUNCTION: TO CONTAIN ASA'S FOR EVERY SPOOL FILE DATA PAGE (SPDBK) IN A SPOOL FILE. THE SPMBK ALSO CONTAINS A COPY OF THE SPFBK, SO THAT IT CAN BE RECREATED WHEN THE SYSTEM IS WARM STARTED. SPMBK'S ARE FILLED WITH ASA'S WHILE IN SYSTEM VIRTUAL STORAGE, AND ARE PERIODICALLY CHECK- POINTED TO DASD.

LOCATED BY:

(1) LOCATED IN SYSTEM VIRTUAL STORAGE BY:
- SPAVSPM - SPABK ANCHOR FOR THE CURRENT SPMBK IN A SYSTEM VIRTUAL PAGE.

(2) LOCATED ON DASD BY:
- SPADSPM - SPABK ASA FOR THE SPMBK CURRENTLY IN SYSTEM VIRTUAL STORAGE.
- SPFSTART - SPFBK ASA FOR THE FIRST SPMBK OF A SPOOL FILE. SPMNEXT CHAINS THE ASA'S OF SUBSEQUENT SPMBK'S, IF NECESSARY.
- SFNASA - SFNASA IS A TABLE OF ASA'S. EACH ASA IS FOR THE FIRST SPMBK OF A SPOOL FILE. THE TABLE IS USED BY HCPWRMST TO RECREATE THE FILES WHEN THE SYSTEM IS WARM STARTED.

CREATED BY:

(1) CREATED IN SYSTEM VIRTUAL STORAGE BY:
- HCPSFPON - ALLOCATES A PAGE OF SYSTEM VIRTUAL STORAGE FOR THE SPMBK WHEN A SPOOL FILE IS OPENED FOR CREATION.
- HCPSFROP - ALLOCATES A PAGE OF SYSTEM VIRTUAL STORAGE FOR THE SPMBK WHEN A SPOOL FILE IS PROCESSED ON A REAL

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

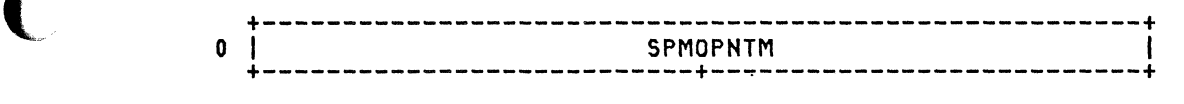
DELETED BY:

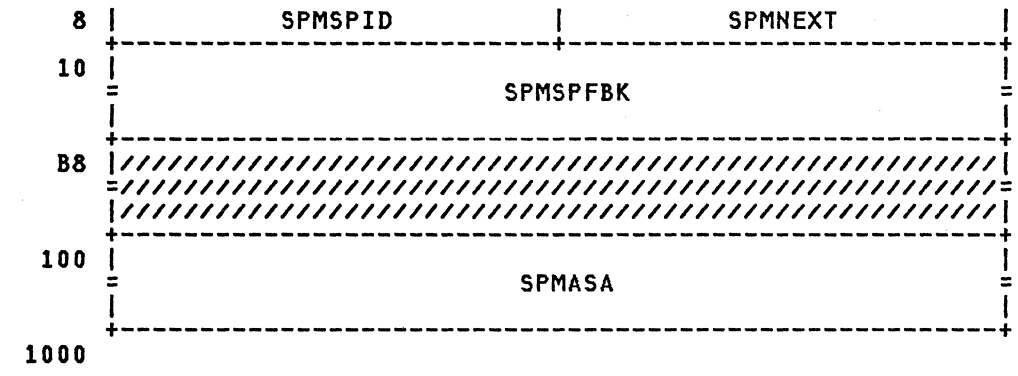
(1) DELETED IN SYSTEM VIRTUAL STORAGE BY:
- HCPSFRCL - RELEASES THE SYSTEM VIRTUAL PAGE ALLOCATED FOR THE SPMBK WHEN A SPOOL FILE CREATED ON A REAL READER IS CLOSED.
- HCPSFVCL - RELEASES THE SYSTEM VIRTUAL PAGE ALLOCATED FOR THE SPMBK WHEN A VIRTUAL OUTPUT FILE IS CLOSED.
- HCPSFROP - IF A PAGING ERROR OCCURS WHILE PROCESSING AN SPDBK, THE SYSTEM VIRTUAL PAGE FOR THE SPMBK IS RELEASED.
- HCPSFVOP - FOR THE SAME REASON AS HCPSFROP.
- HCPSFPON - FOR THE SAME REASON AS HCPSFROP.

(2) DELETED ON DASD BY:
- HCPSFRDL - WHENEVER A SPOOL FILE IS DELETED FROM THE SYSTEM.
- HCPWRSST - WHENEVER THERE IS A PROBLEM RE-CREATING A SPOOL FILE DURING A "FORCE" START. ALSO, IT WILL DELETE THE SPMBK IF IT DETECTS THAT THE FIRST ASA IS ZERO, WHICH MEANS THERE ARE NO DATA PAGES MAPPED BY THIS SPMBK.

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

SPMBK - SPOOL FILE PAGE MAP BLOCK





disp	name	length	description
000	SPMOPNTM	008	TOD (FULL) WHEN FILE WAS OPENED
008	SPMSPID	004	SYSTEM SPOOL ID FOR THIS FILE
00C	SPMNEXT	004	ASA OF NEXT SPMBK FOR THIS FILE
010	SPMSPFBK	008	COPY OF THE SPFBK
0B8		9D	RESERVED FOR IBM USE
100	SPMASA	004	ROOM FOR 60 SETS OF 16 ASA GROUPS

EQUATES

00	SPMASALN	TO LOCATE END OF SPMASA

MORE EQUATES

3C0	SPMCCNT	
FFF	SPMSIZCK	
200	SPMSIZE	BLOCK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
SPMASA	004	100
SPMASALN	001	F00
SPMBK	001	000
SPMCCNT	001	3C0
SPMNEXT	004	00C
SPMOPNTM	008	000
SPMSIZCK	001	000
SPMSIZE	001	200
SPMSPFBK	008	010
SPMSPID	004	008

HCPSPTBK— SPOOL-TO-TAPE EXECUTION CONTROL BLOCK

DSECT NAME: SPTBK

DESCRIPTIVE NAME: SPOOL-TO-TAPE EXECUTION CONTROL BLOCK

FUNCTION:

LOCATED BY:

(1) ROUTINES:
HCPSPTAP - WHEN A VALID SPTAPE STOP OR CANCEL COMMAND IS ISSUED.
(2) FIELDS:
RDEVSPT - POINTS TO THE SPTBK ACTIVE ON THE TAPE DRIVE

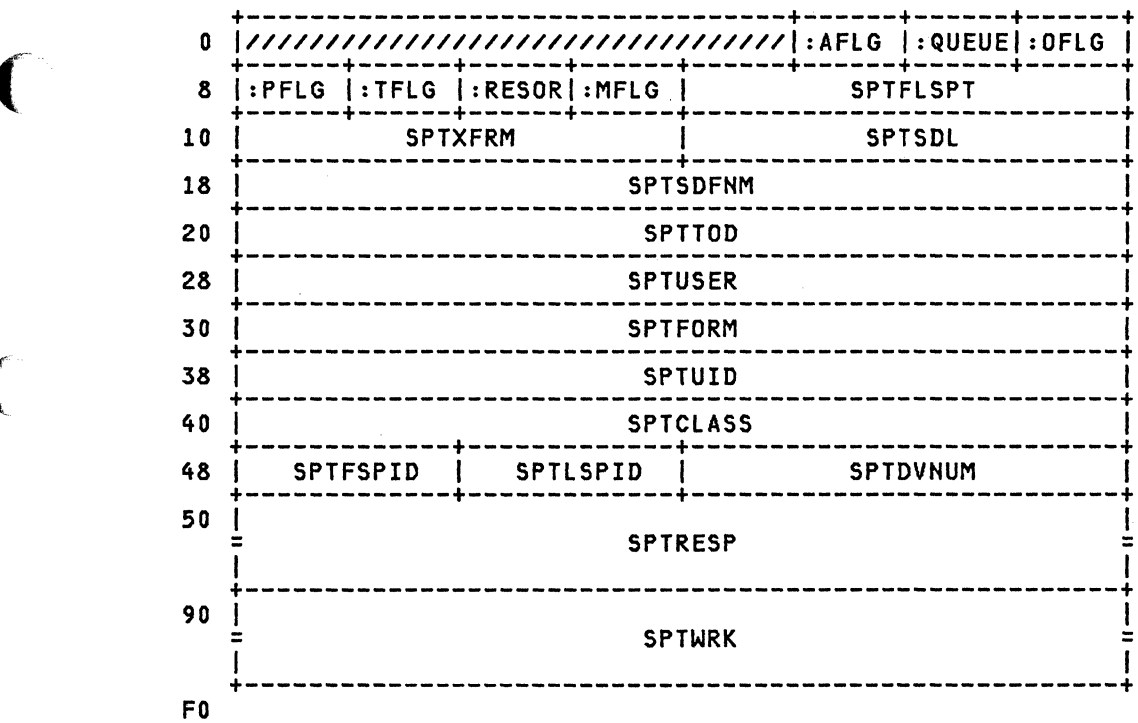
CREATED BY:

HCPSPTAP - FOR THE SPTAPE DUMP, LOAD, AND SCAN COMMANDS

DELETED BY:

HCPSPDMP - AFTER DUMPING FILES TO TAPE, OR AFTER CANCEL OR STOP REQUEST
HCPSPSLD - AFTER LOADING FILES FROM TAPE, OR AFTER CANCEL OR STOP REQUEST
HCPSPSCN - AFTER SCANNING FILES ON TAPE, OR AFTER A STOP OR CANCEL REQUEST

SPTBK - SPOOL-TO-TAPE EXECUTION CONTROL BLOCK



disp	name	length	description
000		XL5	RESERVED FOR FUTURE IBM USE
005	SPTAFLG	001	ACTION FLAGS

BITS DEFINED IN SPTAFLG (AT HEX DISPLACEMENT: 5)

80	SPTDUMP	PROCESSING SPTAPE DUMP COMMAND
40	SPTLOAD	PROCESSING SPTAPE LOAD COMMAND
20	SPTSCAN	PROCESSING SPTAPE SCAN COMMAND

006 SPTQUEUE 001 QUEUE FLAGS

BITS DEFINED FOR SPTQUEUE BY HCPSPFBK SPFQUEUE

007 SPTOFLG 001 OPERATION FLAGS

BITS DEFINED IN SPTOFLG (AT HEX DISPLACEMENT: 7)

80	SPTSTOP	STOP PROCESSING
40	SPTCAN	CANCEL PROCESSING
20	SPTPUR	PURGE FILES AFTER DUMPING THEM TO TAPE
10	SPTLEAVE	LEAVE UPON COMPLETION WITHOUT POSITIONING TAPE
08	SPTRUN	REWIND AND UNLOAD TAPE UPON COMPLETION
04	SPTREW	REWIND TAPE UPON COMPLETION
02	SPTSTPED	SPTAPE STOPPING HAS BEGUN
01	SPTCANED	SPTAPE CANCELLING HAS BEGUN

008 SPTPFLG 001 PROCESSING FLAGS

BITS DEFINED IN SPTPFLG (AT HEX DISPLACEMENT: 8)

80	SPTPCLAS	SPOOL FILES ARE TO BE PROCESSED BY CLASS
40	SPTPFORM	SPOOL FILES ARE TO BE PROCESSED BY FORM
20	SPTPSPID	SPOOL FILES ARE TO BE PROCESSED BY SPOOL ID
10	SPTPUID	SPOOL FILES ARE TO BE PROCESSED BY USERID
08	SPTPUHLD	USERHOLD FILES ARE TO BE PROCESSED
04	SPTPSHLD	SYSTEM HOLD FILES ARE TO BE PROCESSED
02	SPTPNOH	NOHOLD FILES ARE TO BE PROCESSED

009 SPTTFLG 001 TAPE MODE FLAG

BITS DEFINED IN SPTTFLG (AT HEX DISPLACEMENT: 9)

80	SPT800	USE MODE 800 BPI FOR SPTAPE DUMP
40	SPT1600	USE MODE 1600 BPI FOR DUMP
20	SPT6250	USE MODE 6250 BPI FOR DUMP
10	SPT38K	USE MODE 38K BPI FOR DUMP TO 3480 TAPE SUBSYSTEM DEVICE

00A SPTRESOR 001 RESOURCE ALLOCATION FLAGS

BITS DEFINED IN SPTRESOR (AT HEX DISPLACEMENT: A)

80	SPTSDFLK	SET IF AN SDF IS LOCKED
40	SPTDPGLK	SET IF A SPDBK HAS BEEN LOCKED
20	SPTSDLBK	SET IF AN SDLBK IS BEING USED
10	SPTIORBK	SET IF AN IORBK IS BEING USED
08	SPTOFILE	SET IF A SPOOL FILE IS OPEN
04	SPTSPFBK	SET IF AN SPFBK IS BEING USED
02	SPTFRM	SET IF A TRANSLATION FRAME IS BEING USED.

00B SPTMFLG 001 MISCELLANEOUS FLAGS

BITS DEFINED IN SPTMFLG (AT HEX DISPLACEMENT: B)

80	SPTINUSE	THE 'INUSE' STATUS OF THE SDF BEING DUMPED
40	SPTCSTOP	SET IF SPTAPE PROCESSING CAN BE STOPPED
20	SPTURSTD	IF THE SPTAPE USER IS A CLASS E AND NOT CLASS D USER
10	SPTVMXA	THE FILE BEING PROCESSED WAS DUMPED BY A VM/XA SPTAPE DUMP
08	SPT1PRO	TO INDICATE AT LEAST ONE FILE HAS BEEN PROCESSED.
04	SPTFORM2	REMEMBER THAT FORM WAS SPECIFIED (EVEN IF ONLY FORM *)
02	SPTCLAS2	REMEMBER THAT CLASS WAS SPECIFIED (EVEN IF ONLY CL *)

00C	SPTFLSPT	004	ADDRESS OF THE FIRST FLSPT
010	SPTXFRM	004	ADDRESS OF THE FRAME FOR SPOOL FILE BLOCK TRANSLATIONS
014	SPTSDL	004	ADDRESS OF THE SDLBK FOR LOADS
018	SPTSDFNM	008	FILENAME OF THE LOCKED SDF
020	SPTTOD	008	THE CLOCK TIME WHEN THE SPTAPE COMMAND WAS ISSUED
028	SPTUSER	008	USERID OF SPTAPE COMMAND ISSUER
030	SPTFORM	008	FORM NUMBER OF REQUESTED FILES
038	SPTUID	008	USERID OF THE FILE OWNER WHOSE FILES ARE TO BE PROCESSED
040	SPTCLASS	008	USER SELECTED CLASSES
048	SPTFSPID	002	STARTING SPID IF SPID RANGE
04A	SPTLSPID	002	ENDING SPID IF SPID RANGE
04C	SPTDVNUM	004	REAL NUMBER OF TAPE DRIVE IN HEX
050	SPTRESP	008	ROOM TO BUILD SPTAPE RESPONSES
090	SPTWRK	008	WORK SPACE FOR SPTAPE MODULES

EQUATES

1E	SPTSIZE	SPTBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SPTAFLG	001	005	SPTIORBK	001	010	SPTQUEUE	001	006
SPTBK	001	000	SPTLEAVE	001	010	SPTRESOR	001	00A
SPTCAN	001	040	SPTLOAD	001	040	SPTRESP	008	050
SPTCANED	001	001	SPTLSPID	002	04A	SPTREW	001	004
SPTCLASS	008	040	SPTMFLG	001	00B	SPTRUN	001	008
SPTCLAS2	001	002	SPTOFILE	001	008	SPTSCAN	001	020
SPTCSTOP	001	040	SPTOFLG	001	007	SPTSDFLK	001	080
SPTDPGLK	001	040	SPTPCLAS	001	080	SPTSDFNM	008	018
SPTDUMP	001	080	SPTPFLG	001	008	SPTSDL	004	014
SPTDVNUM	004	04C	SPTPFORM	001	040	SPTSDLBK	001	020
SPTFLSPT	004	00C	SPTPNOH	001	002	SPTSIZE	001	01E
SPTFORM	008	030	SPTPSHLD	001	004	SPTSPFBK	001	004
SPTFORM2	001	004	SPTPSPID	001	020	SPTSTOP	001	080
SPTFRM	001	002	SPTPUHLD	001	008	SPTSTPED	001	002
SPTFSPID	002	048	SPTPUID	001	010	SPTTFLG	001	009
SPTINUSE	001	080	SPTPUR	001	020	SPTTOD	008	020

Name	Len	Val/Disp
SPTUID	008	038
SPTURSTD	001	020
SPTUSER	008	028
SPTVMXA	001	010
SPTWRK	008	090
SPTXFRM	004	010
SPT1PRO	001	008
SPT1600	001	040
SPT38K	001	010
SPT6250	001	020
SPT800	001	080

HCPSRMBK— SYSTEM RESOURCE MANAGEMENT BLOCK

DSECT NAME: SRMBK

DESCRIPTIVE NAME: SYSTEM RESOURCE MANAGEMENT BLOCK

FUNCTION: HCPSRMBK CONTAINS POINTERS AND PARAMETERS USED BY THE SYSTEM RESOURCE MANAGER (SCHEDULER) IN THE MAINTENANCE OF USER LISTS AND CALCULATION OF THE VARIOUS SCHEDULING PARAMETERS.

LOCATED BY:

SYSSCH FIELD OF HCPSYSCM

CREATED BY:

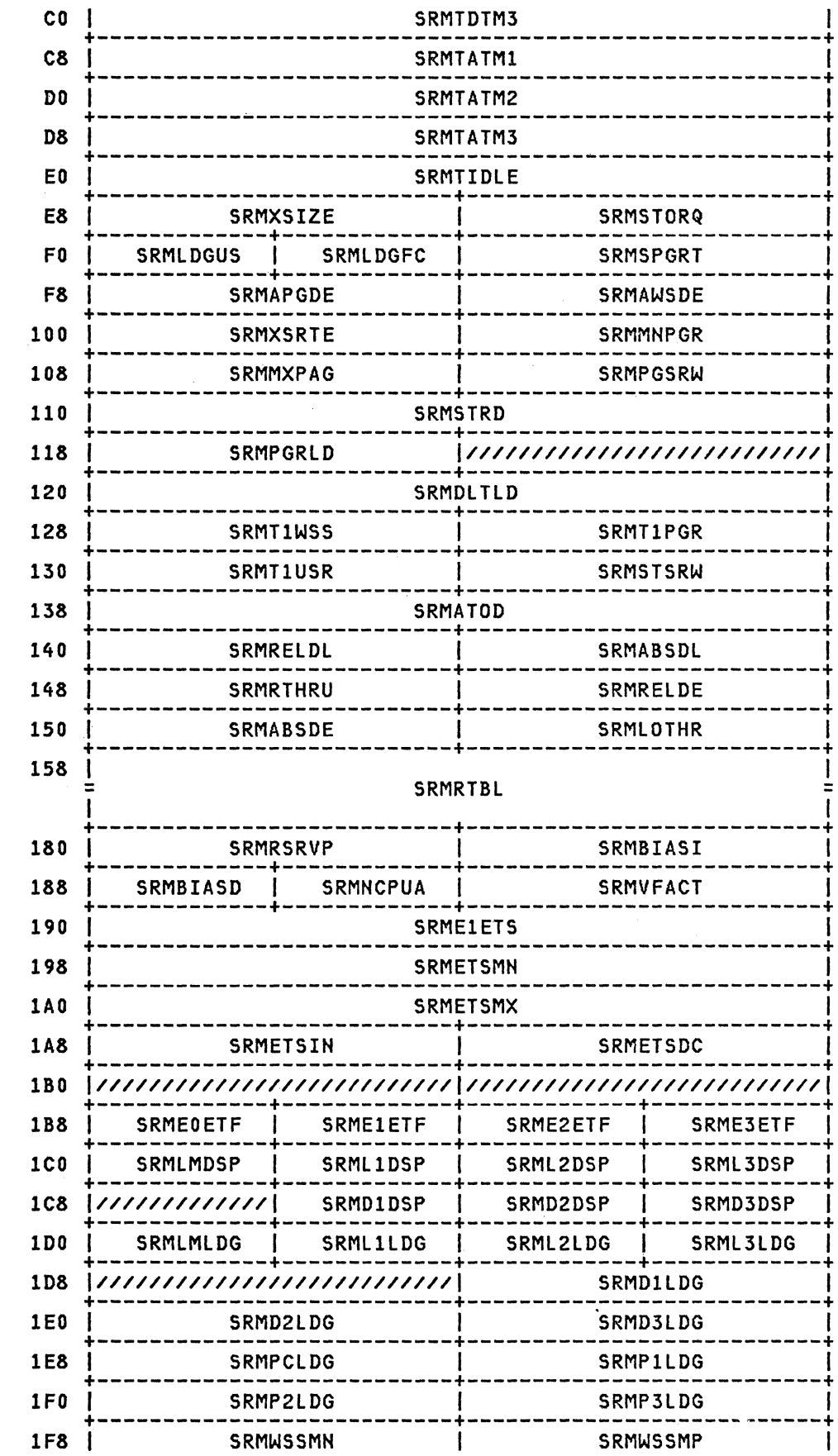
HCPISR DURING SYSTEM INITIALIZATION

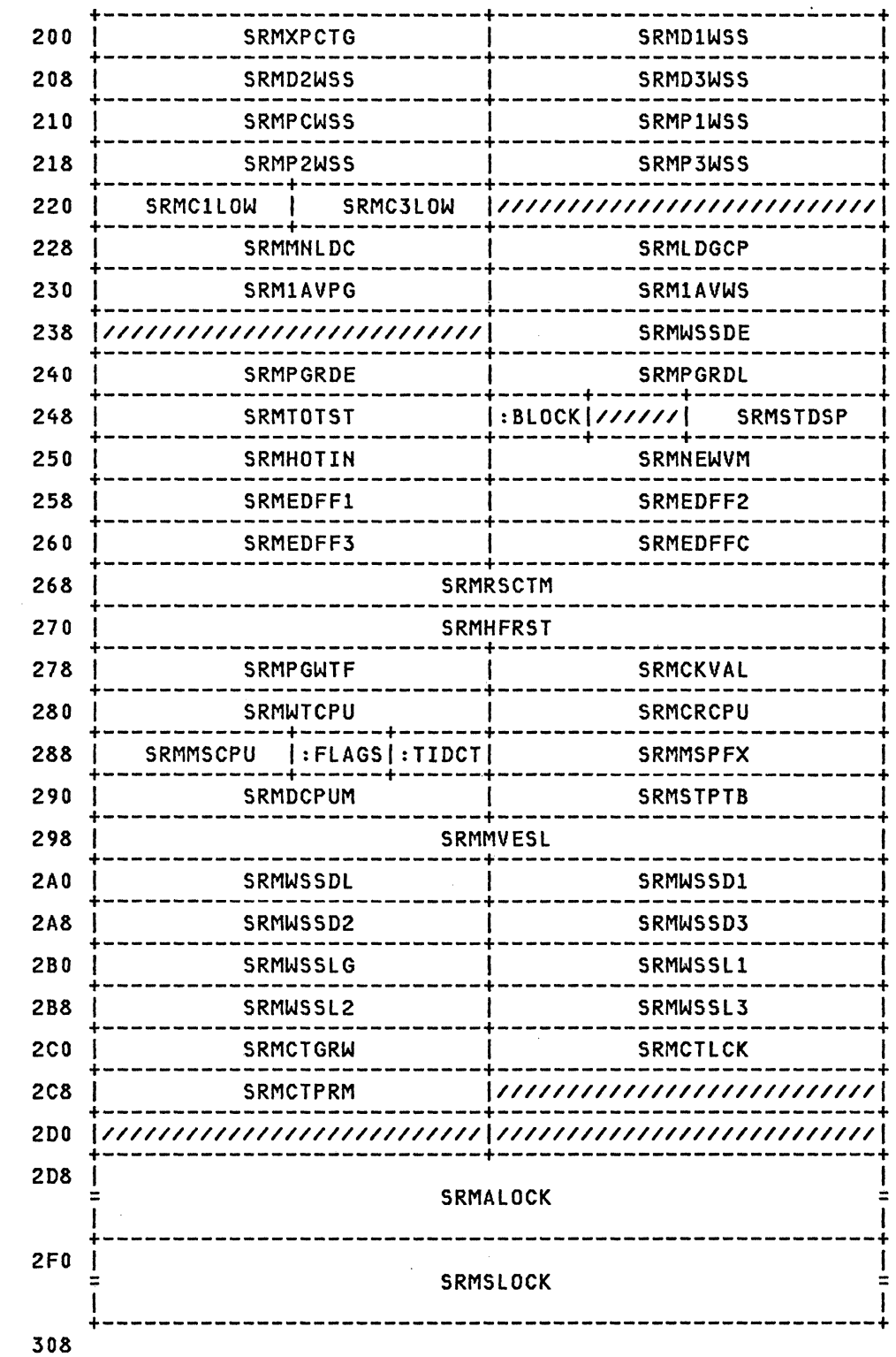
DELETED BY:

NEVER DELETED

SRMBK - SYSTEM RESOURCE MANAGEMENT BLOCK

0	SRMELIST		SRMMLIST	
8	SRMDLSCN		SRMDLADD	
10	SRMVMTID		SRME1ADD	
18	SRME2ADD		SRME3ADD	
20	SRMTSLIC			
28	SRMTSHOT			
30	SRMTIMIN			
38	SRMTODSV			
40	SRMRVLTM			
48	SRMCDISP	SRMC1DSP	SRMC2DSP	SRMC3DSP
50	SRMCDLDG	SRMC1DLD	SRMC2DLD	SRMC3DLD
58	SRMCELIG	SRMC1ELG	SRMC2ELG	SRMC3ELG
60	SRMCELDG	SRMC1ELD	SRMC2ELD	SRMC3ELD
68	SRMCDORM		SRMSPLIN	
70	SRMEPNF0	SRMEPNF1	SRMEPNF2	SRMEPNF3
78	SRMSDSPL	SRMSDSP1	SRMSDSP2	SRMSDSP3
80	SRMSLDDL	SRMSLDD1	SRMSLDD2	SRMSLDD3
88	SRMSELGL	SRMSELG1	SRMSELG2	SRMSELG3
90	SRMSLDEL	SRMSLDE1	SRMSLDE2	SRMSLDE3
98	SRMSDORL		SRMSTORP	
A0	SRMADJL		SRMDSVMW	
A8	SRMSTEAL		SRMSSTEL	
B0	SRMTDTM1			
B8	SRMTDTM2			





disp	name	length	description
000	SRMELIST	004	ELIGIBLE LIST ANCHOR
004	SRMMLIST	004	DORMANT LIST ANCHOR THE DISPATCH LIST IS ANCHORED FOR SCHEDULING PURPOSES BY THE SYSTEM VMDBK, WHICH IS THE FIRST

```
                        MEMBER OF THE DISPATCH LIST.
008     SRMDLSCN    004 DISPATCH LIST SCAN HEADER.  THIS
                        IS THE POINT AT WHICH HCPSTK'S
                        LINKDS SUBROUTINE IS TO BEGIN
                        SCANNING THE DISPATCH LIST FOR
                        AN INSERTION POINT WHENEVER
                        ADDING A USER
00C     SRMDLADD    004 POINTER TO THE LAST VMDBK ADDED
                        TO THE D-LIST AHEAD OF ATOD.
                        USED TO REDUCE SCANS IN THE LIST.
010     SRMVMTID    004 ADDRESS OF FIRST TEST-IDLE VMDBK
                        IN THE DISPATCH LIST. TEST-IDLE
                        USERS ARE LOCATED AT THE BOTTOM
                        OF THE DISPATCH LIST, ORDERED BY
                        THE LENGTH OF TIME THEY HAVE
                        BEEN TEST-IDLE (LONGEST TO
                        SHORTEST). WHEN THERE ARE NO
                        TEST-IDLE USERS IN THE DISPATCH
                        LIST, THIS FIELD POINTS TO THE
                        SYSTEM VMDBK.
014     SRME1ADD    004 LAST USER ADDED TO E-LIST, BY
018     SRME2ADD    004 CLASS.  THESE FIELDS ARE NOT
01C     SRME3ADD    004 VALID WHEN THE E-LIST IS EMPTY,
                        AND SRME2ADD, FOR EXAMPLE, MAY
                        NOT POINT TO AN E2 USER.  IT DID
                        ONCE, BUT THAT USER DROPPED FROM
                        THE E-LIST SO THE POINTER BUMPED
                        TO THE NEXT VMDBK.
                        TIMING PARAMETERS

                        NOTE: THE ASSEMBLER CONSTRUCT 'FL8S12' IS USED TO
                        GENERATE A FIXED-POINT NUMBER WHICH REPRESENTS A
                        TIME VALUE (IN MICROSECONDS) IN TOD CLOCK FORMAT
                        OR CPU TIMER FORMAT.  USE OF 'FL8S12E6' IS USED
                        WHEN SPECIFYING A TIME VALUE IN SECONDS (RATHER
                        THAN MICROSECONDS).
020     SRMTSLIC    008 TIME SLICE VALUE
028     SRMTSHOT    008 SHORT TIME SLICE FOR HOT-SHOT
                        DISPATCH FOR A TERMINAL USER
030     SRMTIMIN    008 SYSTEM SAMPLING INTERVAL

                   EQUATES

        30     SRMTIMN      USE ONLY SECONDS PART OF SRMTIMIN

038     SRMTODSV    008 TOD CLOCK TIME WHEN LAST
                        RETRIEVED FOR SCHEDULER.
040     SRMRVLTM    008 TIME OF LAST PLDV RE-SHUFFLE
                        DISPATCHER CONTROLS

                        COUNT OF USERS IN LISTS

                   EQUATES

        48     SRMUSERC
                        *
                        THE FOLLOWING TABLES MUST FOLLOW SRMUSERC.  SRMUSERC IS   *
                        TREATED AS THE HEAD OF A TWO-DIMENSIONAL ARRAY:           *
                        *
                        (E-LIST CLASS)                          *
                        0   1   2   3                            *
                        ----------------                           *
                        SRMCDISP    |   |   |   |   |                          *
                        ----------------                           *
                        SRMCDLDG    |   |   |   |   |                          *
                        ----------------                           *
                        SRMCELIG    |   |   |   |   |                          *
                        ----------------                           *
                        SRMCELDG    |   |   |   |   |                          *
                        ----------------                           *
                        *
                        THE ELEMENTS OF SRMUSERC MUST APPEAR IN THE SAME ORDER    *
                        AS THE CORRESPONDING ELEMENTS IN THE SRMSUSRC TABLE.      *
```

```
                        THIS IS DUE TO THE USAGE OF THESE TABLES BY HCPSTPGS.     *
                        SEE THAT ENTRY POINT FOR DETAILS.                         *
                        *
                        *
048   SRMCDISP   002    COUNT OF VMDBKS IN DISPATCH LIST
                        (Q0, Q1, Q2, Q3)
04A   SRMC1DSP   002    COUNT OF VMDBKS IN Q1,Q2 AND Q3
04C   SRMC2DSP   002    COUNT OF VMDBKS IN Q2 AND Q3
04E   SRMC3DSP   002    COUNT OF VMDBKS IN Q3
050   SRMCDLDG   002    COUNT OF LOADING  VMDBKS IN
                        DISPATCH LIST (Q0, Q1, Q2, Q3)
052   SRMC1DLD   002    COUNT OF LOADING  VMDBKS IN
                        Q1, Q2 AND Q3
054   SRMC2DLD   002    COUNT OF LOADING  VMDBKS IN
                        Q2 AND Q3
056   SRMC3DLD   002    COUNT OF LOADING  VMDBKS IN
                        Q3
058   SRMCELIG   002    COUNT OF VMDBKS IN ELIGIBLE LIST
                        (E0, E1, E2, E3)
05A   SRMC1ELG   002    COUNT OF VMDBKS IN E1, E2, E3
05C   SRMC2ELG   002    COUNT OF VMDBKS IN E2 AND E3
05E   SRMC3ELG   002    COUNT OF VMDBKS IN E3
060   SRMCELDG   002    COUNT OF LOADING  VMDBKS IN
                        ELIGIBLE LIST (Q0, Q1, Q2, Q3)
062   SRMC1ELD   002    COUNT OF LOADING  VMDBKS IN
                        E1, E2 AND E3
064   SRMC2ELD   002    COUNT OF LOADING  VMDBKS IN
                        E2 AND E3
066   SRMC3ELD   002    COUNT OF LOADING  VMDBKS IN
                        E3

                EQUATES

        68    SRMCUSRE  END OF TABLE
        20    SRMCUSRL  LENGTH OF TABLE

                        END SRMUSERC


068   SRMCDORM   004    COUNT OF VMDBKS IN DORMANT LIST
                        DATA FIELDS USED BY INDICATE LOAD COMMAND
06C   SRMSPLIN   004    SAMPLING INTERVAL

                EQUATES

        70    SRMSUSRC
                        *
                        THE FOLLOWING TABLE  MUST FOLLOW SRMSUSRC.  SRMSUSRC IS   *
                        TREATED AS THE HEAD OF A TWO-DIMENSIONAL ARRAY:           *
                        *
                        *
                        0   1   2   3   (E-LIST CLASS)              *
                        ----------------                              *
                        SRMEPNFC    |   |   |   |   |                           *
                        ----------------                              *
                        SRMSDSPL    |   |   |   |   |                           *
                        ----------------                              *
                        SRMSLDDL    |   |   |   |   |                           *
                        ----------------                              *
                        SRMSELGL    |   |   |   |   |                           *
                        ----------------                              *
                        SRMSLDEL    |   |   |   |   |                           *
                        ----------------                              *
                        *
                        *
                        THE ELEMENTS OF SRMSUSRC MUST APPEAR IN THE SAME ORDER    *
                        AS THE CORRESPONDING ELEMENTS IN THE SRMUSERC TABLE.      *
                        THIS IS DUE TO THE USAGE OF THESE TABLES BY HCPSTPGS.     *
                        SEE THAT ENTRY POINT FOR DETAILS.                         *
                        *
                        *
        70    SRMEPNFC  EXPANSION FACTORS PER CLASS
```

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070    SRMEPNF0    002       DUMMY ENTRY FOR INDEXING
072    SRMEPNF1    002       EXPANSION FACTOR CLASS 1
074    SRMEPNF2    002       EXPANSION FACTOR CLASS 2
076    SRMEPNF3    002       EXPANSION FACTOR CLASS 3
078    SRMSDSPL    002       SMOOTHED NUMBER OF USERS IN THE
                             DISPATCH LIST (Q0)
07A    SRMSDSP1    002       SMOOTHED NUMBER OF USERS IN Q1
07C    SRMSDSP2    002       SMOOTHED NUMBER OF USERS IN Q2
07E    SRMSDSP3    002       SMOOTHED NUMBER OF USERS IN Q3

                         EQUATES

       80     SRMSDSPE     END OF TABLE

080    SRMSLDDL    002       SMOOTHED NUMBER OF LOADING
                             USERS IN THE DISPATCH LIST (Q0)
082    SRMSLDD1    002       SMOOTHED NUMBER OF LOADING
                             USERS IN Q1
084    SRMSLDD2    002       SMOOTHED NUMBER OF LOADING
                             USERS IN Q2
086    SRMSLDD3    002       SMOOTHED NUMBER OF LOADING
                             USERS IN Q3

                         EQUATES

       88     SRMSLDDE     END OF TABLE

088    SRMSELGL    002       SMOOTHED NUMBER OF USERS IN THE
                             ELIGIBLE LIST (E0)
08A    SRMSELG1    002       SMOOTHED NUMBER OF USERS IN E1
08C    SRMSELG2    002       SMOOTHED NUMBER OF USERS IN E2
08E    SRMSELG3    002       SMOOTHED NUMBER OF USERS IN E3

                         EQUATES

       90     SRMSELGE     END OF TABLE

090    SRMSLDEL    002       SMOOTHED NUMBER OF LOADING
                             USERS IN THE ELIGIBLE LIST (E0)
092    SRMSLDE1    002       SMOOTHED NUMBER OF LOADING
                             USERS IN E1
094    SRMSLDE2    002       SMOOTHED NUMBER OF LOADING
                             USERS IN E2
096    SRMSLDE3    002       SMOOTHED NUMBER OF LOADING
                             USERS IN E3

                         EQUATES

       98     SRMSUSRE     END OF TABLE

                             END SRMSUSRC


098    SRMSDORL    004       SMOOTHED NUMBER OF USERS IN THE
                             DORMANT LIST
09C    SRMSTORP    004       SMOOTHED STORAGE UTILIZATION
                             PROJECTION
0A0    SRMADJL     004       ADJUNCT VMDBK LINKED LIST
                             LINKED WITH VMDADJL, SERIALIZED
                             BY HCPLKADJ.

0A4    SRMDSVMW    004       DORMANT LIST USERS IN SVM WAIT
0A8    SRMSTEAL    004       INSTANTANEOUS STEAL  VALUE
0AC    SRMSSTEL    004       SMOOTHED  'STEAL' OUTPUT FOR
                             INDICATE LOAD


                             EXPANSION FACTOR FIELDS

                         EQUATES
```

B0 SRMTDTM

0B0	SRMTDTM1	008	TOTAL D-LIST TIME, CLASS 1
0B8	SRMTDTM2	008	TOTAL D-LIST TIME, CLASS 2
0C0	SRMTDTM3	008	TOTAL D-LIST TIME, CLASS 3

EQUATES

C8 SRMTATM

0C8	SRMTATM1	008	TOTAL ACTIVE (NON-DORMANT) TIME, ..CLASS 1
0D0	SRMTATM2	008	TOTAL ACTIVE (NON-DORMANT) TIME, ..CLASS 2
0D8	SRMTATM3	008	TOTAL ACTIVE (NON-DORMANT) TIME, ..CLASS 3
0E0	SRMTIDLE	008	THE MAXIMUM AMOUNT OF TIME ..GRANTED TO A USER WHO GOES ..IDLE IN THE DISPATCH LIST ..BEFORE DROPPING IT TO THE ..DORMANT LIST
			SCHEDULING CONTROL FIELDS
0E8	SRMXSIZE	004	BLOCKS OF XSTORE AVAILABLE TO CP
0EC	SRMSTORQ	004	STORAGE REQUIRED FROM PREEMPTION
0F0	SRMLDGFW	004	FULLWORD TO HOLD NUMBER OF PAGE READS PER MINOR TIME SLICE WHICH CONSTITUTE A 'LOADING USER'
0F0	SRMLDGUS	002	INTEGER PORTION OF LOADING USER DESIGNATION
0F2	SRMLDGFC	002	FRACTIONAL PORTION OF LOADING USER DESIGNATION. THIS PART IS NOT USED. IT IS HERE SO THAT NOTHING IS LOST TO ROUNDING OFF AS THE FULLWORD IS ADJUSTED.
0F4	SRMSPGRT	004	SYSTEM CPU-PAGE READ RATIO
0F8	SRMAPGDE	004	AVERAGE PAGING RATE OF A USER IN DISPATCH OR ELIGIBLE LIST
0FC	SRMAWSDE	004	AVERAGE WORKING SET SIZE OF A USER IN DISPATCH OR ELIGIBLE LIST
100	SRMXSRTE	004	CURRENT SYSTEM XSTORE PAGE IN AND PAGE OUT RATE (SMOOTHED BY HCPSTPGS)
104	SRMMNPGR	004	MINIMUM SYSTEM PAGING RATE USED BY THE SCHEDULER
108	SRMMXPAG	004	TOTAL PAGING CAPACITY, IN PAGES PER SECOND WHICH CAN BE DELIV-ERED BY THE PAGING HARDWARE
10C	SRMPGSRW	004	SYSTEM RESOURCE WEIGHT FOR PAGING. THIS IS COMPUTED BY HCPSTPGS WHENEVER THE SYSTEM PAGING RATE CHANGES. IT IS USED IN ELIGIBLE LIST PRIORITY CALCULATION.
110	SRMSTRD	008	SMOOTHED 'TIME IT TAKES TO READ A PAGE'. COMPUTED BY HCPSTP USING THE NEXT TWO FIELDS
118	SRMPGRLD	004	COUNT OF PAGE READS BY ALL E1 LOADING USERS
11C		F	RESERVED FOR FUTURE IBM USE
120	SRMDLTLD	008	TOTAL D-LIST TIME FOR ALL E1 LOADING USERS
			THE NEXT THREE FIELDS ARE USED TO CALCULATE AN 'AVERAGE E1 USER' WSS AND PAGING RATE :
128	SRMT1WSS	004	TOTAL WSS OF ALL E1 USERS
12C	SRMT1PGR	004	TOTAL PAGE RATE OF ALL E1 USERS
130	SRMT1USR	004	COUNT OF E1 USERS INCLUDED
134	SRMSTSRW	004	SYSTEM RESOURCE WEIGHT FOR STORAGE. THIS IS COMPUTED BY HCPSTPGS WHENEVER THE SMOOTHED STORAGE DEMAND (TOTAL WSS)

```
                        CHANGES.  IT IS USED IN THE
                        ELIGIBLE LIST PRIORITY
                        CALCULATION.
138   SRMATOD    008    ARTIFICIAL TOD.  THIS TOD ONLY
                        ..ADVANCES AT THE RATE THE
                        ..SYSTEM IS RUNNING USER WORK.
140   SRMTOTLS   004    AN EQUATE USED AS AN INDEX BASE
                        ..TO REFERENCE ONE OF THE NEXT
                        ..TWO FIELDS, SRMRELDL AND
                        ..SRMABSDL.  CODE DEPENDS ON
                        ..THESE TWO FIELDS BEING
                        ..FULLWORDS AND FOLLOWING IN
                        ..THE GIVEN ORDER.
140   SRMRELDL   004    THE SUM OF THE RELATIVE SHARES
                        ..OF ALL RELATIVE SHARE HOLDERS
                        ..(EXCLUDING DEDICATED VMDBKS)
                        ..CURRENTLY IN THE DISPATCH
                        ..LIST. THIS FIELD IS PROTECTED
                        ..BY THE SCHEDULER LOCK.
144   SRMABSDL   004    THE SUM OF THE ABSOLUTE SHARES
                        ..OF ALL VMDBKS (EXCLUDING
                        ..DEDICATED VMDBKS) CURRENTLY
                        ..IN THE DISPATCH LIST. THIS
                        ..FIELD IS PROTECTED BY THE
                        ..SCHEDULER LOCK.
148   SRMRTHRU   004    THE SUM OF THE THROUGHPUT VALUES
                        ..FOR ALL RELATIVE SHARE AND
                        ..ABSOLUTE SHARE DISPATCH
                        ..LIST USERS. 'THROUGHPUT' IS THE
                        ..THROUGHPUT VALUE WHICH A GIVEN
                        ..USER IS TO RECEIVE IN THE
                        ..DISPATCH LIST.
                        ..A USER'S THRUPUT IS TRANSLATED
                        ..INTO A DISPATCH LIST SHARE VIA
                        ..COMPARISON WITH THIS FIELD.

14C   SRMTOTDE   004    AN EQUATE USED AS AN INDEX BASE
                        ..TO REFERENCE ONE OF THE NEXT
                        ..TWO FIELDS, SRMRELDE AND
                        ..SRMABSDE.  CODE DEPENDS ON
                        ..THESE TWO FIELDS BEING
                        ..FULLWORDS AND FOLLOWING IN
                        ..THE GIVEN ORDER.
14C   SRMRELDE   004    THE SUM OF THE RELATIVE SHARES
                        ..OF ALL RELATIVE SHARE HOLDERS
                        ..CURRENTLY IN THE ELIGIBLE AND
                        ..DISPATCH LIST.  THIS FIELD IS
                        ..PROTECTED BY THE SCHEDULER
                        ..LOCK.
150   SRMABSDE   004    THE SUM OF THE ABSOLUTE SHARES
                        ..OF ALL VMDBKS CURRENTLY IN
                        ..THE ELIGIBLE AND DISPATCH LIST.
                        ..THIS FIELD IS PROTECTED BY THE
                        ..SCHEDULER LOCK.
154   SRMLOTHR   004    LOW THROUGHPUT VALUE TO USE
                        ..WHEN SRMRTBSZ OR MORE
                        ..USERS IN DISPATCH LIST

                    EQUATES

        0A     SRMRTBSZ     NUMBER OF ENTRIES IN SRMRTBL
        04     SRMRTBEL     SIZE OF EACH ENTRY IN SRMRTBL

158   SRMRTBL    004    R PRIME TABLE FOR 10 OR LESS
                        ..DISPATCH LIST USERS.  THIS
                        ..TABLE CONTAINS OUR ESTIMATE OF
                        ..HOW MUCH RESOURCE ACCESS
                        ..(SERVICE) WE CAN GIVE TO A
                        ..USER, GIVEN VERY FEW DISPATCH
                        ..LIST USERS.  IT IS USED TO
                        ..CALCULATE MAXIMUM ALLOWABLE
                        ..ELIGIBLE LIST DELAY.
```

EQUATES

80 SRMRTBEN

180	SRMRSRVP	004	THE "RESERVED PERCENT". ..THE PERCENT, IN UNITS OF CPUS ..TO BE HELD IN RESERVE FOR THE ..RELATIVE SHARE USERS. THIS ..FIELD IS PROTECTED BY THE ..SCHEDULER LOCK.
184	SRMBIASI	004	THE "INTENSITY" THAT THE ..IABIAS PARAMETER OF THE SET ..SRM COMMAND IS CURRENTLY SET ..TO. THE RANGE IS 0.00-1.00. ..THIS FIELD PROTECTED BY THE ..SCHEDULER LOCK.
188	SRMBIASD	002	THE "DURATION" THAT THE IABIAS ..PARAMETER OF THE SET SRM ..COMMAND IS CURRENTLY SET TO. ..THE RANGE IS 1-100. THIS ..FIELD IS PROTECTED BY THE ..SCHEDULER LOCK.
18A	SRMNCPUA	002	THE NUMBER OF CPUS AVAILABLE TO ..SCHEDULE TIME ON FOR ..NON-DEDICATED USERS. THIS ..FIELD IS PROTECTED BY THE ..SCHEDULER LOCK.
18C	SRMVFACT	004	NUMBER OF ACTIVE VECTOR USERS
			ELAPSED TIME SLICE VARIABLES
190	SRME1ETS	008	E1 ELAPSED TIME SLICE
198	SRMETSMN	008	MINIMUM ELAPSED TIME SLICE ..(.05 SECOND OR 50,000 ..MICROSECONDS)
1A0	SRMETSMX	008	MAXIMUM ELAPSED TIME SLICE ..(16 SECONDS OR 16,000,000 ..MICROSECONDS)
1A8	SRMETSIN	004	ELAPSED TIME SLICE INCREMENT. THIS IS THE AMOUNT THE E1 TIME SLICE IS INCREMENTED WHENEVER A USER DOES NOT COMPLETE AFTER AN E1 STAY.
1AC	SRMETSDC	004	ELAPSED TIME SLICE DECREMENT. THIS IS THE AMOUNT THE E1 TIME SLICE IS DECREMENTED WHEN A USER COMPLETES AFTER AN E1 STAY.
1B0		F	RESERVED FOR FUTURE IBM USE
1B4		F	RESERVED FOR FUTURE IBM USE SUBTRACTING TIME SPENT HANDLING OVERHEAD FUNCTIONS FROM SRMTODSV

EQUATES

03 SRMLSTEL LAST E-LIST CLASS

1B8	SRMETSLC	002	ELAPSED TIME SLICE TABLE NOTE: E1 SLICE TIME * ANY SRMEXETF SHOULD ALWAYS BE LESS THAN SRMMVESL.
1B8	SRME0ETF	002	E0 ELAPSED TIME SLICE FACTOR AN E0 SLICE IS AN E1 SLICE TIMES THIS NUMBER
1BA	SRME1ETF	002	DUMMY HOLDER FOR INDEXING
1BC	SRME2ETF	002	E2 ELAPSED TIME SLICE FACTOR AN E2 SLICE IS AN E1 SLICE TIMES THIS NUMBER
1BE	SRME3ETF	002	E3 ELAPSED TIME SLICE FACTOR AN E3 SLICE IS AN E1 SLICE TIMES THIS NUMBER
			RESOURCE LIMITS
			NOTE: E-0 USERS ARE NOT SUBJECT TO ANY OF THESE QUOTAS

EQUATES

	04	SRMCTBLN	NUMBER OF ELIGIBLE LIST CLASSES, THUS NUMBER OF ENTRIES IN EACH ELIGIBLE LIST TABLE
	02	SRMCTBEL	SIZE OF ELEMENT IN THE ELIGIBLE LIST TABLES - EACH ARE HALFWORDS
	01	SRMCTSHF	SHIFT BY ONE TO INDEX INTO HALF-WORD COUNT ENTRIES
	00	SRMEZERO	E-0 LIST EQUATE
	01	SRMEONE	E-1 LIST EQUATE
	02	SRMETWO	E-2 LIST EQUATE
	03	SRMETHRE	E-3 LIST EQUATE
	00	SRMCLS0	INDEX TO THE E-0 CLASS ENTRIES
	02	SRMCLS1	INDEX TO THE E-1 CLASS ENTRIES
	04	SRMCLS2	INDEX TO THE E-2 CLASS ENTRIES
	06	SRMCLS3	INDEX TO THE E-3 CLASS ENTRIES

1C0	SRMLMDSP	002	START OF DISPATCH USER LIMIT TABLE. DUMMY ENTRY FOR INDXING.
1C2	SRML1DSP	002	LIMIT ON NUMBER OF USERS ALLOWED IN DISPATCH LIST (Q1, Q2, Q3)
1C4	SRML2DSP	002	LIMIT ON NUMBER OF USERS ALLOWED IN Q2 AND Q3
1C6	SRML3DSP	002	LIMIT ON NUMBER OF USERS ALLOWED IN Q3

EQUATES

	C8	SRMLEDSP	END OF DISPATCH USER LIMIT TABLE
	02	SRMDSPEL	SIZE OF DISPATCH TABLE ENTRY

1C8		H	RESERVED FOR IBM USE
1CA	SRMD1DSP	002	DEFAULT NUMBER OF USERS ALLOWED IN DISPATCH LIST (Q1, Q2, Q3)
1CC	SRMD2DSP	002	DEFAULT NUMBER OF USERS ALLOWED IN Q2 AND Q3
1CE	SRMD3DSP	002	DEFAULT NUMBER OF USERS ALLOWED IN Q3
1D0	SRMLMLDG	002	START OF LOADING USER LIMIT TABLE. DUMMY ENTRY FOR INDXING.
1D2	SRML1LDG	002	LIMIT ON NUMBER OF LOADING USERS ALLOWED IN (Q1, Q2, Q3)
1D4	SRML2LDG	002	LIMIT ON NUMBER OF LOADING USERS ALLOWED IN (Q2, Q3)
1D6	SRML3LDG	002	LIMIT ON NUMBER OF LOADING USERS ALLOWED IN (Q3) LOAD PERCENTAGES: THESE VALUES ARE SET BY SET SRM LDUBUF COMMAND AND USED TO DETERMINE THE LOADLIMITS, ABOVE

EQUATES

	04	SRMLMTEL	SIZE OF EACH LIMIT FIELD: ..SRMDFLDG TABLE ELEMENTS, ..SRMPCLDG TABLE ELEMENTS, ..SRMDFWSS TABLE ELEMENTS, ..SRMPCWSS TABLE ELEMENTS

1D8		F	RESERVED FOR FUTURE IBM USE
1DC	SRMDFLDG	004	DEFAULTS TO USE FOR LOADING USER LIMITS
1DC	SRMD1LDG	004	DEFAULT FOR E1
1E0	SRMD2LDG	004	DEFAULT FOR E2
1E4	SRMD3LDG	004	DEFAULT FOR E3
1E8	SRMPCLDG	004	START OF LDG LIMIT TABLE. DUMMY ENTRY FOR INDEXING.
1EC	SRMP1LDG	004	PERCENTAGE OF 'LOAD CAPACITY'


```
                                WHICH CAN BE TAKEN BY Q1, Q2, Q3
1F0   SRMP2LDG    004           PERCENTAGE OF LOAD CAPACITY FOR
                                Q2 AND Q3
1F4   SRMP3LDG    004           PERCENTAGE OF LOAD CAPACTIY FOR
                                Q3

                        EQUATES

        F8     SRMPELDG
                                WSS PERCENTAGES:
                                THESE VALUES ARE SET BY SET SRM
                                STORBUF COMMAND AND USED TO
                                DETERMINE THE AMOUNT OF MEMORY
                                WHICH CAN BE COMMITTED TO EACH
                                E-LIST CLASS.  THE ACTUAL AMOUNT
                                OF MEMORY EACH PERCENTAGE REPRE-
                                SENTS IS RECOMPUTED AT USER ADD
                                TIME IN ORDER TO EXCLUDE LOCKED
                                PAGES

1F8   SRMWSSMN    004           MINIMUM USER WORKING SET SIZE
1FC   SRMWSSMP    004           PERCENTAGE OF AVIALBLE MEMORY
                                WHICH CONSTITUTES A MAXIMUM WSS
200   SRMXPCTG    004           PERCENTAGE OF XSTORE TO USE IN
                                WSS AND AVAILABLE MEMORY CALCU-
                                LATIONS
204   SRMDFWSS    004           DEFAULTS TO USE FOR WSS LIMITS
204   SRMD1WSS    004           DEFAULT FOR E1
208   SRMD2WSS    004           DEFAULT FOR E2
20C   SRMD3WSS    004           DEFAULT FOR E3
210   SRMPCWSS    004           START OF WSS LIMIT TABLE.
                                PERCENTAGE OF AVAILABLE MEMORY
                                WHICH CAN BE TAKEN BY Q0
                                THIS VALUE IS ALWAYS 100% TO
                                ELIMINATE THE TEST FOR Q0.
214   SRMP1WSS    004           PERCENTAGE OF AVAILABLE MEMORY
                                WHICH CAN BE TAKEN BY Q1, Q2, Q3
218   SRMP2WSS    004           PERCENTAGE OF AVAILABLE MEMORY
                                WHICH CAN BE TAKEN BY Q2 AND Q3
21C   SRMP3WSS    004           PERCENTAGE OF AVAILABLE MEMORY
                                WHICH CAN BE TAKEN BY Q3

                        EQUATES

        20     SRMPEWSS

                                THE FOLLOWING TWO FIELDS ARE THE LOW THRESHOLD VALUES USED
                                BY THE E1 ELAPSED TIME SLICE ADJUSTMENT LOGIC IN HCPSTP:

220   SRMC1LOW    002           Q1 + E1 THRESHOLD VALUE
222   SRMC3LOW    002           Q3 + E3 THRESHOLD VALUE
224               F             RESERVED FOR FUTURE IBM USE
228   SRMMNLDC    004           MINIMUM LOADING CAPACITY FOR
                                ..THE SYSTEM.
22C   SRMLDGCP    004           TOTAL 'LOAD CAPACITY'.  THIS IS
                                THE NUMBER OF USERS, PAGING
                                CONTINUOUSLY, REQUIRED TO DRIVE
                                THE PAGING HARDWARE AT ITS
                                MAXIMUM RATE.  IT IS BASED ON
                                NUMBER OF READ EXPOSURES.

                                RESOURCE USAGE MEASURES

230   SRM1AVPG    004           E1 USERS' AVERAGE PAGING RATE,
                                -IN PAGES PER MICROSECOND

                        EQUATES

        01     SRM1MNPG       MINIMUM RATE TO USE FOR E1
                                -USERS' AVERAGE

234   SRM1AVWS    004           E1 USERS' AVERAGE WORKING SET
                                -SIZE
```

EQUATES

	01 SRM1MNWS		MINIMUM WSS TO USE FOR E1 -USERS' AVERAGE
238		F	RESERVED FOR FUTURE IBM USE
23C	SRMWSSDE	004	TOTAL OF WORKING SET SIZES FOR ALL USERS CURRENTLY IN THE ELIGIBLE AND DISPATCH LISTS
240	SRMPGRDE	004	TOTAL LAST-RECORDED PAGING RATES OF ALL USERS CURRENTLY IN THE ELIGIBLE AND DISPATCH LISTS (IN PAGES / SECOND)
244	SRMPGRDL	004	TOTAL LAST-RECORDED PAGING RATES OF ALL USERS CURRENTLY IN THE DISPATCH LIST (IN PAGES / SECOND)
248	SRMTOTST	004	TOTAL STORAGE TO CONSIDER WHEN ..SELECTING VMDBKS FOR THE D-LIST
24C	SRMBLOCK	001	BLOCKED CLASS - USED WHEN ..SELECTING VMDBKS FOR THE D-LIST
24D		X	RESERVED FOR FUTURE IBM USE
24E	SRMSTDSP	002	SMOOTHED TOTAL USERS IN THE ..DISPATCH LIST (Q0, Q1, Q2, Q3)

EQUATES

	05 SRMSSCAN		NUMBER OF VMDBKS TO CHECK IN A .."SHORT SCAN" OF THE E-LIST.
	32 SRMLSCAN		NUMBER OF VMDBKS TO CHECK IN A .."LONG SCAN" OF THE E-LIST.
250	SRMHOTIN	004	THE "HOTSHOT INTENSITY". ..THE INTENSITY OF THE HOTSHOT ..BOOST FOR UNSOLICITED TERMINAL ..INTERRUPTS FOR A VMDBK.
254	SRMNEWVM	004	THE VMDBK IN THE DORMANT OR ..ELIGIBLE LIST WHICH LAST (OR ..JUST) RECEIVED NEW WORK. INPUT ..TO E-LIST SCAN FUNCTION WHEN ..THERE ARE NO NEW RESOURCES ..AVAILABLE IN THE D-LIST.
			THE FOLLOWING VALUES ARE USED IN THE E-LIST PRIORITY CALC:
258	SRMEDFF	004	ELIG LIST DELAY FACTOR FEEDBACK THE NEXT 3 FULLWORDS ARE FEEDBACK VALUES FOR THE E-LIST PRIORITY CALCULATION. THEY ADJUST THE PRIORITY VALUES BY CLASS ACCORD- ING TO SYSTEMS ABILITY TO SELECT E-LIST USERS AHEAD OR BEHIND SCHEDULE.
258	SRMEDFF1	004	CLASS 1 E-LIST DELAY FACTOR FDBCK
25C	SRMEDFF2	004	CLASS 2 E-LIST DELAY FACTOR FDBCK
260	SRMEDFF3	004	CLASS 3 E-LIST DELAY FACTOR FDBCK
264	SRMEDFFC	004	CONSTANT USED TO ADJUST EACH EDFF
268	SRMRSCTM	008	CONFIG. CPU TIME RESET INTERVAL
270	SRMHFRST	008	HALF A RESET INTERVAL
278	SRMPGWTF	004	PAGING WEIGHTING FACTOR
27C	SRMCKVAL	004	RELATIVE E1 ETS ADJUSTMENT FACTOR USED BY THE E1 ETS ADJUSTMENT LOGIC IN HCPSTP HOST MULTI-CPU CONTROLS
280	SRMWTCPU	004	MASK OF CPU'S IN WAIT STATE
284	SRMCRCPU	004	COUNT OF CPU'S NOT IN WAIT STATE
288	SRMMSCPU	002	CPU ADDRESS OF MASTER-SIDE CPU
28A	SRMFLAGS	001	FLAG BYTE OF SYSTEM STATUS ..IMPORTANT TO THE SCHEDULER/ ..DISPATCHER.

BITS DEFINED IN SRMFLAGS (AT HEX DISPLACEMENT: 28A)

	80	SRMAWAIT	SET WHEN "ACTIVE WAIT" IS BEING ..USED. FOR A DESCRIPTION OF .."ACTIVE WAIT", SEE THE PROLOG ..OF THE HCPWAI MODULE.
	40	SRMPRMPT	PRE-EMPTION REQUIRED
	20	SRMFRSTP	FIRST PASS THROUGH HCPSCHSE FOR ..THIS SEARCH FOR USERS.
	10	SRMCKELI	CHECK THE ELIGIBLE LIST FOR ..USERS TO ADD TO THE D-LIST
	08	SRMNWRSC	SET WHEN E-LIST IS SEARCHED FOR ..USERS FOR PROMOTION FOLLOWING ..NEW RESOURCES IN THE D-LIST.
	00	SRMCLEAR	FLAG CLEARING EQUATE
28B	SRMTIDCT	001	TOLERANCE OF TEST-IDLE LACK OF ..USE BEFORE TEST-IDLE IS NO ..LONGER USED FOR A VMDBK.
28C	SRMMSPFX	004	MASTER'S PREFIX PAGE ADDRESS
290	SRMDCPUM	004	DEDICATED PROCESSOR BIT MAP
294	SRMSTPTB	004	POINTER TO STP'S SMOOTHING TABLE
298	SRMMVESL	008	MAXIMUM ELAPSED TIMESLICE. REQUIRED ONLY FOR USERS WHOSE ETS IS CALCULATED PROPORTIONAL TO THEIR WORKING SET SIZE.
2A0	SRMWSSDL	004	START OF TOTAL WORKING SET SIZE TABLE. SUM OF WSS'S FOR ALL USERS (Q0...Q3) CURRENTLY IN THE DISPATCH LIST.
2A4	SRMWSSD1	004	SUM OF WSS'S FOR ALL Q1, Q2, AND Q3 USERS CURRENTLY IN THE DISPATCH LIST.
2A8	SRMWSSD2	004	SUM OF WSS'S FOR ALL Q2 AND Q3 USERS CURRENTLY IN THE DISPATCH LIST.
2AC	SRMWSSD3	004	SUM OF WSS'S FOR ALL Q3 USERS CURRENTLY IN THE DISPATCH LIST.
2B0	SRMWSSLG	004	START OF LARGEST USER THAT CAN FIT INTO STORAGE BY CLASS TABLE. EQUIVALENT TO TOTAL UNUSED STORAGE AVAILABLE PER CLASS. USED TO DETERMINE IF A USER SHOULD BE ALLOWED INTO THE DISPATCH LIST. FIRST ENTRY IS FOR INDEXING ONLY SINCE CLASS 0 USERS ARE ALWAYS ALLOWED IN THE DISPATCH LIST.
2B4	SRMWSSL1	004	LARGEST E1 USER THAT CAN FIT INTO STORAGE = TOTAL UNUSED Q1 STORAGE
2B8	SRMWSSL2	004	LARGEST E2 USER THAT CAN FIT INTO STORAGE = TOTAL UNUSED Q2 STORAGE
2BC	SRMWSSL3	004	LARGEST E3 USER THAT CAN FIT INTO STORAGE = TOTAL UNUSED Q3 STORAGE

EQUATES

04	SRMWSSEL	SIZE OF AN ENTRY FOR THE SRMWSSDL AND SRMWSSLG (ALSO SRMPCWSS) TABLES

2C0	SRMCTGRW	004	COUNT DROPS FOR GROWTH LIMIT.
2C4	SRMCTLCK	004	COUNT DROPS FOR LOCKSHOT END.
2C8	SRMCTPRM	004	COUNT DROPS FOR PREEMPTION.
2CC		F	RESERVED FOR FUTURE IBM USE
2D0		F	RESERVED FOR FUTURE IBM USE
2D4		F	RESERVED FOR FUTURE IBM USE

```
                        ADJUNCT LIST LOCK
2D8   SRMALOCK   008    ADJUNCT LIST LOCK
                        * * * WARNING: THIS AREA IS MAPPED BY THE SYNBK COPY FILE.
                        * * * THE AREA MUST BE 3 DOUBLE WORDS.
                        SCHEDULER LOCK
2F0   SRMSLOCK   008    SCHEDULER LOCK
                        * * * WARNING: THIS AREA IS MAPPED BY THE SYNBK COPY FILE.
                        * * * THE AREA MUST BE 3 DOUBLE WORDS.

                  EQUATES

      61    SRMSIZE     SRMBK SIZE IN DOUBLE WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SRMABSDE	004	150	SRMC3LOW	002	222	SRMFLAGS	001	28A
SRMABSDL	004	144	SRMDCPUM	004	290	SRMFRSTP	001	020
SRMADJL	004	0A0	SRMDFLDG	004	1DC	SRMHFRST	008	270
SRMALOCK	008	2D8	SRMDFWSS	004	204	SRMHOTIN	004	250
SRMAPGDE	004	0F8	SRMDLADD	004	00C	SRMLDGCP	004	22C
SRMATOD	008	138	SRMDLSCN	004	008	SRMLDGFC	002	0F2
SRMAWAIT	001	080	SRMDLTLD	008	120	SRMLDGFW	004	0F0
SRMAWSDE	004	0FC	SRMDSPEL	001	002	SRMLDGUS	002	0F0
SRMBIASD	002	188	SRMDSVMW	004	0A4	SRMLEDSP	001	1C8
SRMBIASI	004	184	SRMD1DSP	002	1CA	SRMLMDSP	002	1C0
SRMBK	001	000	SRMD1LDG	004	1DC	SRMLMLDG	002	1D0
SRMBLOCK	001	24C	SRMD1WSS	004	204	SRMLMTEL	001	004
SRMCDISP	002	048	SRMD2DSP	002	1CC	SRMLOTHR	004	154
SRMCDLDG	002	050	SRMD2LDG	004	1E0	SRMLSCAN	001	032
SRMCDORM	004	068	SRMD2WSS	004	208	SRMLSTEL	001	003
SRMCELDG	002	060	SRMD3DSP	002	1CE	SRML1DSP	002	1C2
SRMCELIG	002	058	SRMD3LDG	004	1E4	SRML1LDG	002	1D2
SRMCKELI	001	010	SRMD3WSS	004	20C	SRML2DSP	002	1C4
SRMCKVAL	004	27C	SRMEDFF	004	258	SRML2LDG	002	1D4
SRMCLEAR	001	000	SRMEDFFC	004	264	SRML3DSP	002	1C6
SRMCLS0	001	000	SRMEDFF1	004	258	SRML3LDG	002	1D6
SRMCLS1	001	002	SRMEDFF2	004	25C	SRMMLIST	004	004
SRMCLS2	001	004	SRMEDFF3	004	260	SRMMNLDC	004	228
SRMCLS3	001	006	SRMELIST	004	000	SRMMNPGR	004	104
SRMCRCPU	004	284	SRMEONE	001	001	SRMMSCPU	002	288
SRMCTBEL	001	002	SRMEPNFC	001	070	SRMMSPFX	004	28C
SRMCTBLN	001	004	SRMEPNF0	002	070	SRMMVESL	008	298
SRMCTGRW	004	2C0	SRMEPNF1	002	072	SRMMXPAG	004	108
SRMCTLCK	004	2C4	SRMEPNF2	002	074	SRMNCPUA	002	18A
SRMCTPRM	004	2C8	SRMEPNF3	002	076	SRMNEWVM	004	254
SRMCTSHF	001	001	SRMETHRE	001	003	SRMNWRSC	001	008
SRMCUSRE	001	068	SRMETSDC	004	1AC	SRMPCLDG	004	1E8
SRMCUSRL	001	020	SRMETSIN	004	1A8	SRMPCWSS	004	210
SRMC1DLD	002	052	SRMETSLC	002	1B8	SRMPELDG	001	1F8
SRMC1DSP	002	04A	SRMETSMN	008	198	SRMPEWSS	001	220
SRMC1ELD	002	062	SRMETSMX	008	1A0	SRMPGRDE	004	240
SRMC1ELG	002	05A	SRMETWO	001	002	SRMPGRDL	004	244
SRMC1LOW	002	220	SRMEZERO	001	000	SRMPGRLD	004	118
SRMC2DLD	002	054	SRME0ETF	002	1B8	SRMPGSRW	004	10C
SRMC2DSP	002	04C	SRME1ADD	004	014	SRMPGWTF	004	278
SRMC2ELD	002	064	SRME1ETF	002	1BA	SRMPRMPT	001	040
SRMC2ELG	002	05C	SRME1ETS	008	190	SRMP1LDG	004	1EC
SRMC3DLD	002	056	SRME2ADD	004	018	SRMP1WSS	004	214
SRMC3DSP	002	04E	SRME2ETF	002	1BC	SRMP2LDG	004	1F0
SRMC3ELD	002	066	SRME3ADD	004	01C	SRMP2WSS	004	218
SRMC3ELG	002	05E	SRME3ETF	002	1BE	SRMP3LDG	004	1F4

Name	Len	Val/Disp	Name	Len	Val/Disp
SRMP3WSS	004	21C	SRMVMTID	004	010
SRMRELDE	004	14C	SRMWSSDE	004	23C
SRMRELDL	004	140	SRMWSSDL	004	2A0
SRMRSCTM	008	268	SRMWSSD1	004	2A4
SRMRSRVP	004	180	SRMWSSD2	004	2A8
SRMRTBEL	001	004	SRMWSSD3	004	2AC
SRMRTBEN	001	180	SRMWSSEL	001	004
SRMRTBL	004	158	SRMWSSLG	004	2B0
SRMRTBSZ	001	00A	SRMWSSL1	004	2B4
SRMRTHRU	004	148	SRMWSSL2	004	2B8
SRMRVLTM	008	040	SRMWSSL3	004	2BC
SRMSDORL	004	098	SRMWSSMN	004	1F8
SRMSDSPE	001	080	SRMWSSMP	004	1FC
SRMSDSPL	002	078	SRMWTCPU	004	280
SRMSDSP1	002	07A	SRMXPCTG	004	200
SRMSDSP2	002	07C	SRMXSIZE	004	0E8
SRMSDSP3	002	07E	SRMXSRTE	004	100
SRMSELGE	001	090	SRM1AVPG	004	230
SRMSELGL	002	088	SRM1AVWS	004	234
SRMSELG1	002	08A	SRM1MNPG	001	001
SRMSELG2	002	08C	SRM1MNWS	001	001
SRMSELG3	002	08E			
SRMSIZE	001	061			
SRMSLDDE	001	088			
SRMSLDDL	002	080			
SRMSLDD1	002	082			
SRMSLDD2	002	084			
SRMSLDD3	002	086			
SRMSLDEL	002	090			
SRMSLDE1	002	092			
SRMSLDE2	002	094			
SRMSLDE3	002	096			
SRMSLOCK	008	2F0			
SRMSPGRT	004	0F4			
SRMSPLIN	004	06C			
SRMSSCAN	001	005			
SRMSSTEL	004	0AC			
SRMSTDSP	002	24E			
SRMSTEAL	004	0A8			
SRMSTORP	004	09C			
SRMSTORQ	004	0EC			
SRMSTPTB	004	294			
SRMSTRD	008	110			
SRMSTSRW	004	134			
SRMSUSRC	001	070			
SRMSUSRE	001	098			
SRMTATM	001	0C8			
SRMTATM1	008	0C8			
SRMTATM2	008	0D0			
SRMTATM3	008	0D8			
SRMTDTM	001	0B0			
SRMTDTM1	008	0B0			
SRMTDTM2	008	0B8			
SRMTDTM3	008	0C0			
SRMTIDCT	001	28B			
SRMTIDLE	008	0E0			
SRMTIMIN	008	030			
SRMTIMN	004	030			
SRMTODSV	008	038			
SRMTOTDE	004	14C			
SRMTOTLS	004	140			
SRMTOTST	004	248			
SRMTSHOT	008	028			
SRMTSLIC	008	020			
SRMT1PGR	004	12C			
SRMT1USR	004	130			
SRMT1WSS	004	128			
SRMUSERC	001	048			
SRMVFACT	004	18C			

HCPSSABK— STATIC SAVE AREA BLOCK

DSECT NAME: SSABK

DESCRIPTIVE NAME: STATIC SAVE AREA BLOCK

FUNCTION: MAP PROCESSOR LOCAL SAVE AREAS

LOCATED BY:

PFXSSA, HCPSSASA

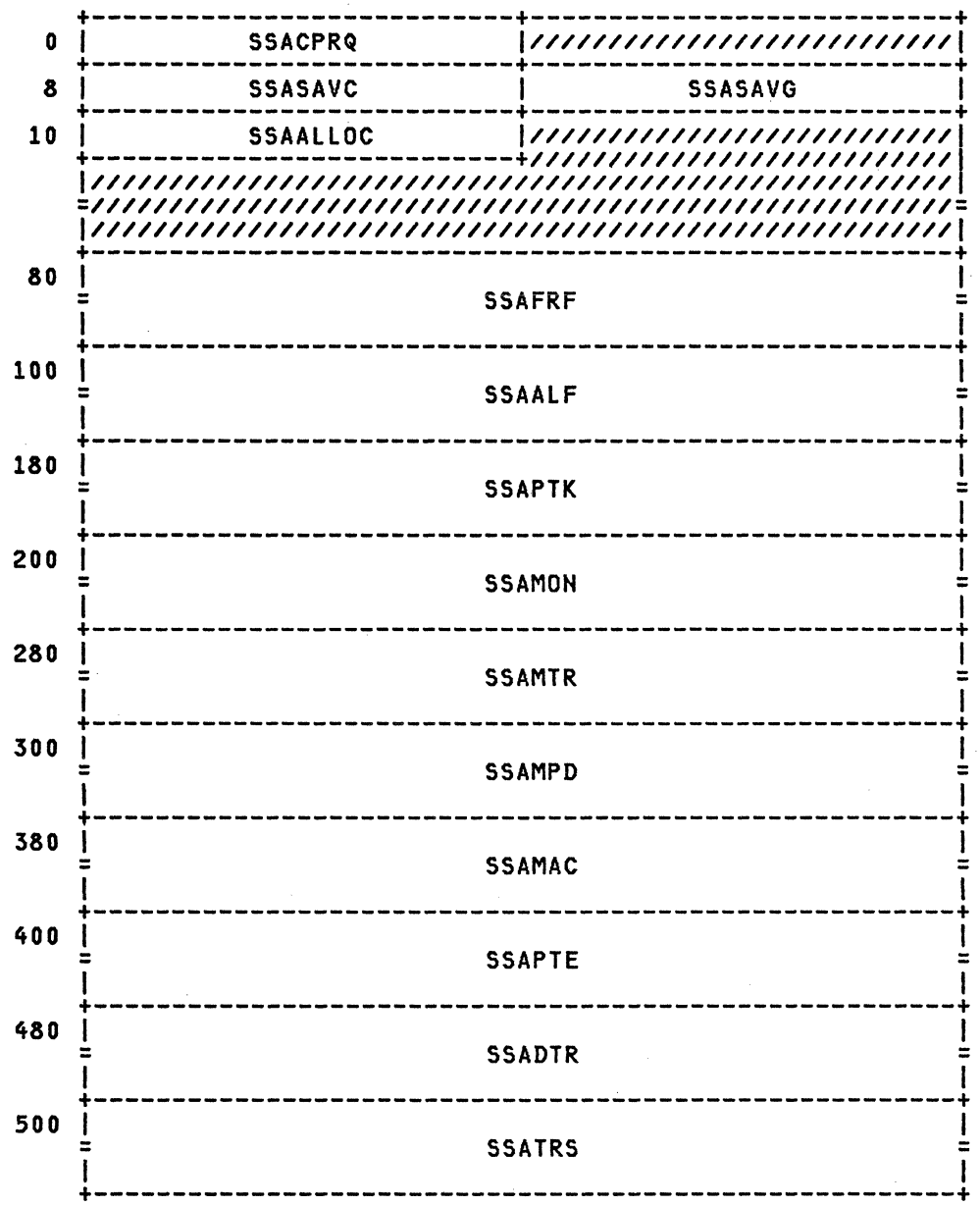
CREATED BY:

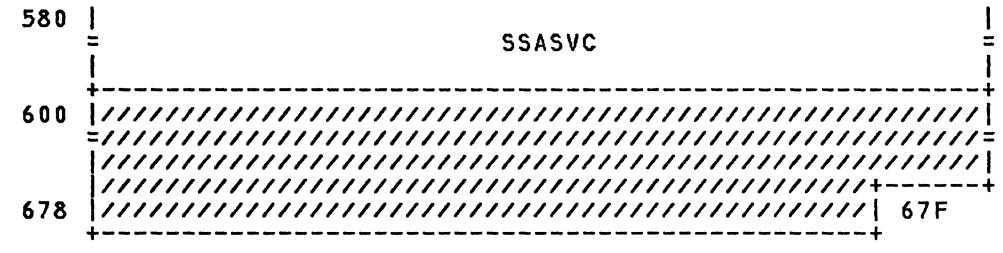
HCPSVCON, HCPSSA

DELETED BY:

HCPSVCOF

SSABK - STATIC SAVEAREA BLOCK





disp	name	length	description
000	SSACPRQ	004	CPRQ COUNT
004		A(0)	CPRQ ANCHOR
008	SSASAVC	004	ACTUAL NUMBER OF SAVEAREAS
00C	SSASAVG	004	AVERAGE NUMBER OF SAVEAREAS
010	SSAALLOC	004	ALLOCATED ADDRESS OF SSABK
014		27F	RESERVED
080	SSAFRF	128	RSM
100	SSAALF	128	RSM
180	SSAPTK	128	RSM
200	SSAMON	128	MONITOR
280	SSAMTR	128	MONITOR
300	SSAMPD	128	RCPU MP DEFER SAVEAREA
380	SSAMAC	128	RSM MACRO REGISTER SAVEAREA
400	SSAPTE	128	RSM PTE SAVEAREA
480	SSADTR	128	TRACE SERVICES SAVEAREA
500	SSATRS	128	TRACE SERVICES SAVEAREA
580	SSASVC	128	TRACE SERVICES SAVEAREA (SVC)
600		XL127	

EQUATES

D0	SSASIZE	SIZE OF SSABK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
SSAALF	128	100
SSAALLOC	004	010
SSABK	001	000
SSACPRQ	004	000
SSADTR	128	480
SSAFRF	128	080
SSAMAC	128	380
SSAMON	128	200
SSAMPD	128	300
SSAMTR	128	280
SSAPTE	128	400
SSAPTK	128	180
SSASAVC	004	008
SSASAVG	004	00C
SSASIZE	001	0D0
SSASVC	128	580
SSATRS	128	500

HCPSSMBK— SNAP SAVEAREAS MAP BLOCK

DSECT NAME: SSMBK

DESCRIPTIVE NAME: SNAP SAVEAREAS MAP BLOCK

FUNCTION: A SSMBK IDENTIFIES WHERE IN THE SNAP BUFFERS STANDARD CP SAVEAREAS ARE PRESERVED.

LOCATED BY:

THE SSMBK IS LOCATED BY A SNAPPED AREAS MAP CONTROL BLOCK (HCPSAMBK)

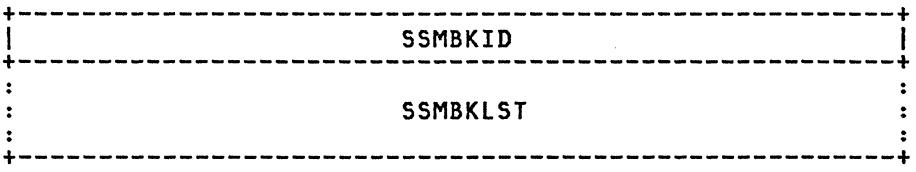
CREATED BY:

THE SOFT ABEND PROCESSOR (HCPABN)

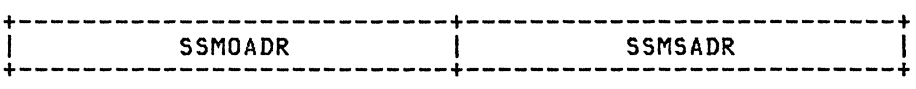
DELETED BY:

N/A

SSMBK - SNAP SAVEAREAS MAP BLOCK



REDEFINITION - SNAP SAVEAREAS MAP LIST



disp	name	length	description
000		0F	FORCE WORD BOUNDARY
000	SSMBKID	008	EYECATCHER FOR IDENTIFICATION
008	SSMBKLST	004	START OF VARIABLE LENGTH DATA
	REDEFINITION - SNAP SAVEAREAS MAP LIST		
008	SSMOADR	004	ORIGINATING SAVEAREA ADDRESS
00C	SSMSADR	004	SAVED SAVEAREA ADDRESS
	EQUATES		
	08 SSMENTLN		LENGTH OF SNAP SAVEAREAS MAP LIST ENTRY
	10 SSMBKLN		LENGTH OF SNAP SAVEAREAS MAP LIST ENTRY AND THE EYECHATCHER
010	SSMNEXT	004	NEXT SNAP SAVEAREAS MAP LIST ENTRY

CROSS REFERENCE

Name	Len	Val/Disp
SSMBK	001	000
SSMBKID	008	000
SSMBKLN	001	010
SSMBKLST	004	008
SSMENTLN	001	008
SSMNEXT	004	010
SSMOADR	004	008
SSMSADR	004	00C

HCPSTDBK— SYSTEM TERMINATION DATA BLOCK

DSECT NAME: STDBK

DESCRIPTIVE NAME: SYSTEM TERMINATION DATA BLOCK

FUNCTION: CONTAINS ALL CRITICAL SYSTEM DATA WHICH IS LIKELY TO CHANGE DURING SYSTEM ABEND PROCESSING

LOCATED BY:

PFXSTDBK FIELD OF THE PFXPG
IF THE STDBK FOR A PROCESSOR HAS NOT BEEN ALLOCATED,
A BACKUP STDBK AT HCPDMPBK IS USED.

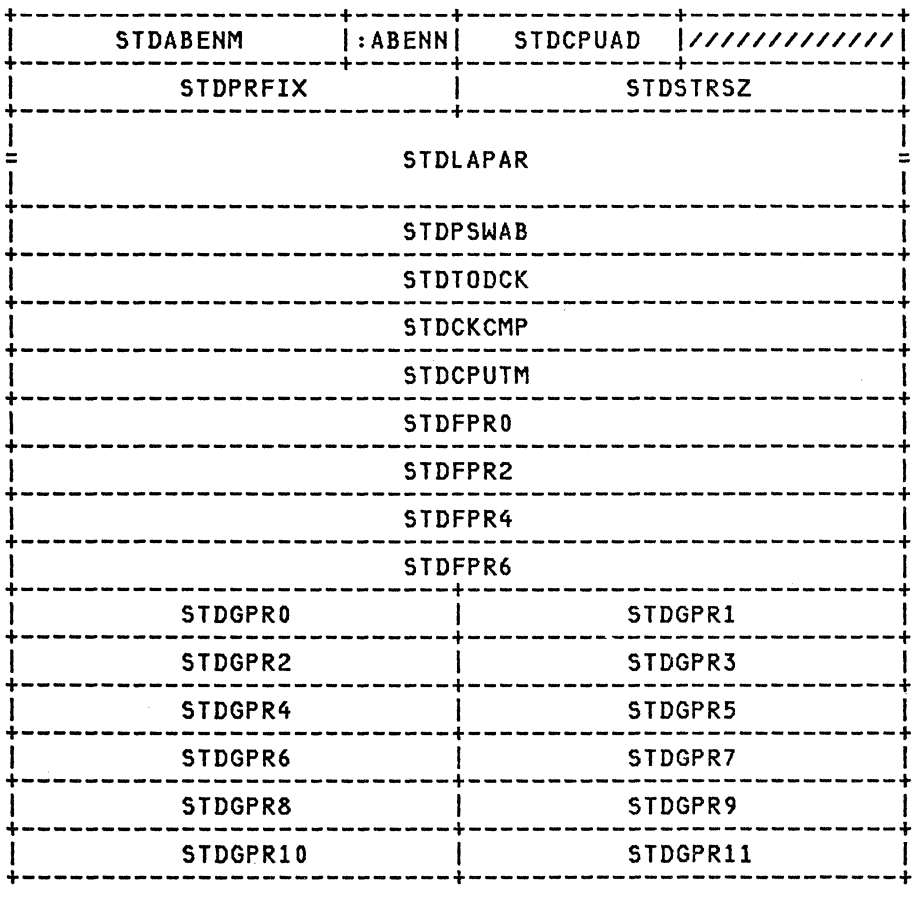
CREATED BY:

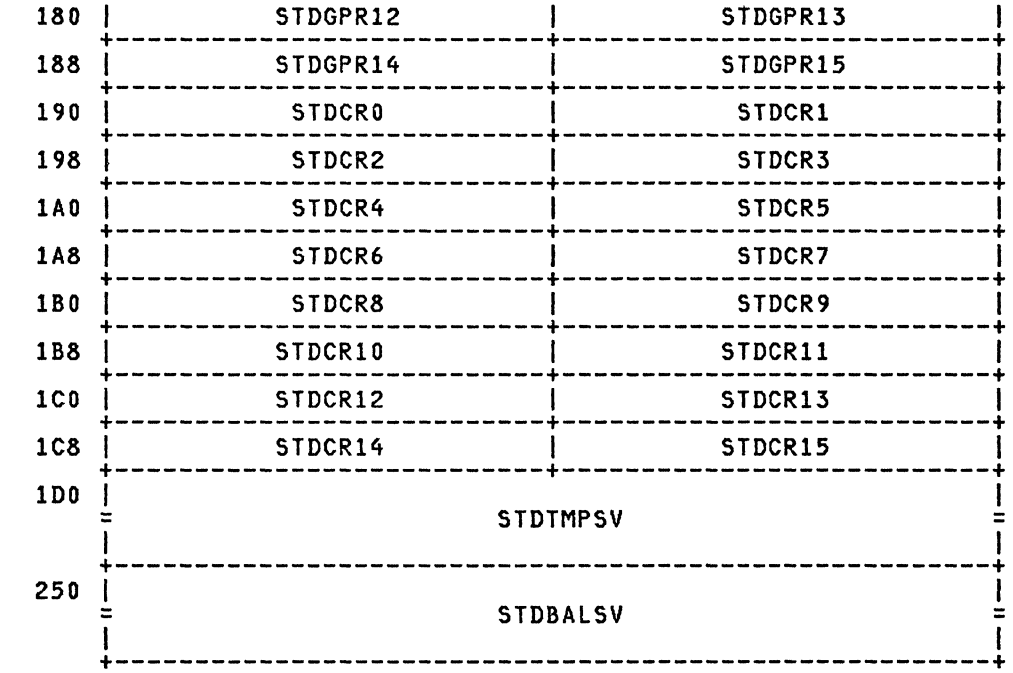
ALLOCATED BY -
HCPMPS (MULTI-PROCESSOR STORAGE ALLOCATOR)
DURING PROCESSOR INITIALIZATION
INITIALIZED BY -
HCPDMP (SYSTEM ABEND DUMP PROCESSOR) DURING
SYSTEM ABEND DUMP PROCESSING
HCPSVC (SVC ABEND INTERRUPT HANDLER) WHEN
SETTING UP FOR SYSTEM ABEND DUMP
HCPWRP (SYSTEM TERMINATOR) WHEN TERMINATING
THE SYSTEM DUE TO AN ABEND

DELETED BY:

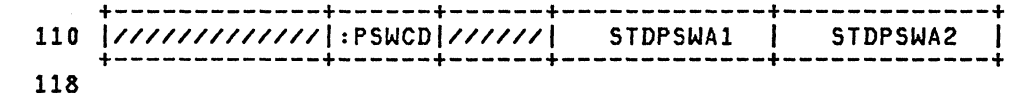
HCPMPS (MULTI-PROCESSOR STORAGE DE-ALLOCATOR) WHEN A
PROCESSOR IS VARIED OFFLINE
(THE BACKUP STDBK AT HCPDMPBK IS NOT DELETED.)

STDBK - SYSTEM TERMINATION DATA BLOCK





REDEFINITION - REDEFINE ABEND PSW



disp	name	length	description
000	STDABEND	004	CP ABNORMAL TERMINATION CODE
000	STDABENM	003	CP ABEND MODULE ID
003	STDABENN	001	CP ABEND DETAIL CODE
004	STDCPUAD	002	'STAP' PROCESSOR ADDRESS
006		XL2	RESERVED FOR FUTURE IBM USE
008	STDPRFIX	004	PREFIX PAGE ADDRESS
00C	STDSTRSZ	004	AVAILABLE STORAGE SIZE OF SYSTEM
010	STDLAPAR	256	AREA PROTECTED BY L.A.P. FEATURE
110	STDPSWAB	008	ABENDING PSW
118	STDCLOKS	024	CLOCKS
118	STDTODCK	008	TOD OF DAY CLOCK
120	STDCKCMP	008	CLOCK COMPARATOR
128	STDCPUTM	008	CPU TIMER
130	STDFPRLG	032	FLOATING POINT REGISTER LOGOUT AREA
130	STDFPR0	008	FLOATING POINT REGISTER 0
138	STDFPR2	008	FLOATING POINT REGISTER 2
140	STDFPR4	008	FLOATING POINT REGISTER 4
148	STDFPR6	008	FLOATING POINT REGISTER 6
150	STDGPRLG	064	GENERAL REGISTER LOGOUT AREA
150	STDGPR0	004	GENERAL REGISTER 0
154	STDGPR1	004	GENERAL REGISTER 1
158	STDGPR2	004	GENERAL REGISTER 2
15C	STDGPR3	004	GENERAL REGISTER 3
160	STDGPR4	004	GENERAL REGISTER 4
164	STDGPR5	004	GENERAL REGISTER 5
168	STDGPR6	004	GENERAL REGISTER 6
16C	STDGPR7	004	GENERAL REGISTER 7
170	STDGPR8	004	GENERAL REGISTER 8
174	STDGPR9	004	GENERAL REGISTER 9
178	STDGPR10	004	GENERAL REGISTER 10

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17C   STDGPR11   004       GENERAL REGISTER 11
180   STDGPRCF   016       GENERAL REGISTERS 12 THRU 15
180   STDGPR12   004       GENERAL REGISTER 12
184   STDGPR13   004       GENERAL REGISTER 13
188   STDGPR14   004       GENERAL REGISTER 14
18C   STDGPR15   004       GENERAL REGISTER 15
190   STDCRLG    064       CONTROL REGISTER LOGOUT AREA
190   STDCR0     004       CONTROL REGISTER 0
194   STDCR1     004       CONTROL REGISTER 1
198   STDCR2     004       CONTROL REGISTER 2
19C   STDCR3     004       CONTROL REGISTER 3
1A0   STDCR4     004       CONTROL REGISTER 4
1A4   STDCR5     004       CONTROL REGISTER 5
1A8   STDCR6     004       CONTROL REGISTER 6
1AC   STDCR7     004       CONTROL REGISTER 7
1B0   STDCR8     004       CONTROL REGISTER 8
1B4   STDCR9     004       CONTROL REGISTER 9
1B8   STDCR10    004       CONTROL REGISTER 10
1BC   STDCR11    004       CONTROL REGISTER 11
1C0   STDCR12    004       CONTROL REGISTER 12
1C4   STDCR13    004       CONTROL REGISTER 13
1C8   STDCR14    004       CONTROL REGISTER 14
1CC   STDCR15    004       CONTROL REGISTER 15
1D0   STDTMPSV   128       TEMPORARY SAVE AREA
250   STDBALSV   128       BALR LINKAGE SAVE AREA
```

EQUATES

```
5A    STDSIZE    SIZE OF SYSTEM TERM. DUMP BLOCK
```

REDEFINITION - REDEFINE ABEND PSW

```
110               H
112   STDPSWCD   001       CONDITION CODE AT SYSTEM FAILURE
113               X
114   STDPSWA    004       PSW ADDRESS AT SYSTEM FAILURE
114   STDPSWA1   002       1ST HALF OF PSW ADDRESS
116   STDPSWA2   002       2ND HALF OF PSW ADDRESS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
STDABEND	004	000	STDCR4	004	1A0	STDGPR15	004	18C
STDABENM	003	000	STDCR5	004	1A4	STDGPR2	004	158
STDABENN	001	003	STDCR6	004	1A8	STDGPR3	004	15C
STDBALSV	128	250	STDCR7	004	1AC	STDGPR4	004	160
STDBK	001	000	STDCR8	004	1B0	STDGPR5	004	164
STDCKCMP	008	120	STDCR9	004	1B4	STDGPR6	004	168
STDCLOKS	024	118	STDFPRLG	032	130	STDGPR7	004	16C
STDCPUAD	002	004	STDFPR0	008	130	STDGPR8	004	170
STDCPUTM	008	128	STDFPR2	008	138	STDGPR9	004	174
STDCRLG	064	190	STDFPR4	008	140	STDLAPAR	256	010
STDCR0	004	190	STDFPR6	008	148	STDPRFIX	004	008
STDCR1	004	194	STDGPRCF	016	180	STDPSWA	004	114
STDCR10	004	1B8	STDGPRLG	064	150	STDPSWAB	008	110
STDCR11	004	1BC	STDGPR0	004	150	STDPSWA1	002	114
STDCR12	004	1C0	STDGPR1	004	154	STDPSWA2	002	116
STDCR13	004	1C4	STDGPR10	004	178	STDPSWCD	001	112
STDCR14	004	1C8	STDGPR11	004	17C	STDSIZE	001	05A
STDCR15	004	1CC	STDGPR12	004	180	STDSTRSZ	004	00C
STDCR2	004	198	STDGPR13	004	184	STDTMPSV	128	1D0
STDCR3	004	19C	STDGPR14	004	188	STDTODCK	008	118

HCPSTLBK— SEGMENT TABLE ENTRY LIST BLOCK

DSECT NAME: STLBK

DESCRIPTIVE NAME: SEGMENT TABLE ENTRY LIST BLOCK

FUNCTION: THERE IS A SEGMENT TABLE ENTRY LIST BLOCK FOR EACH ACTIVE NAMED SAVED SYSTEM (NSS) OR DISCONTIGUOUS SAVED SEGMENT (DCSS). WITHIN THE BLOCK THERE IS ONE SEGMENT TABLE ENTRY FOR EACH MEGABYTE OF ADDRESS SPACE IN THE NSS OR DCSS. THE SEGMENTS CAN BE SHARED OR EXCLUSIVE. THE NUMBER OF SEGMENTS DETERMINES THE SIZE OF THE BLOCK.

LOCATED BY:

SNTSTLPT FIELD OF HCPSNTBK

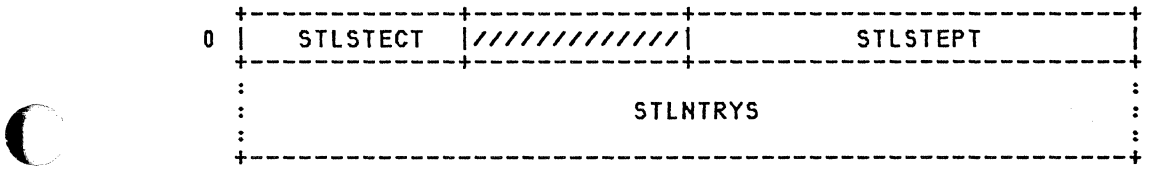
CREATED BY:

HCPBPBSL WHEN AT NSS OR DCSS IS FIRST REFERENCED
AN STLBK IS ATTACHED TO THE USER VIA AN IMBED OPERATION.
ENTRY POINT HCPBPBIM PERFORMS IMBED OPERATIONS.

DELETED BY:

HCPRPBSL WHEN A NSS OR DCSS IS NO LONGER ACTIVE.
AN STLBK IS DETACHED FROM THE USER VIA A REMOVE OPERATION.
MODULE HCPRPBRM PERFORMS REMOVE OPERATIONS.

STLBK - SEGMENT TABLE ENTRY LIST BLOCK



disp	name	length	description
000	STLSTECT	002	NUMBER OF SEGMENT TABLE ENTRIES WITHIN THE STLBK. THE SIZE OF THE CONTROL BLOCK CAN BE DETERMINED BY: ((STLSTECT*4)+STLHDRLN+7)/8. ROUND THE QUOTIENT DOWN.
002		H	RESERVED FOR FUTURE IBM USE

EQUATES

04	STLHDRLN	LENGTH OF CONTROL BLOCK HEADER

004	STLSTEPT	004	FIRST STLBK SEGMENT TABLE ENTRY (SEGTE) WHICH POINTS TO A PAGE MANAGEMENT BLOCK (PGMBK). THIS FIELD CAN BE MAPPED BY COPY FILE HCPSEGTE. THE SEGMENT INVALID BIT (SEGINVAL=1) IS USED WITHIN AN STLBK SEGTE TO INDICATE THAT THE SEGMENT IS EXCLUSIVE AND THAT THE USER MUST BE GIVEN ACCESS TO A COPY OF THE ASSOCIATED PGMBK.
008	STLNTRYS	004	START OF VARIABLE LENGTH DATA THE STLBK CAN HAVE A VARIABLE

NUMBER OF SEGMENT TABLE ENTRIES.
THERE IS ONE STLBK SEGMENT
TABLE ENTRY FOR EACH MEGABYTE
OF ADDRESS SPACE REPRESENTED
BY THE STLBK.
IF THERE IS MORE THAN ONE
SEGMENT TABLE ENTRY, THE REST
OF THE SEGMENT TABLE ENTRIES
WITHIN THE STLBK START AT THIS
FIELD.
SINCE THE SEGMENT TABLE ENTRIES
IN THE STLBK ARE MAPPED
BY COPY FILE HCPSEGTE, THE
ADDRESS OF THE NEXT SEGMENT
TABLE ENTRY WITHIN THE STLBK
CAN BE FOUND USING SEGNEXT.
STLNTRYS CANNOT BE USED TO
ADDRESS THE NEXT SEGMENT TABLE
ENTRY WITHIN THE STLBK

CROSS REFERENCE

Name	Len	Val/Disp
STLBK	001	000
STLHDRLN	001	004
STLNTRYS	004	008
STLSTECT	002	000
STLSTEPT	004	004

HCPSUBBK— SUBPOOL DATA AREA BLOCK

DSECT NAME: SUBBK

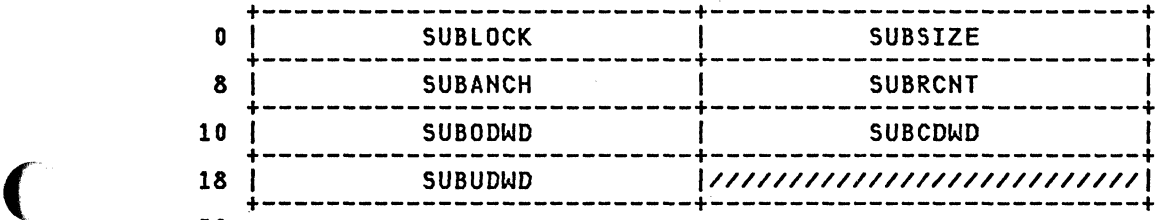
DESCRIPTIVE NAME: SUBPOOL DATA AREA BLOCK

FUNCTION: MAPS EACH OF THE FREE STORAGE SUBPOOL DATA AREA ELEMENTS.

LOCATED BY:

NEVER ALLOCATED

SUBBK - SUBPOOL DATA AREA BLOCK



disp	name	length	description
000	SUBLOCK	004	SUBPOOL LOCK WORD
004	SUBSIZE	004	INTEGRAL SIZE (IN DWDS) OF SUBPOOL BLOCK INCLUDING FRERECL
008	SUBANCH	004	POINTER TO FIRST FRMTE FOR REGULAR FREE STORAGE/FIRST AVAILABLE BLOCK FOR V=R
00C	SUBRCNT	004	COUNT OF REQUESTS THIS SIZE
010	SUBODWD	004	COUNT OF DWD CURRENTLY IN USE (MULTIPLE OF SUBSIZE)
014	SUBCDWD	004	COUNT OF DWDS NOW ON CHAIN
018	SUBUDWD	004	COUNT OF ACTUAL DWD USAGE (DOES NOT INCLUDE INTERNAL FRAGMENTATION)
01C		F	RESERVED FOR FUTURE IBM USE

EQUATES

20	SUBESZ	SIZE OF ONE SUBPOOL ENTRY

CROSS REFERENCE

Name	Len	Val/Disp
SUBANCH	004	008
SUBBK	001	000
SUBCDWD	004	014
SUBESZ	001	020
SUBLOCK	004	000
SUBODWD	004	010
SUBRCNT	004	00C
SUBSIZE	004	004
SUBUDWD	004	018

HCPSXIBK— DIAGNOSE X'64' SEGMENT EXTENDED INPUT AREA

DSECT NAME: SXIBK

DESCRIPTIVE NAME: DIAGNOSE X'64' SEGMENT EXTENDED INPUT AREA

FUNCTION: THIS BLOCK WILL MAP THE SEGMENT EXTENDED INPUT AREA FOR DIAGNOSE X'64' SUBCODE X'18'.

LOCATED BY:

THE POINTER TO THIS AREA IS CONTAINED IN THE RX REGISTER OF THE DIAGNOSE X'64' SUBCODE X'18' FUNCTION.

CREATED BY:

THE RX REGISTER OF DIAGNOSE X'64' SUBCODE X'18' IS SETUP BY THE USER TO POINT TO A USER SUPPLIED BUFFER.
- THIS BUFFER HAS A MINIMUM LENGTH OF THREE DOUBLEWORDS.
- THIS BUFFER MUST RESIDE ON A DOUBLEWORD BOUNDARY AND CANNOT CROSS A PAGE BOUNDARY.
- THE SXIOAREA FIELD DEFINES AN OUTPUT AREA. THIS AREA IS USER SUPPLIED AND MUST RESIDE ON A DOUBLEWORD BOUNDARY AND CANNOT CROSS A PAGE BOUNDARY. THIS AREA IS DEFINED BY THE HCPSXOBK DSECT.

DELETED BY:

THIS AREA IS USER SUPPLIED AND USER DELETED.

disp	name	length	description
000		0D	
000	SXIOPCOD	001	CODE FOR THE OPERATION TO BE PERFORMED
001		XL3	RESERVED FOR IBM USE
004	SXIRCODE	001	RETURN CODE FROM THE FUNCTION
005		XL3	RESERVED FOR IBM USE
008	SXIRNAME	008	THE REQUESTED SEGMENT NAME. THIS NAME IS LEFT JUSTIFIED AND PADDED WITH BLANKS
010	SXIOAREA	004	ADDRESS OF THE OUTPUT AREA
014	SXIOARLN	002	THE LENGTH OF THE OUTPUT AREA
016		XL2	RESERVED FOR IBM USE

EQUATES

03	SXISIZE	SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
SXIDABK	001	000
SXIOAREA	004	010
SXIOARLN	002	014
SXIOPCOD	001	000
SXIRCODE	001	004
SXIRNAME	008	008
SXISIZE	001	003

HCPSXOBK— DIAGNOSE X'64' SEGMENT EXTENDED OUTPUT AREA

DSECT NAME: SXOBK

DESCRIPTIVE NAME: DIAGNOSE X'64' SEGMENT EXTENDED OUTPUT AREA

FUNCTION: THIS BLOCK WILL MAP THE SEGMENT EXTENDED OUTPUT AREA FOR DIAGNOSE X'64' SUBCODE X'18'.

LOCATED BY:

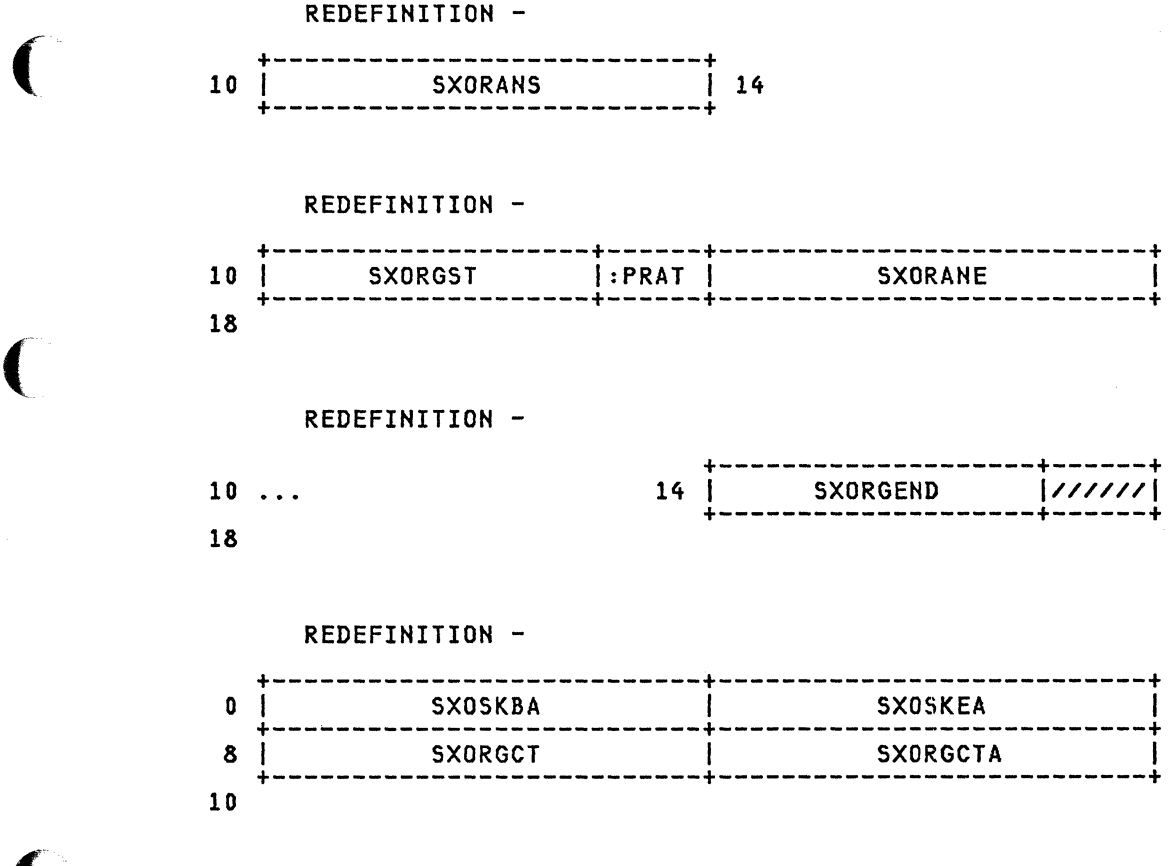
THE POINTER TO THIS AREA IS PROVIDED BY THE SXIOAREA FIELD OF HCPSXIBK COPY. IT IS A USER SUPPLIED AREA THAT MUST BE ON A DOUBLEWORD BOUNDARY AND CANNOT CROSS A PAGE BOUNDARY.

CREATED BY:

THE RX REGISTER OF DIAGNOSE X'64' SUBCODE X'18' IS SETUP BY THE USER TO POINT TO A USER SUPPLIED BUFFER. WITHIN THAT USER SUPPLIED BUFFER, THE USER PROVIDES THE ADDRESS OF THIS AREA WITHIN THE SXIOAREA FIELD OF HCPSXIBK COPY.
- THIS BUFFER MUST RESIDE ON A DOUBLEWORD BOUNDARY AND CANNOT CROSS A PAGE BOUNDARY.

DELETED BY:

THIS AREA IS USER SUPPLIED AND USER DELETED.



disp	name	length	description

000		0D	
000	SXOLSBA	004	BEGINNING ADDRESS OF THE SEGMENT SPACE. THE ADDRESS OF THE MEGABYTE BOUNDARY CONTAINING THE LOWEST PAGE DEFINITION OF THE SEGMENT SPACE IS RETURNED.
004	SXOLSEA	004	ENDING ADDRESS OF THE SEGMENT SPACE. THE LAST ADDRESS OF THE MEGABYTE IN WHICH THE PAGE WITH THE HIGHEST DEFINITION RESIDES IS RETURNED.
008	SXOLSNAM	008	NAME OF THE SEGMENT SPACE THAT CONTAINS THE REQUESTED SAVED SEGMENT
010	SXOASM2	008	PAGE RANGE INFORMATION

EQUATES

80	SXOPRMAX	THE MAXIMUM NUMBER OF PAGE RANGE ENTRYS

REDEFINITION

REDEFINITION -

REDEFINITION -

REDEFINITION -

000	SXOSKBA	004	BEGINNING ADDRESS OF THE SKELETON SEGMENT OR THE ACTIVE SEGMENT. IF THE REQUEST WAS FOR A MEMBER SAVED SEGMENT, THEN THE ADDRESS RETURNED IS THE LOWEST PAGE VALUE DEFINED FOR THE MEMBER. IF THE REQUEST WAS FOR A SAVED SEGMENT, THEN THE LOWEST PAGE VALUE DEFINED FOR THE SAVED SEGMENT IS RETURNED. IF THE REQUEST WAS FOR A SEGMENT SPACE THEN THE BEGINNING ADDRESS OF A SEGMENT SPACE RETURNED IS THE FIRST BYTE OF THE PAGE WITH THE LOWEST SPECIFIED VALUE DEFINED BY ONE OF IT'S MEMBERS.
004	SXOSKEA	004	ENDING ADDRESS OF THE SKELETON SEGMENT OR THE ACTIVE SEGMENT. IF THE REQUEST WAS FOR A MEMBER SAVED SEGMENT, THEN THE ADDRESS RETURNED IS THE HIGHEST PAGE VALUE DEFINED FOR THE MEMBER. IF THE REQUEST WAS FOR A SAVED SEGMENT, THEN THE HIGHEST PAGE VALUE DEFINED FOR THE SAVED SEGMENT IS RETURNED. IF THE REQUEST WAS FOR A SEGMENT SPACE THEN, THE ENDING ADDRESS OF A SEGMENT SPACE RETURNED IS THE LAST BYTE OF THE PAGE WITH THE HIGHEST SPECIFIED VALUE DEFINED BY ONE OF IT'S MEMBERS.
008	SXORGCT	004	A COUNT OF THE VALID PAGE RANGE ENTRY PAIRS (SXORGST AND SXORGEND)
00C	SXORGCTA	004	A COUNT OF THE VALID PAGE RANGE ENTRY PAIRS (SXORGST AND SXORGEND) THAT WERE ACTUALLY PLACED IN THE OUTPUT PAGE RANGE TABLE. THIS MAY BE USED WHEN THE OUTPUT BUFFER PROVIDED WAS NOT LARGE ENOUGH TO CONTAIN ALL THE PAGE RANGE ENTRIES THAT WERE AVAILABLE (SXORGCT).

MORE EQUATES

001	SXOEXCL	THIS BIT INDICATES SEGMENTS THAT MAY NOT BE SHARED AMONG SEVERAL USERS. EACH USER GETS A SEPARATE COPY OF THIS SEGMENT.
002	SXOPROT	THIS BIT INDICATES PAGE RANGES THAT ARE PAGE PROTECTED. USERS MAY ACCESS THESE PAGES ONLY IN READ-ONLY MODE.
004	SXONDAT	THIS BIT INDICATES PAGE RANGES WHOSE DATA IS NOT SAVED INTO THE SDF (NO DATA).

HOW PAGE DESCRIPTOR CODES CORRESPOND TO SETTINGS OF SXOPRAT:

CODE	SXOPRAT	SXONDAT	SXOPROT	SXOEXCL
SW	000	0=DATA	0=UNPROTECTED (READ/WRITE)	0=SHARED
EW	001	0=DATA	0=UNPROTECTED (READ/WRITE)	1=EXCLUSIVE
SR	010	0=DATA	1=PROTECTED (READ-ONLY)	0=SHARED
ER	011	0=DATA	1=PROTECTED (READ-ONLY)	1=EXCLUSIVE
SN	100	1=NODATA	0=UNPROTECTED (READ/WRITE)	0=SHARED
EN	101	1=NODATA	0=UNPROTECTED (READ/WRITE)	1=EXCLUSIVE
SC	110	1=NODATA	1=PROTECTED (READ-ONLY)	0-SHARED

000	SXORNGSW	RANGE FLAG VALUE FOR 'SW'
001	SXORNGEW	RANGE FLAG VALUE FOR 'EW'
002	SXORNGSR	RANGE FLAG VALUE FOR 'SR'
003	SXORNGER	RANGE FLAG VALUE FOR 'ER'
004	SXORNGSN	RANGE FLAG VALUE FOR 'SN'
005	SXORNGEN	RANGE FLAG VALUE FOR 'EN'
006	SXORNGSC	RANGE FLAG VALUE FOR 'SC'
003	SXOSIZE	SIZE IN DOUBLE WORDS

CROSS REFERENCE

Name	Len	Val/Disp
SXOASM2	008	010
SXODABK	001	000
SXOEXCL	001	001
SXOLSBA	004	000
SXOLSEA	004	004
SXOLSNAM	008	008
SXONDAT	001	004
SXOPRAT	001	013
SXOPRMAX	001	080
SXOPROT	001	002
SXORANE	004	014
SXORANS	004	010
SXORGCT	004	008
SXORGCTA	004	00C
SXORGEND	003	014
SXORGST	003	010
SXORNGEN	001	005
SXORNGER	001	003
SXORNGEW	001	001
SXORNGSC	001	006
SXORNGSN	001	004
SXORNGSR	001	002
SXORNGSW	001	000
SXOSIZE	001	003
SXOSKBA	004	000
SXOSKEA	004	004

HCPSYNBK— SYNCHRONIZING LOCK CONTROL BLOCK

DSECT NAME: SYNBK

DESCRIPTIVE NAME: SYNCHRONIZING LOCK CONTROL BLOCK

FUNCTION: THIS DSECT DESCRIBES THE CONTROL AREA WHICH IS USED TO REPRESENT A SPIN LOCK. IN GENERAL, THE SPIN LOCKS IN THE SYSTEM ARE PERMANENTLY IMBEDDED WITHIN OTHER CONTROL BLOCKS OR MODULES. THIS DSECT DESCRIBES COMMON FORMAT OF ALL SPIN LOCKS. THE LOCK IS ALWAYS 3 DOUBLE-WORDS. ALL SPIN LOCKS ARE OBTAINED THROUGH A STANDARD SYSTEM MACRO, WITH A CALL TO MODULE HCPSYN IF THE LOCK IS NOT OBTAINED IN-LINE TO THE REQUESTING CODE.

LOCATED BY:

THE SYNBK DESCRIBES ANY OF THE SEVERAL SPECIFIC SPIN LOCKS, THEREFORE LOCATING IT DEPENDS UPON LOCATING THE PARTICULAR SPIN LOCK OF INTEREST. FOR EXAMPLE, THE SCHEDULER SPIN LOCK IS CODED IN THE SRMBK AS:

```
SRMSLOCK DS    3D              SCHEDULER LOCK
```

CREATED BY:

GENERALLY THE SYNBK OF A SPIN LOCK IS:

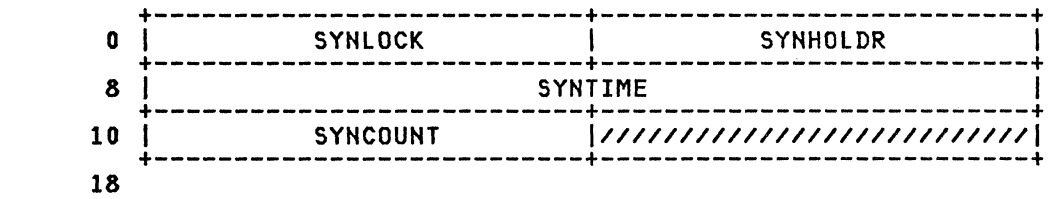
(1) HARD-CODED IN A MODULE AND THEREFORE GENERATED BY THE ASSEMBLER. E.G., THE SWITCH-MASTER LOCK IN HCPMPF.

(2) IMBEDDED IN A PERMANENTLY ALLOCATED CONTROL BLOCK. E.G., THE SCHEDULER LOCK IN THE SRMBK.

DELETED BY:

GENERALLY SYNBK'S ARE NOT DELETED SINCE THEY ARE GENERALLY IMBEDDED IN MODULES OR IN PERMANENTLY ALLOCATED CONTROL BLOCKS.

SYNBK - SYNCHRONIZING LOCK CONTROL BLOCK



disp	name	length	description
000	SYNLOCK	004	SPIN LOCK WORD. CONTENTS ZERO MEANS LOCK IS NOT HELD. NON-ZERO CONTENTS IS THE LOGICAL CPU IDENTIFIER (FROM PFXLCPUA) OF THE CPU WHICH HOLDS THE LOCK.
004	SYNHOLDR	004	MACRO ADDRESS LAST OBTAINING THIS LOCK
008	SYNTIME	008	ELAPSED SPIN TIME ON THIS LOCK STARTING AT ZERO AND COUNTING UP
010	SYNCOUNT	004	NUMBER OF SPINS ON THIS LOCK
014		F	RESERVED FOR FUTURE IBM USE

EQUATES

03	SYNSIZE	SYNBK SIZE IN DOUBLE-WORDS WHICH MUST BE 3 DOUBLE-WORDS SINCE IT IS IMBEDDED IN OTHER CONTROL BLOCKS AND CODE.

CROSS REFERENCE

Name	Len	Val/Disp
SYNBK	001	000
SYNCOUNT	004	010
SYNHOLDR	004	004
SYNLOCK	004	000
SYNSIZE	001	003
SYNTIME	008	008

HCPSYSCM— SYSTEM COMMON AREA

DSECT NAME: SYSCM

DESCRIPTIVE NAME: SYSTEM COMMON AREA

FUNCTION: CONTAINS SYSTEM-WIDE POINTERS, VARIABLES, COUNTERS, AND CONSTANTS OF WHICH THERE IS ONE COPY (AS COMPARED TO PFXPG WHICH IS ONE COPY PER PROCESSOR).

LOCATED BY:

PFXSYS FIELD OF HCPPFXPG

CREATED BY:

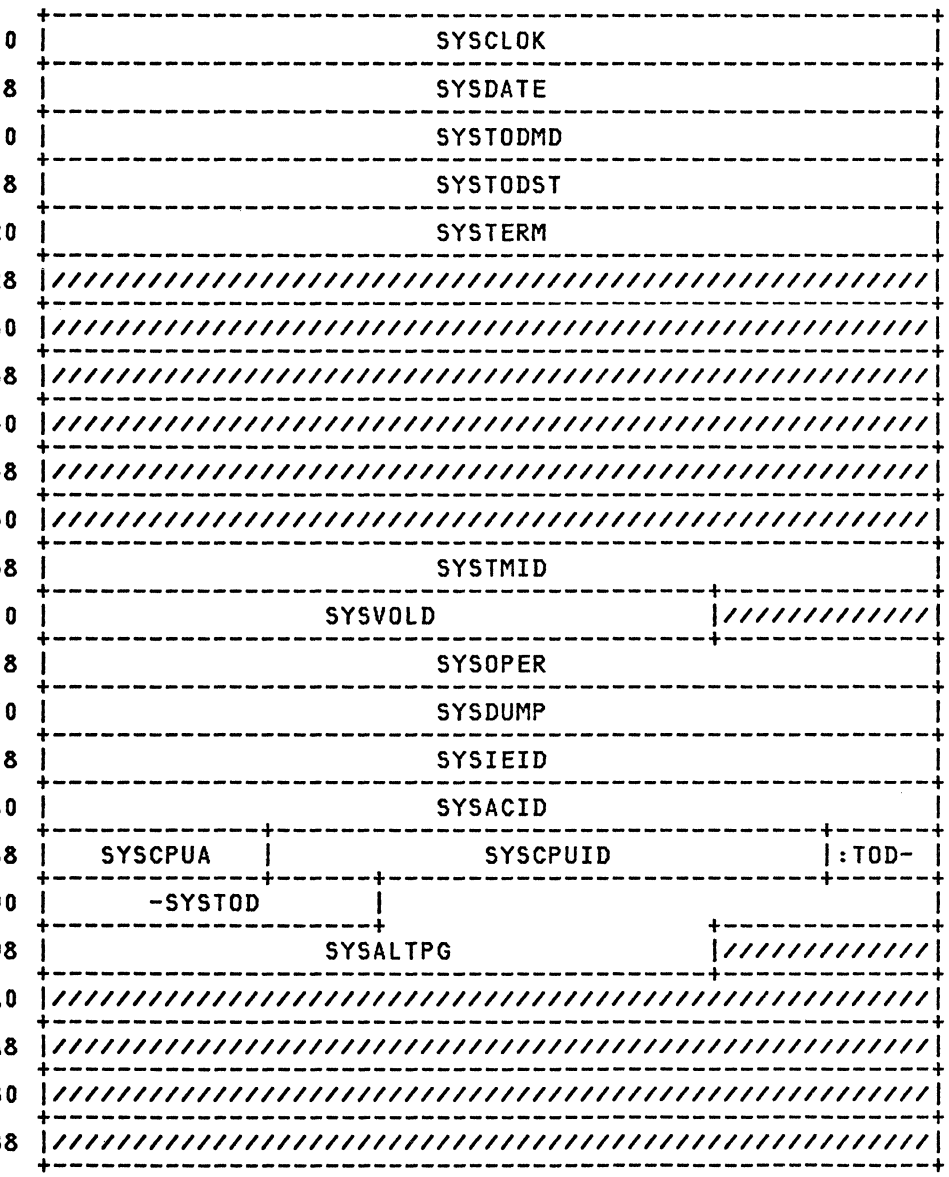
HCPSYS ASSEMBLY (SYSGEN)

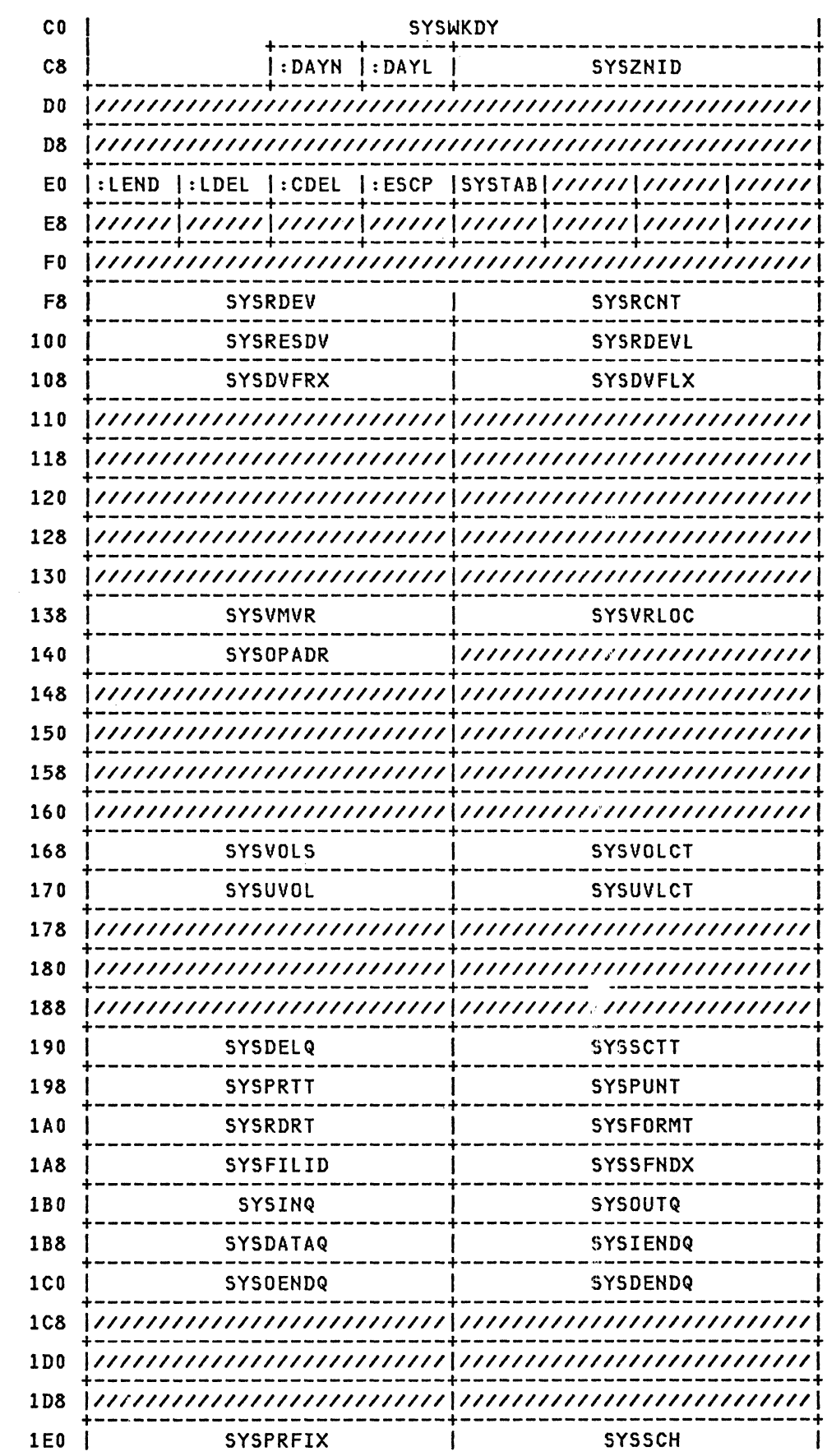
DELETED BY:

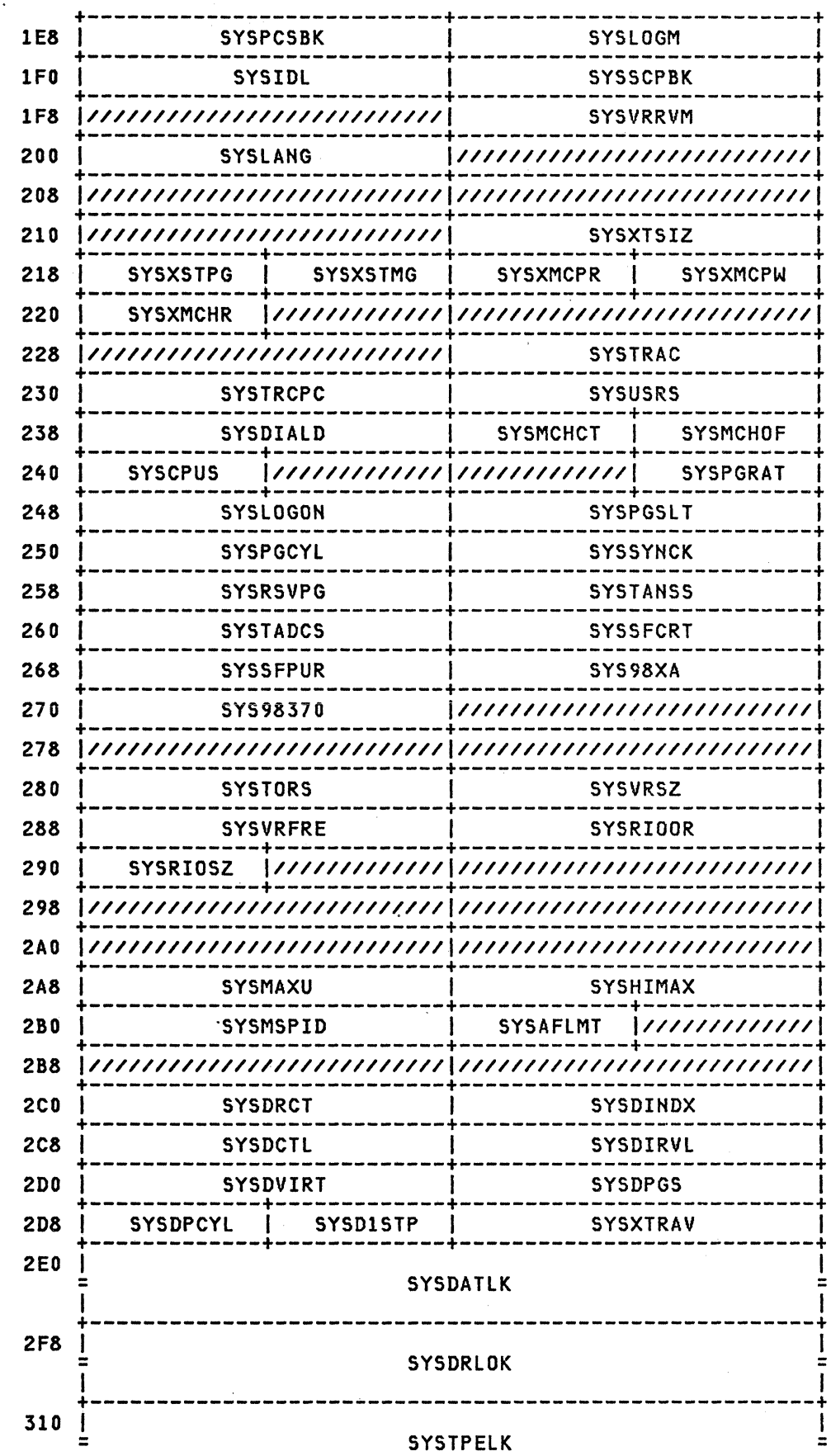
NONE

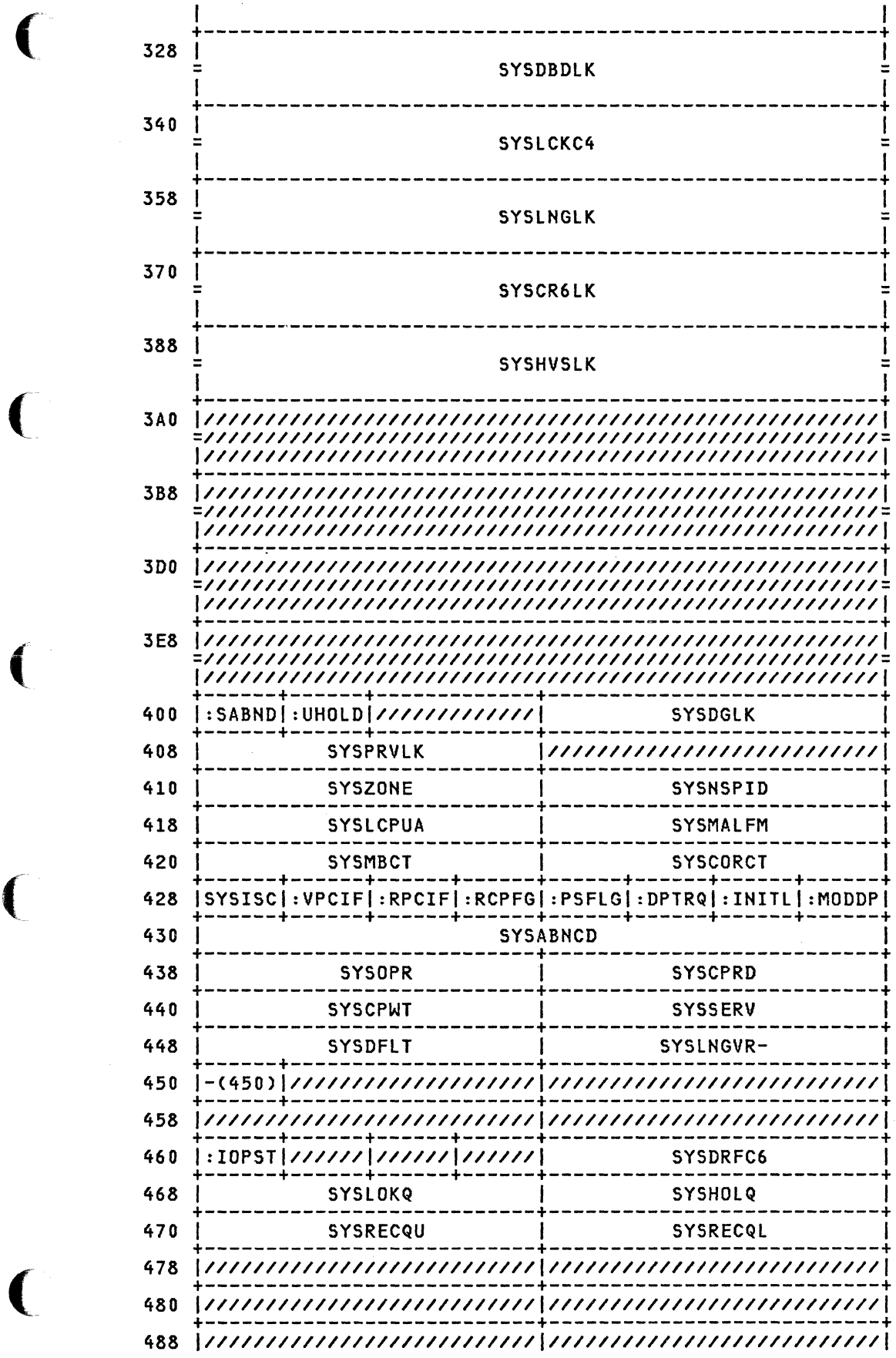
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

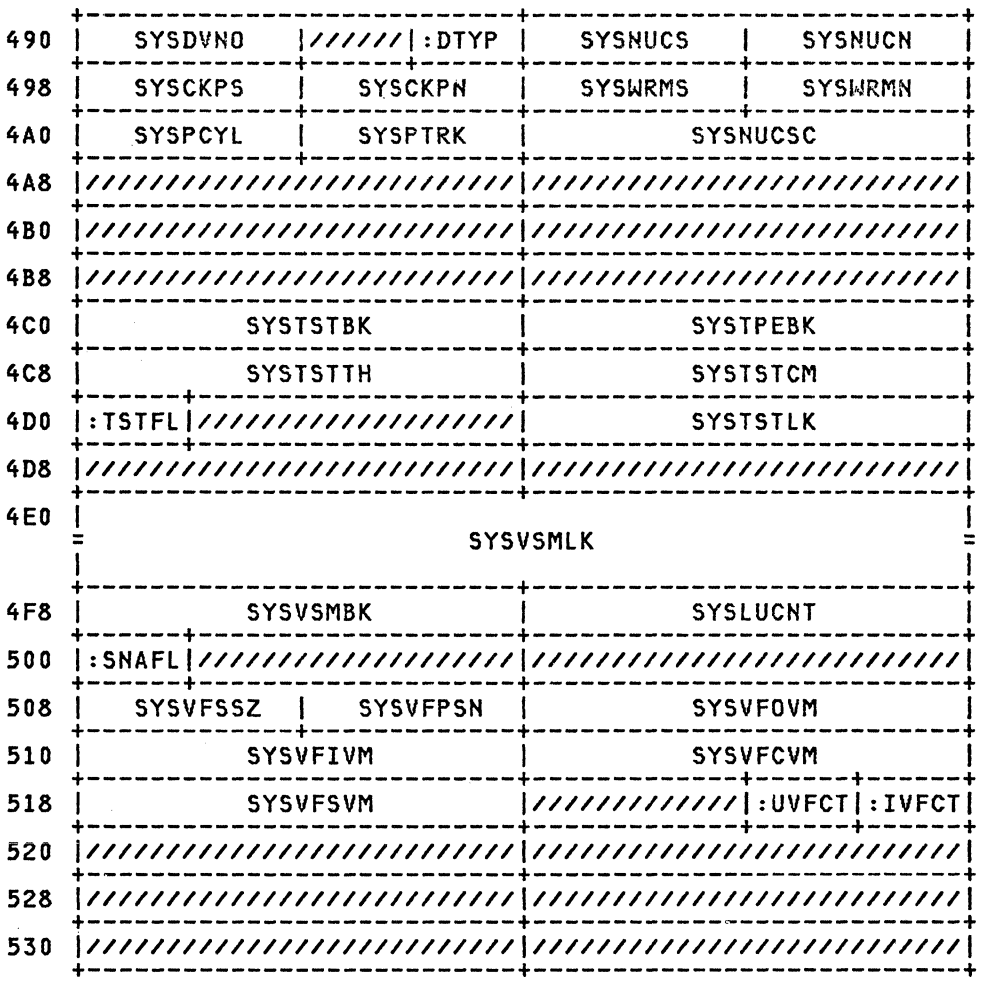
SYSCM - SYSTEM COMMON AREA




C0 SYSWKDY
C8 :DAYN :DAYL SYSZNID
D0
D8
E0 :LEND :LDEL :CDEL :ESCP SYSTAB
E8
F0
F8 SYSRDEV SYSRCNT
100 SYSRESDV SYSRDEVL
108 SYSDVFRX SYSDVFLX
110
118
120
128
130
138 SYSVMVR SYSVRLOC
140 SYSOPADR
148
150
158
160
168 SYSVOLS SYSVOLCT
170 SYSUVOL SYSUVLCT
178
180
188
190 SYSDELQ SYSSCTT
198 SYSPRTT SYSPUNT
1A0 SYSRDRT SYSFORMT
1A8 SYSFILID SYSSFNDX
1B0 SYSINQ SYSOUTQ
1B8 SYSDATAQ SYSIENDQ
1C0 SYSOENDQ SYSDENDQ
1C8
1D0
1D8
1E0 SYSPRFIX SYSSCH

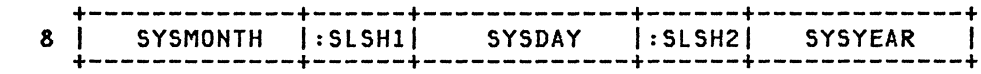



328
SYSDBDLK
340
SYSLCKC4
358
SYSLNGLK
370
SYSCR6LK
388
SYSHVSLK
3A0
3B8
3D0
3E8
400
:SABND
:UHOLD
SYSDGLK
408
SYSPRVLK
410
SYSZONE
SYSNSPID
418
SYSLCPUA
SYSMALFM
420
SYSMBCT
SYSCORCT
428
SYSISC
:VPCIF
:RPCIF
:RCPFG
:PSFLG
:DPTRQ
:INITL
:MODDP
430
SYSABNCD
438
SYSOPR
SYSCPRD
440
SYSCPWT
SYSSERV
448
SYSDFLT
SYSLNGVR-
450
-(450)
458
460
:IOPST
SYSDRFC6
468
SYSLOKQ
SYSHOLQ
470
SYSRECQU
SYSRECQL
478
480
488



REDEFINITION - REDEFINITION OF SYSCLOK

REDEFINITION - REDEFINITION OF SYSDATE



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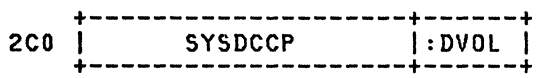

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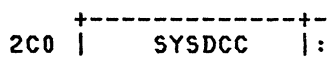

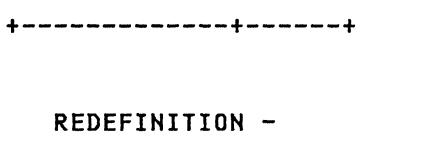

disp	name	length	description
000	SYSSTRT	008	START OF SYSLOCS
000	SYSCLOK	008	LATEST TOD CLOCK VALUE STORED
008	SYSDATE	008	CURRENT DATE
010	SYSTODMD	008	TIME OF DAY CLOCK VALUE AT MIDNIGHT
018	SYSTODST	008	TIME OF DAY CLOCK AT IPL
020	SYSTERM	008	TIME OF DAY CLOCK AT TERMINATION
028		D'0'	RESERVED FOR FUTURE IBM USE
030		D'0'	RESERVED FOR FUTURE IBM USE
038		D'0'	RESERVED FOR FUTURE IBM USE
040		D'0'	RESERVED FOR FUTURE IBM USE
048		D'0'	RESERVED FOR FUTURE IBM USE
050		D'0'	RESERVED FOR FUTURE IBM USE
058	SYSTMID	008	VM/370 SYSTEM IDENTIFIER
060	SYSVOLD	006	SYSTEM RESIDENCE VOLUME SERIAL ID
066		CL2'	(ALIGNMENT)
068	SYSOPER	008	USERID OF PRIMARY SYSTEM OPERATOR
070	SYSDUMP	008	USERID FOR SYSTEM DUMP RECEIVER
078	SYSIEID	008	USERID TO RECIEVE I/O ERROR RECORDS
080	SYSACID	008	USERID TO RECEIVE ACCOUNTING RECORDS
088	SYSDPID	011	DYNAMIC PATHING GROUP IDENTIFIER
088	SYSCPUA	002	CPU ADDRESS
08A	SYSCPUID	005	CPU IDENTIFICATION
08F	SYSTOD	004	FIRST HALF OF TOD CLOCK VALUE
093	SYSALTPG	011	SYSTEM ALTERNATE PATH GROUP
			00009B 404040
09E		CL2'	(ALIGNMENT)
0A0		CL8'	RESERVED FOR FUTURE IBM USE
0A8		CL8'	RESERVED FOR FUTURE IBM USE
0B0		CL8'	RESERVED FOR FUTURE IBM USE
0B8		CL8'	RESERVED FOR FUTURE IBM USE
0C0	SYSWKDY	010	CURRENT DAY OF THE WEEK NAME
0CA	SYSDAYN	001	DAY OF WEEK NUMBER (1-7) IN BINARY
0CB	SYSDAYL	001	DAY OF WEEK LENGTH IN BYTES
0CC	SYSZNID	004	TOD CLOCK TIME ZONE IDENTIFIER
0D0		CL8'	RESERVED FOR FUTURE IBM USE
0D8		CL8'	RESERVED FOR FUTURE IBM USE
0E0	SYSLEND	001	DEFAULT LOGICAL LINE-END CHAR
0E1	SYSLDEL	001	DEFAULT LOGICAL LINE-DELETE CHAR
0E2	SYSCDEL	001	
0E3	SYSESCP	001	DEFAULT LOGICAL ESCAPE CHARACTER
0E4	SYSTAB	001	DEFAULT TAB CHARACTER
0E5		CL1	RESERVED FOR FUTURE IBM USE
0E6		CL1	RESERVED FOR FUTURE IBM USE
0E7		CL1	RESERVED FOR FUTURE IBM USE
0E8		AL1	RESERVED FOR FUTURE IBM USE
0E9		AL1	RESERVED FOR FUTURE IBM USE
0EA		AL1	RESERVED FOR FUTURE IBM USE
0EB		AL1	RESERVED FOR FUTURE IBM USE
0EC		AL1	RESERVED FOR FUTURE IBM USE
0ED		AL1	RESERVED FOR FUTURE IBM USE
0EE		AL1	RESERVED FOR FUTURE IBM USE
0EF		AL1	RESERVED FOR FUTURE IBM USE
0F0		CL8'	RESERVED FOR FUTURE IBM USE
0F8	SYSRDEV	004	FIRST REGULAR RDEV BLOCK
0FC	SYSRCNT	004	COUNT OF RDEV BLOCKS
100	SYSRESDV	004	SYSTEM RESIDENCE RDEV BLOCK
104	SYSRDEVL	004	ADDRESS FOLLOWING LAST RDEV BLOCK
108	SYSDVFRX	004	LOCATOR FOR DVF REFERENCE TO RIOBKS

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10C   SYSDVFLX   004      LOCATOR FOR DVF REFERENCE TO LIOBKS
110               A(0)     RESERVED FOR FUTURE IBM USE
114               A(0)     RESERVED FOR FUTURE IBM USE
118               A(0)     RESERVED FOR FUTURE IBM USE
11C               A(0)     RESERVED FOR FUTURE IBM USE
120               A(0)     RESERVED FOR FUTURE IBM USE
124               A(0)     RESERVED FOR FUTURE IBM USE
128               A(0)     RESERVED FOR FUTURE IBM USE
12C               A(0)     RESERVED FOR FUTURE IBM USE
130               A(0)     RESERVED FOR FUTURE IBM USE
134               A(0)     RESERVED FOR FUTURE IBM USE
138   SYSVMVR     004      V=R USER VMDBLOCK WHEN LOGGED ON
13C   SYSVRLOC    004      ADDRESS WHERE V=R USER VMDBK WILL BE
140   SYSOPADR    004      SYSTEM OPERATOR VMDBLOCK ADDRESS
144               A(0)     RESERVED FOR FUTURE IBM USE
148               A(0)     RESERVED FOR FUTURE IBM USE
14C               A(0)     RESERVED FOR FUTURE IBM USE
150               A(0)     RESERVED FOR FUTURE IBM USE
154               A(0)     RESERVED FOR FUTURE IBM USE
158               A(0)     RESERVED FOR FUTURE IBM USE
15C               A(0)     RESERVED FOR FUTURE IBM USE
160               A(0)     RESERVED FOR FUTURE IBM USE
164               A(0)     RESERVED FOR FUTURE IBM USE
168   SYSVOLS     004      CP OWNED VOLUME ENTRY
16C   SYSVOLCT    004      CP OWNED VOLUME COUNT
170   SYSUVOL     004      USER     VOLUME LIST
174   SYSUVLCT    004      USER     VOLUME COUNT
178               A(0)     RESERVED FOR FUTURE IBM USE
17C               A(0)     RESERVED FOR FUTURE IBM USE
180               A(0)     RESERVED FOR FUTURE IBM USE
184               A(0)     RESERVED FOR FUTURE IBM USE
188               A(0)     RESERVED FOR FUTURE IBM USE
18C               A(0)     RESERVED FOR FUTURE IBM USE
190   SYSDELQ     004      SPOOL FILE       DELETE  QUEUE
194   SYSSCTT     004      SPOOL CLASSIFICATION TITLE TABLE PTR
198   SYSPRTT     004      PRINTER TABLE
19C   SYSPUNT     004      PUNCH   TABLE
1A0   SYSRDRT     004      READER  TABLE
1A4   SYSFORMT    004      POINTER TO SYSTEM FORM TABLE
1A8   SYSFILID    004      POINTER TO FILEID TABLE
1AC   SYSSFNDX    004      NUMBER OF SFNDX PAGES IN WRMST AREA
1B0   SYSINQ      004      SYSTEM INPUT QUEUE POINTER
1B4   SYSOUTQ     004      SYSTEM OUTPUT QUEUE POINTER
1B8   SYSDATAQ    004      SYSTEM DATA FILE QUEUE POINTER
1BC   SYSIENDQ    004      POINTER TO END OF SYSTEM INPUT QUEUE
1C0   SYSOENDQ    004      POINTER TO END OF SYSTEM OUTPUT QUEUE
1C4   SYSDENDQ    004      POINTER TO END OF SYSTEM DATA FILE Q
1C8               A(0)     RESERVED FOR FUTURE IBM USE
1CC               A(0)     RESERVED FOR FUTURE IBM USE
1D0               A(0)     RESERVED FOR FUTURE IBM USE
1D4               A(0)     RESERVED FOR FUTURE IBM USE
1D8               A(0)     RESERVED FOR FUTURE IBM USE
1DC               A(0)     RESERVED FOR FUTURE IBM USE
1E0   SYSPRFIX    004      PREFIX AREA FOR IPL'D PROCESSOR
1E4   SYSSCH      004      SCHEDULER CONTROL BLOCK
1E8   SYSPCSBK    004      POINTER TO PROCESSOR CONTROLLER
                           STATUS BLOCK
1EC   SYSLOGM     004      LOGMSG CONTROL AREA
1F0   SYSIDL      004      ADDRESS OF SYSTEM ID LIST (SIDBK)
1F4   SYSSCPBK    004      SCPINFO DATA BLOCK ADDRESS
1F8               A(0)     RESERVED FOR FUTURE IBM USE
1FC   SYSVRRVM    004      ANCHOR FOR AVAILABLE V=R MP VMDBKS
200   SYSLANG     004      ADDRESS OF DEFAULT LANGUAGE BLOCK
204               A(0)     RESERVED FOR FUTURE IBM USE
208               A(0)     RESERVED FOR FUTURE IBM USE
20C               A(0)     RESERVED FOR FUTURE IBM USE
210               F'0'     RESERVED FOR FUTURE IBM USE
214   SYSXTSIZ    004      THE NUMBER OF PAGES IN THE EXTENDED
                           STORAGE FACILITY.
218   SYSXSTPG    002      XSTORE PAGING RATE
21A   SYSXSTMG    002      XSTORE MIGRATION RATE
21C   SYSXMCPR    002      XSTORE MDC READ RATE
21E   SYSXMCPW    002      XSTORE MDC WRITE RATE
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220	SYSXMCHR	002	XSTORE MDC READ HIT RATIO
222		H'0'	RESERVED FOR FUTURE IBM USE
224		F'0'	RESERVED FOR FUTURE IBM USE
228		F'0'	RESERVED FOR FUTURE IBM USE
22C	SYSTRAC	004	NBR TRACE TABLE PAGES COUNT EACH CPU
230	SYSTRCPC	004	ACTUAL TRACE PAGE COUNT PER PROCESSOR
234	SYSUSRS	004	CURRENT LOGGED ON USERS COUNT
238	SYSDIALD	004	CURRENT DIALED USERS COUNT
23C	SYSMCHRC	004	SYSTEM RECOVERY MACHINE CHK RECORDING
23C	SYSMCHCT	002	COUNT OF SYSTEM RECOVERY MACHINE CHKS
23E	SYSMCHOF	002	COUNT AT WHICH TO TURN MACHINE CHECK RECORDING OFF, 0 IF NO RECORDING
240	SYSCPUS	002	ACTIVE PROCESSORS COUNT
242		H'0'	RESERVED FOR FUTURE IBM USE
244		H'0'	RESERVED FOR FUTURE IBM USE
246	SYSPGRAT	002	PAGING RATIO
248	SYSLOGON	004	COUNT OF LOGONS
24C	SYSPGSLT	004	COUNT OF PAGING SLOTS AVAILABLE
250	SYSPGCYL	004	COUNT OF PAGING CYLINDERS IN USE
254	SYSSYNCK	004	COUNT OF TOD CLOCK SYNCHRONIZATION CHECKS
258	SYSRSVPG	004	COUNT OF RESERVED PAGES
25C	SYSTANSS	004	NUMBER OF CURRENTLY ACTIVE NSS
260	SYSTADCS	004	NUMBER OF CURRENTLY ACTIVE DCSS
264	SYSSFCRT	004	
268	SYSSFPUR	004	
26C	SYS98XA	004	CARDINAL COUNT OF PAGES LOCKED BY DIAG X'98' ISSUED IN 31 BIT MODE.
270	SYS98370	004	CARDINAL COUNT OF PAGES LOCKED BY DIAG X'98' ISSUED IN 24 BIT MODE.
274		F'0'	RESERVED FOR FUTURE IBM USE
278		F'0'	RESERVED FOR FUTURE IBM USE
27C		F'0'	RESERVED FOR FUTURE IBM USE
280	SYSTORS	004	REAL MACHINE SPECIFIED STORAGE SIZE
284	SYSVRSZ	004	SIZE OF V=R AREA IN BYTES
288	SYSVRFRE	004	SIZE OF V=R RESERVED FREE STORAGE (INCLUDING THE VMDBK) IN BYTES
28C	SYSRIOOR	004	ADDRESS OF THE RIO REGION ORIGIN
290	SYSRIOSZ	002	RIO REGION SIZE IN PAGES
292		H'0'	RESERVED FOR FUTURE IBM USE
294		F'0'	RESERVED FOR FUTURE IBM USE
298		F'0'	RESERVED FOR FUTURE IBM USE
29C		F'0'	RESERVED FOR FUTURE IBM USE
2A0		F'0'	RESERVED FOR FUTURE IBM USE
2A4		F'0'	RESERVED FOR FUTURE IBM USE
2A8	SYSMAXU	004	MAXIMUM NUMBER OF USERS ALLOWED ON
2AC	SYSHIMAX	004	HIGH-WATER-MARK OF LOGGED-ON USERS
2B0	SYSMSPID	004	MAXIMUM SYSTEM SPOOL FILE ID
2B4	SYSAFLMT	002	LIMIT OF INCORRECT AUTOLOG/XAUTOLOG PASSWORDS A USER IS ALLOWED BEFORE BEING PROHIBITED TO USE THESE COMMANDS
2B6		H'0'	RESERVED FOR FUTURE IBM USE
2B8		F'0'	RESERVED FOR FUTURE IBM USE
2BC		F'0'	RESERVED FOR FUTURE IBM USE
2C0	SYSDRCT	004	SYSTEM DIRECTORY DASD START
2C4	SYSDINDX	004	SYSTEM DIRECTORY INDEX PAGE POINTER
2C8	SYSDCTL	004	SYSTEM DIRECTORY CURRENT CONTROL AREA
2CC	SYSDIRVL	004	ADDRESS OF CPVOL CONTAINING SYSTEM DIRECTORY
2D0	SYSDVIRT	004	FIRST VIRTUAL ADDRESS OF DIRECTORY
2D4	SYSDPGS	004	NUMBER OF DIRECTORY PAGES IN VIRTUAL
2D8	SYSDPCYL	002	NUMBER OF PAGES IN A DIRECTORY CYLNDR
2DA	SYSD1STP	002	FIRST DIRECTORY PAGE NUMBER
2DC	SYSXTRAV	004	VADDR FOR PAGES OUTSIDE OF THE PRIMARY DIRECTORY EXTENT
2E0	SYSDATLK	008	LOCK FOR TOD AND DATE
2F8	SYSDRLOK	008	LOCK FOR DIRECTORY
310	SYSTPELK	008	LOCK FOR TPEBK
328	SYSDBDLK	008	DIRECTORY BUILD LOCK
340	SYSLCKC4	008	SERIALIZE DIAGNOSE X'C4'
358	SYSLNGLK	008	LANGUAGE BLOCK CHAIN LOCK
370	SYSCR6LK	008	LOCK FOR PASS THROUGH CR6
388	SYSHVSLK	008	ALLOCATE HIGH SYSTEM VIRTUAL STORAGE

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3A0   SYSSECLK   008       SECONDARY USERIDS TABLE LOCK
3B8              3D'0'     RESERVED FOR FUTURE IBM USE
3D0              3D'0'     RESERVED FOR FUTURE IBM USE
3E8              3D'0'     RESERVED FOR FUTURE IBM USE

400   SYSHUDSP   004       HOLD USERS DISPATCH WORD
                           USERS CAN ONLY BE DISPATCHED WHEN THIS WORD IS ZERO
400   SYSSABND   001       SOFT ABEND USER DISPATCH HOLD BYTE
                           THIS BYTE IS LOCKED BY SOFT ABEND LOCK

        BITS DEFINED IN SYSSABND (AT HEX DISPLACEMENT: 400)

        08     SYSSABNF    SOFT ABEND IN PROGRESS

401   SYSUHOLD   001       USER DISPATCH HOLD BYTE
                           THIS BYTE IS LOCKED BY RUNNING ON THE SYSTEM VMDBK

        BITS DEFINED IN SYSUHOLD (AT HEX DISPLACEMENT: 401)

        80     SYSSHTDN    SYSTEM SHUTDOWN IN PROGRESS

402              2XL1'0'   RESERVED FOR FUTURE IBM USE

404   SYSDGLK    004       DIAGNOSE CODE TABLE LOCKWORD
408   SYSPRVLK   004       SYSTEM PRIVILEGE CLASSES LOCKWORD
40C              F'0'      RESERVED FOR FUTURE IBM USE
410   SYSZONE    004       TOD CLOCK TIME ZONE DIFFERENTIAL
414   SYSNSPID   004       NEXT SPID TO BE ASSIGNED
418   SYSLCPUA   004       OR'D MASKS FOR ALL ACTIVE CPUS
41C   SYSMALFM   004       SYSTEM MALFUNCTION ALERT MASK
420   SYSMBCT    004       NUMBER OF BCTS IN 50MILISEC
424   SYSCORCT   004       ERROR RECORDING CORRELATION COUNT
428   SYSISC     001       HOST ISC MASK
429   SYSVPCIF   001       PROCESSOR CONTROLLER INTERFACE:
                           IDENTIFICATION USED TO ACCEPT VIRTUAL
                           SYSTEM DIAGNOSE X'80' OR SERVICE CALL
                           INSTRUCTIONS FOR SIMULATION

        BITS DEFINED IN SYSVPCIF (AT HEX DISPLACEMENT: 429)

        80     SYSVSC3     SERVICE CALL 370 MODE
        40     SYSVSCX     SERVICE CALL XA MODE
        20     SYSVDG3     DIAGNOSE X'80' 370 MODE
        10     SYSVDGX     DIAGNOSE X'80' XA MODE

42A   SYSRPCIF   001       REAL PROCESSOR CONTROLLER INTERFACES
                           USED BY VM/XA REAL REQUEST PROCESSING

        BITS DEFINED IN SYSRPCIF (AT HEX DISPLACEMENT: 42A)

        80     SYSRSCIF    SERVICE CALL TYPE INTERFACE
        40     SYSRDGIF    DIAGNOSE X'80' TYPE INTERFACE

42B   SYSRCPFG   001       GENERAL RCPU FLAGS

        BITS DEFINED IN SYSRCPFG (AT HEX DISPLACEMENT: 42B)

        80     SYSAPISH    THIS BIT IS SET ON JUST BEFORE RCPU
                           INITIATES THE VARY OFFLINE PROCESSOR
                           FUNCTION FOR EACH NON-MASTER PROCESSOR
                           FOR THE SHUTDOWN SEQUENCE.  CAN BE
                           USED TO DISTINGUISH SHUTDOWN FUNCTIONS
                           VS. OTHER VARY FUNCTIONS.

42C   SYSPSFLG   001       PASSWORD SUPPRESSION FLAG
                           IF INDICATED BIT = 0,
                           PASSWORD IS SUPPRESSED
                           IF INDICATED BIT = 1,
                           PASSWORD IS ALLOWED

        BITS DEFINED IN SYSPSFLG (AT HEX DISPLACEMENT: 42C)

        80     SYSPSLNK    LINK
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        40     SYSPSLOG    LOGON
        20     SYSPSAUL    AUTOLOG

42D   SYSDPTRQ   001       UNRESPONSIVE PROCESSOR DETECTION FLAGS

        BITS DEFINED IN SYSDPTRQ (AT HEX DISPLACEMENT: 42D)

        80     SYSDPDET    DETECTION ACTIVE, TRQBK REMAINS ACTIVE
        08     SYSTRQST    TRQBK CURRENTLY ACTIVE

42E   SYSINITL   001       SYSTEM INITIALIZATION FLAG

        BITS DEFINED IN SYSINITL (AT HEX DISPLACEMENT: 42E)

        80     SYSCINIT    OPERATORS CONSOLE NOT YET INITIALIZED
        40     SYSTINIT    TOD CLOCK NOT YET INITIALIZED
        01     SYSSINIT    SYSTEM IS NOT COMPLETELY INITIALIZED

42F   SYSMODDP   001       BYTE CONTAINING MODEL DEPENDENT FLAGS

        BITS DEFINED IN SYSMODDP (AT HEX DISPLACEMENT: 42F)

        40     SYSIOP37    INDICATES I/O PASS THROUGH FOR 370 IS
                           INSTALLED
        20     SYSIOPXA    INDICATES I/O PASS THROUGH FOR XA IS
                           INSTALLED
        10     SYSIOIL2    INDICATES V=F USERS ARE SUPPORTED
                           WITH I/O PASSTHROUGH

430   SYSABNCD   008       CODE OF LAST TERMINATION

                           THE FOLLOWING FIELDS ARE DEFINED PRIVILEGE CLASSES FOR
                           SYSTEM FUNCTIONS

438   SYSOPR     004       CLASS(ES) FOR SYSTEM OPERATOR
43C   SYSCPRD    004       CLASS(ES) AUTHORIZED FOR IOCP READ
440   SYSCPWT    004       CLASS(ES) AUTHORIZED FOR IOCP WRITE
444   SYSSERV    004       CLASS(ES) AUTHORIZED FOR DIAGNOSTIC
                           LOAD/WRITE
448   SYSDFLT    004       DEFAULT CLASS(ES) FOR A USER


44C   SYSLNGVR   005       V=R USER'S LANGUAGE
451              CL3'      RESERVED FOR FUTURE IBM USE
454              F'0'      RESERVED FOR FUTURE IBM USE
458              F'0'      RESERVED FOR FUTURE IBM USE
45C              F'0'      RESERVED FOR FUTURE IBM USE
460   SYSIOPST   001       IOASSIST FOR ALL STATUS BYTE

        BITS DEFINED IN SYSIOPST (AT HEX DISPLACEMENT: 460)

        80     SYSIOPAC    IOASSIST GLOBALLY ACTIVE

461              XL1'0'    RESERVED FOR FUTURE IBM USE
462              XL1'0'    RESERVED FOR FUTURE IBM USE
463              XL1'0'    RESERVED FOR FUTURE IBM USE
464   SYSDRFC6   004       GLOBAL PASS THROUGH CR6 MASK
                           SEE PFXCR6B0 FOR BIT DEFINITIONS
468   SYSLOKQ    004       SYSTEM LOCK REQUEST QUEUE
46C   SYSHOLQ    004       SYSTEM HOLD QUEUE QUEUE
470   SYSRECQU   004       CHKPT SYSTEM RECORDS QUEUE
474   SYSRECQL   004       NON-CHKPT SYSTEM RECORDS QUEUE
478   SYSSECQ    004       ANCHOR FOR SECONDARY USERIDS TABLE
                           QUEUE
47C              F'0'      RESERVED FOR FUTURE IBM USE
480              F'0'      RESERVED FOR FUTURE IBM USE
484              F'0'      RESERVED FOR FUTURE IBM USE
488              F'0'      RESERVED FOR FUTURE IBM USE
48C              F'0'      RESERVED FOR FUTURE IBM USE
490   SYSDVNO    002       SYSTEM RESIDENCE DEVICE NUMBER
492              XL1'00'   RESERVED FOR FUTURE IBM USE
493   SYSDTYP    001       SYSTEM RESIDENCE DEVICE TYPE
494   SYSNUCS    002       START CYLINDER FOR SYSTEM NUCLEUS
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496   SYSNUCN    002       NUMBER OF CYLINDERS FOR NUCLEUS
498   SYSCKPS    002       START CYLINDER FOR DYNAMIC CHECKPOINT
49A   SYSCKPN    002       NUMBER OF CYLINDERS FOR CHECKPOINT
49C   SYSWRMS    002       START CYLINDER FOR WARM START
49E   SYSWRMN    002       NUMBER OF CYLINDERS FOR WARM START
4A0   SYSPCYL    002       PAGES PER CYLINDER ON SYSRES
4A2   SYSPTRK    002       PAGES PER TRACK ON SYSRES
4A4   SYSNUCSC   004       SUBCHANNEL NUMBER OF SYSRES
4A8               F'0'      RESERVED FOR FUTURE IBM USE
4AC               F'0'      RESERVED FOR FUTURE IBM USE
4B0               F'0'      RESERVED FOR FUTURE IBM USE
4B4               F'0'      RESERVED FOR FUTURE IBM USE
4B8               F'0'      RESERVED FOR FUTURE IBM USE
4BC               F'0'      RESERVED FOR FUTURE IBM USE
4C0   SYSTSTBK   004       POINTER TO TRACE SERVICE TOOL
                            BLOCK (TSTBK)
4C4   SYSTPEBK   004       POINTER TO TAPE I/O BLOCK (TPEBK)
4C8   SYSTSTTH   004       TRACE SERVICE TOOL PRG16 WORK COUNTER
4CC   SYSTSTCM   004       TRACE SERVICE TOOL PRG16 COMPARATOR
4D0   SYSTSTFL   001       TRACE SERVICE TOOL STATUS FLAG
4D1               XL3'0'    RESERVED FOR IBM USE
4D4   SYSTSTLK   004       TRACE SERVICE TOOL COMMAND LOCK
4D8               F'0'      RESERVED FOR IBM USE
4DC               F'0'      RESERVED FOR IBM USE
4E0   SYSVSMLK   008       VMSBK QUEUE LOCK
4F8   SYSVSMBK   004       ANCHOR FOR THE VMSBK QUEUE
4FC   SYSLUCNT   004       COUNT OF SNA/CCS USERS
500   SYSSNAFL   001       SNA/CCS FLAG
501               XL3'0'    RESERVED FOR IBM USE
504               F'0'      RESERVED FOR IBM USE
508   SYSVFPRM   004
508   SYSVFSSZ   002       VECTOR FACILITY SECTION SIZE
50A   SYSVFPSN   002       VECTOR FACILITY PARTIAL SUM NUMBER
50C   SYSVFOVM   004       OPERATIONAL VECTOR MAP
                            *** PRESERVE OVER BOUNCE ***
510   SYSVFIVM   004       INSTALLED VECTOR MAP
514   SYSVFCVM   004       CONNECTED VECTOR MAP
518   SYSVFSVM   004       STANDBY VECTOR MAP
51C               H'0'      RESERVED FOR IBM USE
51E   SYSUVFCT   001       USABLE VECTOR FACILITY COUNT
51F   SYSIVFCT   001       INSTALLED VECTOR FACILITY COUNT
520               F'0'      RESERVED FOR IBM USE
524               F'0'      RESERVED FOR IBM USE
528               F'0'      RESERVED FOR IBM USE
52C               F'0'      RESERVED FOR IBM USE
530               F'0'      RESERVED FOR IBM USE
534               F'0'      RESERVED FOR IBM USE
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EQUATES

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A7    SYSSIZE     SIZE OF COMMON AREA
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REDEFINITION - REDEFINITION OF SYSCLOK

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5911          ORG   SYSCLOK   REDEFINITION OF SYSCLOK
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REDEFINITION - REDEFINITION OF SYSDATE

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008   SYSMONTH   002       CURRENT MONTH
00A   SYSSLSH1   001       FIRST SLASH
00B   SYSDAY     002       CURRENT DAY
00D   SYSSLSH2   001       SECOND SLASH
00E   SYSYEAR    002       CURRENT YEAR
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         REDEFINITION -

2C0   SYSDCCP     003       CCP PORTION OF DIRECTORY DASD ADDRESS
2C3   SYSDVOL     001       CP VOLUME CODE

         REDEFINITION -

2C0   SYSDCC      002       CC PORTION OF DIRECTORY DASD ADDRESS
2C2   SYSDRCTP    001       P  PORTION OF DIRECTORY DASD ADDRESS



         REDEFINITION -

2DA   SYSD1PB0    001       BYTE OF ZERO
2DB   SYSD1PB1    001       BYTE CONTAINING THE ACTUAL VALUE

                     MORE EQUATES

        080     SYSTSTAV    TRACE SERVICE TOOL CURRENTLY ACTIVE
        040     SYSTSTRS    TRACE SERVICE TOOL RESET IN PROGRESS
        020     SYSTSTTM    TRACE SERVICE TOOL IN TERMINATION
        080     SYSSNAEN    SNA/CCS IS ENABLED
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
SYSABNCD	008	430	SYSDIRVL	004	2CC	SYSIOPXA	001	020
SYSACID	008	080	SYSDPCYL	002	2D8	SYSIOP37	001	040
SYSAFLMT	002	2B4	SYSDPDET	001	080	SYSISC	001	428
SYSALTPG	011	093	SYSDPGS	004	2D4	SYSIVFCT	001	51F
SYSAPISH	001	080	SYSDPID	011	088	SYSLANG	004	200
SYSCDEL	001	0E2	SYSDPTRQ	001	42D	SYSLCKC4	008	340
SYSCINIT	001	080	SYSDRCT	004	2C0	SYSLCPUA	004	418
SYSCKPN	002	49A	SYSDRCTP	001	2C2	SYSLDEL	001	0E1
SYSCKPS	002	498	SYSDRFC6	004	464	SYSLEND	001	0E0
SYSCLOK	008	000	SYSDRLOK	008	2F8	SYSLNGLK	008	358
SYSCLOKL	004	000	SYSDTYP	001	493	SYSLNGVR	005	44C
SYSCM	001	000	SYSDUMP	008	070	SYSLOGM	004	1EC
SYSCORCT	004	424	SYSDVFLX	004	10C	SYSLOGON	004	248
SYSCPRD	004	43C	SYSDVFRX	004	108	SYSLOKQ	004	468
SYSCPUA	002	088	SYSDVIRT	004	2D0	SYSLUCNT	004	4FC
SYSCPUID	005	08A	SYSDVNO	002	490	SYSMALFM	004	41C
SYSCPUS	002	240	SYSDVOL	001	2C3	SYSMAXU	004	2A8
SYSCPWT	004	440	SYSD1PB0	001	2DA	SYSMBCT	004	420
SYSCR6LK	008	370	SYSD1PB1	001	2DB	SYSMCHCT	002	23C
SYSDATAQ	004	1B8	SYSD1STP	002	2DA	SYSMCHOF	002	23E
SYSDATE	008	008	SYSESCP	001	0E3	SYSMCHRC	004	23C
SYSDATLK	008	2E0	SYSFILID	004	1A8	SYSMODDP	001	42F
SYSDAY	002	00B	SYSFORMT	004	1A4	SYSMONTH	002	008
SYSDAYL	001	0CB	SYSHIMAX	004	2AC	SYSMSPID	004	2B0
SYSDAYN	001	0CA	SYSHOLQ	004	46C	SYSNSPID	004	414
SYSDBDLK	008	328	SYSHUDSP	004	400	SYSNUCN	002	496
SYSDCC	002	2C0	SYSHVSLK	008	388	SYSNUCS	002	494
SYSDCCP	003	2C0	SYSIDL	004	1F0	SYSNUCSC	004	4A4
SYSDCTL	004	2C8	SYSIEID	008	078	SYSOENDQ	004	1C0
SYSDELQ	004	190	SYSIENDQ	004	1BC	SYSOPADR	004	140
SYSDENDQ	004	1C4,	SYSINITL	001	42E	SYSOPER	008	068
SYSDFLT	004	448	SYSINQ	004	1B0	SYSOPR	004	438
SYSDGLK	004	404	SYSIOIL2	001	010	SYSOUTQ	004	1B4
SYSDIALD	004	238	SYSIOPAC	001	080	SYSPCSBK	004	1E8
SYSDINDX	004	2C4	SYSIOPST	001	460	SYSPCYL	002	4A0

Name	Len	Val/Disp
SYSPGCYL	004	250
SYSPGRAT	002	246
SYSPGSLT	004	24C
SYSPRFIX	004	1E0
SYSPRTT	004	198
SYSPRVLK	004	408
SYSPSAUL	001	020
SYSPSFLG	001	42C
SYSPSLNK	001	080
SYSPSLOG	001	040
SYSPTRK	002	4A2
SYSPUNT	004	19C
SYSRCNT	004	0FC
SYSRCPFG	001	42B
SYSRDEV	004	0F8
SYSRDEVL	004	104
SYSRDGIF	001	040
SYSRDRT	004	1A0
SYSRECQL	004	474
SYSRECQU	004	470
SYSRESDV	004	100
SYSRIOOR	004	28C
SYSRIOSZ	002	290
SYSRPCIF	001	42A
SYSRSCIF	001	080
SYSRSVPG	004	258
SYSSABND	001	400
SYSSABNF	001	008
SYSSCH	004	1E4
SYSSCPBK	004	1F4
SYSSCTT	004	194
SYSSECLK	008	3A0
SYSSECQ	004	478
SYSSERV	004	444
SYSSFCRT	004	264
SYSSFNDX	004	1AC
SYSSFPUR	004	268
SYSSHTDN	001	080
SYSSINIT	001	001
SYSSIZE	001	0A7
SYSSLSH1	001	00A
SYSSLSH2	001	00D
SYSSNAEN	001	080
SYSSNAFL	001	500
SYSSTRT	008	000
SYSSYNCK	004	254
SYSTAB	001	0E4
SYSTADCS	004	260
SYSTANSS	004	25C
SYSTERM	008	020
SYSTINIT	001	040
SYSTMID	008	058
SYSTOD	004	08F
SYSTODMD	008	010
SYSTODST	008	018
SYSTORS	004	280
SYSTPEBK	004	4C4
SYSTPELK	008	310
SYSTRAC	004	22C
SYSTRCPC	004	230
SYSTRQST	001	008
SYSTSTAV	001	080
SYSTSTBK	004	4C0
SYSTSTCM	004	4CC
SYSTSTFL	001	4D0
SYSTSTLK	004	4D4
SYSTSTRS	001	040
SYSTSTTH	004	4C8
SYSTSTTM	001	020
SYSUHOLD	001	401
SYSUSRS	004	234
SYSUVFCT	001	51E
SYSUVLCT	004	174
SYSUVOL	004	170
SYSVDGX	001	010
SYSVDG3	001	020
SYSVFCVM	004	514
SYSVFIVM	004	510
SYSVFOVM	004	50C
SYSVFPRM	004	508
SYSVFPSN	002	50A
SYSVFSSZ	002	508
SYSVFSVM	004	518
SYSVMVR	004	138
SYSVOLCT	004	16C
SYSVOLD	006	060
SYSVOLS	004	168
SYSVPCIF	001	429
SYSVRFRE	004	288
SYSVRLOC	004	13C
SYSVRRVM	004	1FC
SYSVRSZ	004	284
SYSVSCX	001	040
SYSVSC3	001	080
SYSVSMBK	004	4F8
SYSVSMLK	008	4E0
SYSWKDY	010	0C0
SYSWRMN	002	49E
SYSWRMS	002	49C
SYSXMCHR	002	220
SYSXMCPR	002	21C
SYSXMCPW	002	21E
SYSXSTMG	002	21A
SYSXSTPG	002	218
SYSXTRAV	004	2DC
SYSXTSIZ	004	214
SYSYEAR	002	00E
SYSZNID	004	0CC
SYSZONE	004	410
SYS98XA	004	26C
SYS98370	004	270

HCPS0CCW— SPOOLING FORMAT 0 CHANNEL CONTROL

DSECT NAME: S0CCW

DESCRIPTIVE NAME: SPOOLING FORMAT 0 CHANNEL CONTROL WORD PAIRS

FUNCTION: PROVIDE SYMBOLIC REFERENCES FOR THE FIELDS OF THE FORMAT 0 (370) CCW PAIRS USED BY SPOOLING IN THE SPOOL FILES. THE FORMAT 0 CCW IS USED WHEN WORKING WITH VM/SP SPOOL FILES. THIS DEFINITION CORRESPONDS TO THE VM/SP CCW PAIR USAGE.

LOCATED BY:

N/A

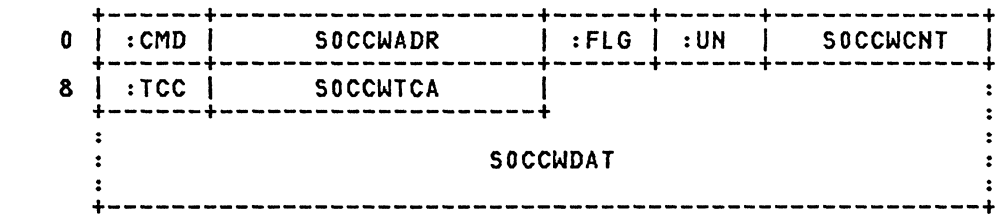
CREATED BY:

N/A

DELETED BY:

N/A

S0CCW - SPOOLING FORMAT 0 CHANNEL CONTROL WORD PAIRS



disp	name	length	description
000	S0CCWPAR	012	FORMAT 0 (SYSTEM 370 CCW PAIR)
000	S0CCWWD0	004	FIRST WORD OF CCW PAIR
000	S0CCWCMD	001	CCW COMMAND CODE
001	S0CCWADR	003	CCW ADDRESS (24-BIT)
004	S0CCWWD1	004	SECOND WORD OF CCW PAIR
004	S0CCWFLG	001	CONTROL OF CCW FLAGS
	BITS DEFINED FOR S0CCWFLG BY HCPEQUAT CCWFLAG		
005	S0CCWUN	001	FORMAT 0 "UNUSED" BYTE.
006	S0CCWCNT	002	COUNT FOR I/O
	EQUATES		
	08 S0CCWSLN		LENGTH OF A FORMAT 0 CCW IF THE SKIP BIT IS SET. (NO TIC)
008	S0CCWWD2	004	THIRD WORD OF CCW PAIR
008	S0CCWTCC	001	TIC CCW COMMAND CODE
009	S0CCWTCA	003	TIC CCW ADDRESS (24-BIT)
00C	S0CCWDAT	002	START OF VARIABLE LENGTH DATA
	EQUATES		
	0C S0CCWLEN		LENGTH OF A FORMAT 0 CCW PAIR IN BYTES
	10 S0CCWTAG		LENGTH TO ADD TO THE TAG FOR THE CCW AND DBL WD ALIGNMENT
	07 S0CCWIS		INSERT MASK FOR 24-BIT ADDRESSES

CROSS REFERENCE

Name	Len	Val/Disp
SOCCW	001	000
SOCCWADR	003	001
SOCCWCMD	001	000
SOCCWCNT	002	006
SOCCWDAT	002	00C
SOCCWFLG	001	004
SOCCWIS	001	007
SOCCWLEN	001	00C
SOCCWPAR	012	000
SOCCWSLN	001	008
SOCCWTAG	001	010
SOCCWTCA	003	009
SOCCWTCC	001	008
SOCCWUN	001	005
SOCCWWD0	004	000
SOCCWWD1	004	004
SOCCWWD2	004	008

HCPS1CCW— SPOOLING FORMAT 1 CHANNEL CONTROL

DSECT NAME: S1CCW

DESCRIPTIVE NAME: SPOOLING FORMAT 1 CHANNEL CONTROL WORD PAIRS

FUNCTION: PROVIDE SYMBOLIC REFERENCES FOR THE FIELDS OF THE FORMAT 1 (XA) CCW PAIRS USED BY SPOOLING IN THE SPOOL FILES.

LOCATED BY:

N/A

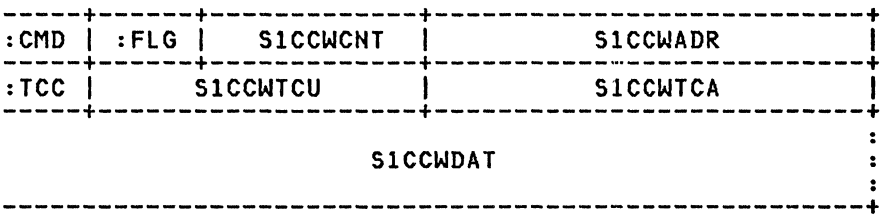
CREATED BY:

N/A

DELETED BY:

N/A

S1CCW - SPOOLING FORMAT 1 CHANNEL CONTROL WORD PAIRS



disp	name	length	description
000	S1CCWPAR	016	FORMAT 1 (SYSTEM 370/XA CCW PAIR)
000	S1CCWWD0	004	FIRST WORD OF THE CCW PAIR
000	S1CCWCMD	001	CCW COMMAND CODE
001	S1CCWFLG	001	CONTROL OF CCW FLAGS
	BITS DEFINED FOR S1CCWFLG BY HCPEQUAT CCWFLAG		
002	S1CCWCNT	002	COUNT FOR I/O
004	S1CCWADR	004	CCW ADDRESS (31-BIT)
008	S1CCWWD2	004	THIRD WORD OF CCW PAIR
008	S1CCWTCC	001	CCW COMMAND CODE
009	S1CCWTCU	001	NO TIC FLAGS OR COUNT FOR A FORMAT 1 CCW, THIS UNUSED FIELD OF THE TIC MUST BE ZERO.
00C	S1CCWTCA	004	CCW ADDRESS (31-BIT)
010	S1CCWDAT	008	START OF VARIABLE LENGTH DATA

EQUATES

10	S1CCWLEN	LENGTH OF A FORMAT 1 CCW PAIR IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp
S1CCW	001	000
S1CCWADR	004	004
S1CCWCMD	001	000
S1CCWCNT	002	002
S1CCWDAT	008	010
S1CCWFLG	001	001
S1CCWLEN	001	010
S1CCWPAR	016	000
S1CCWTCA	004	00C
S1CCWTCC	001	008
S1CCWTCU	001	009
S1CCWWD0	004	000
S1CCWWD2	004	008

HCPTBFBK— TRACE SERVICE TOOL BUFFER FORMAT BLOCK

DSECT NAME: TBFBK

DESCRIPTIVE NAME: TRACE SERVICE TOOL BUFFER FORMAT BLOCK

FUNCTION: CONTAINS THE FORMAT OF THE BUFFERS USED TO SAVE MERGED ENTRIES FROM THE TRACE TABLE ONTO TAPE

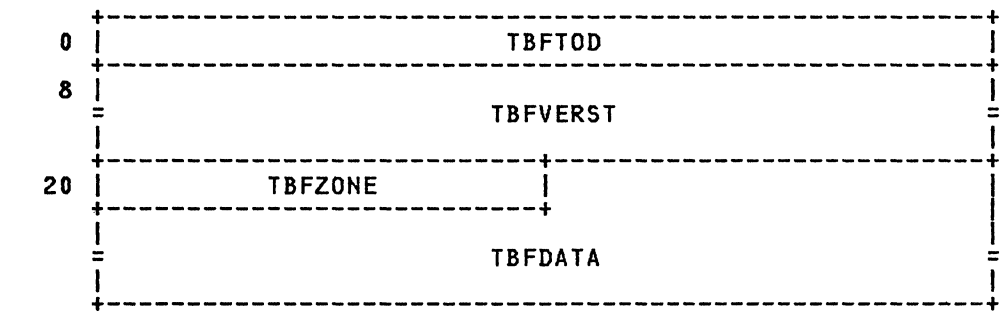
CREATED BY:

NOT APPLICABLE

DELETED BY:

NOT APPLICABLE

TBFBK - TAPE BUFFER FORMAT BLOCK



disp	name	length	description
000	TBFTOD	008	TIME OF DAY CLOCK
008	TBFVERST	024	TRACE SERVICE TOOLS' VERIFICATION STRING
020	TBFZONE	004	TIME ZONE DIFFERENTIAL (FROM SYSZONE)
024	TBFDATA	028	145 28-BYTE TRACE ENTRIES

EQUATES

00	TBFSIZE	TBFBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
TBFBK	001	000
TBFDATA	028	024
TBFSIZE	001	200
TBFTOD	008	000
TBFVERST	024	008
TBFZONE	004	020

HCPTPCBK— 3480 TAPE PATHING CONTROL BLOCK

DSECT NAME: TPCBK

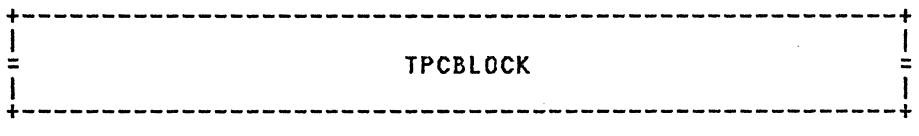
DESCRIPTIVE NAME: 3480 TAPE PATHING CONTROL BLOCK

FUNCTION: CONTAINS 3480 TAPE PATHING INFORMATION

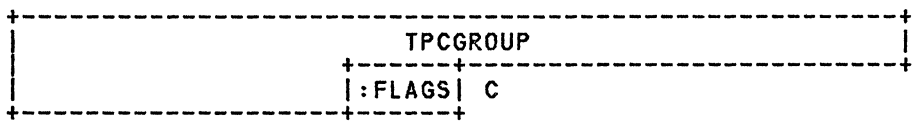
LOCATED BY:

VDEVDYPT IN VIRTUAL DEVICE BLOCK

TPCBK - 3480 TAPE PATHING CONTROL BLOCK



REDEFINITION - DEFINE EACH ENTRY OF CONTROL BLOCK



disp	name	length	description
000	TPCBLOCK	012	EIGHT ENTRIES OF PATHING INFORMATION

EQUATES

0C	TPCSIZE	TPCBK SIZE IN DOUBLE WORDS

REDEFINITION - DEFINE EACH ENTRY OF CONTROL BLOCK

000	TPCENTRY	012	ONE ENTRY OF TAPE PATHING BLOCK
000	TPCGROUP	011	TAPE PATH GROUP ID
00B	TPCFLAGS	001	TAPE PATHING FLAGS

MORE EQUATES

080	TPCFGRP	PATH IS GROUPED

CROSS REFERENCE

Name	Len	Val/Disp
TPCBK	001	000
TPCBLOCK	012	000
TPCENTRY	012	000
TPCFGRP	001	080
TPCFLAGS	001	00B
TPCGROUP	011	000
TPCSIZE	001	00C

HCPTPEBK— TAPE CONTROL BLOCK

DSECT NAME: TPEBK

DESCRIPTIVE NAME: TAPE CONTROL BLOCK

FUNCTION: THE TAPE CONTROL BLOCK IS USED TO SAVE INFORMATION USED FOR WRITING TO TAPE.

LOCATED BY:

SYSTPEBK IN HCPSYSCM

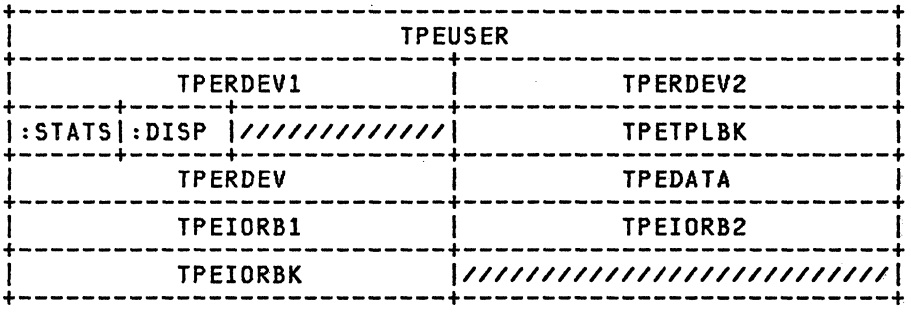
CREATED BY:

HCPTPEIN - DURING INITIALIZATION OF I/O PROCESSING.

DELETED BY:

HCPTPEND - DURING TERMINATION OF I/O PROCESSING.

TPEBK - TAPE CONTROL BLOCK



disp	name	length	description
000	TPEUSER	008	USERID TO SEND INFORMATIONAL MESSAGES TO
008	TPERDEV1	004	ADDRESS OF RDEVBK
00C	TPERDEV2	004	ADDRESS OF RDEVBK
010	TPESTATS	001	TAPE STATUS
	BITS DEFINED IN TPESTATS (AT HEX DISPLACEMENT: 10)		
	80 TPELABEL		WRITE TAPE LABEL
	40 TPECANCL		CANCEL PROCESSING
011	TPEDISP	001	TAPE DISPOSTION
	CODES DEFINED FOR TPEDISP BY HCPEQUAT TPEDISP		
012		1H	RESERVED FOR IBM USE
014	TPETPLBK	004	ADDRESS OF TAPE LABEL BLOCK HCPTPLBK
018	TPERDEV	004	ADDRESS OF RDEV CURRENTLY DOING I/O TO
01C	TPEDATA	004	ADDRESS OF PARAMETER LIST CONTAINING
020	TPEIORB1	004	ADDRESS OF IORBK
024	TPEIORB2	004	ADDRESS OF IORBK
028	TPEIORBK	004	ADDRESS OF CURRENT IORBK IN USE
02C		1F	RESERVED FOR IBM USE
	EQUATES		
	06 TPESIZE		SIZE OF TPEBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
TPEBK	001	000
TPECANCL	001	040
TPEDATA	004	01C
TPEDISP	001	011
TPEIORBK	004	028
TPEIORB1	004	020
TPEIORB2	004	024
TPELABEL	001	080
TPERDEV	004	018
TPERDEV1	004	008
TPERDEV2	004	00C
TPEREW	001	002
TPERUN	001	001
TPESIZE	001	006
TPESTATS	001	010
TPETPLBK	004	014
TPEUSER	008	000
TPE1600	001	002
TPE38K	001	004
TPE6250	001	003
TPE800	001	001

HCPTPLBK— TAPE LABEL CONTROL BLOCK

DSECT NAME: TPLBK

DESCRIPTIVE NAME: TAPE LABEL CONTROL BLOCK

FUNCTION: THE TAPE LABEL CONTROL BLOCK IS USED TO DESCRIBE THE TAPE LABEL PUT ON TAPE. ONLY ONE TPLBK IS CREATED AND USED DURING I/O PROCESSING TO TAPE.

LOCATED BY:

TPETPLBK IN HCPTPEBK

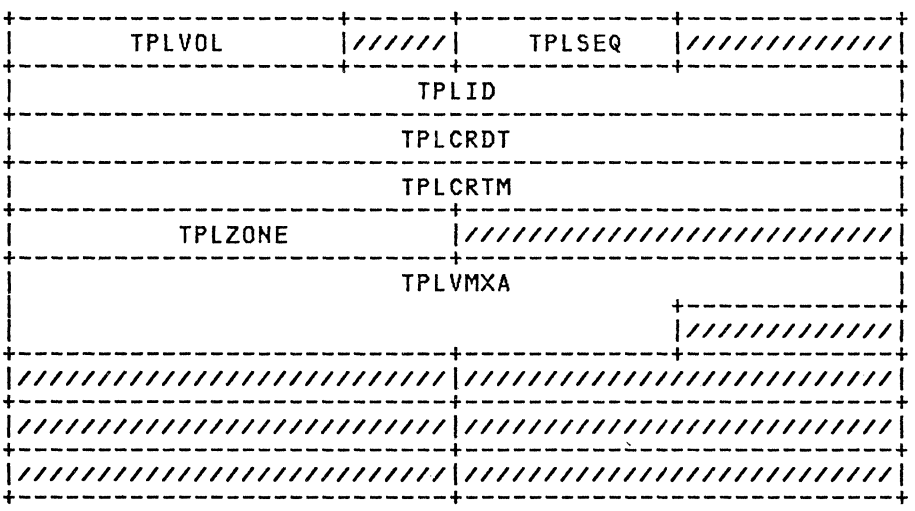
CREATED BY:

HCPTPEIN - DURING INITIALIZATION OF I/O PROCESSING.

DELETED BY:

HCPTPEND - DURING TERMINATION OF I/O PROCESSING.

TPLBK - TAPE LABEL CONTROL BLOCK



disp	name	length	description
000	TPLVOL	003	LABEL IDENTIFIER
003		1X	RESERVED FOR IBM USE
004	TPLSEQ	002	VOLUME SEQUENCE NUMBER
006		H	RESERVED FOR IBM USE
008	TPLID	008	TAPE CREATOR IDENTIFICATION
010	TPLCRDT	008	CREATION DATE
018	TPLCRTM	008	CREATION TIME
020	TPLZONE	004	TIME ZONE DIFFERENTIAL
024		F	RESERVED FOR IBM USE
038		F	RESERVED FOR IBM USE
03C		F	RESERVED FOR IBM USE
040		F	RESERVED FOR IBM USE
044		F	RESERVED FOR IBM USE
048		F	RESERVED FOR IBM USE
04C		F	RESERVED FOR IBM USE

EQUATES

0A	TPLSIZE	SIZE OF TPLBK IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
TPLBK	001	000
TPLCRDT	008	010
TPLCRTM	008	018
TPLID	008	008
TPLSEQ	002	004
TPLSIZE	001	00A
TPLVMXA	014	028
TPLVOL	003	000
TPLZONE	004	020

HCPTRCBK— TRACEID BLOCK

DSECT NAME: TRCBK

DESCRIPTIVE NAME: TRACEID BLOCK

FUNCTION: CONTAINS TRACE INFORMATION AND STATUS OF A TRACEID

LOCATED BY:

TXCTRCBK, RDEVTRC

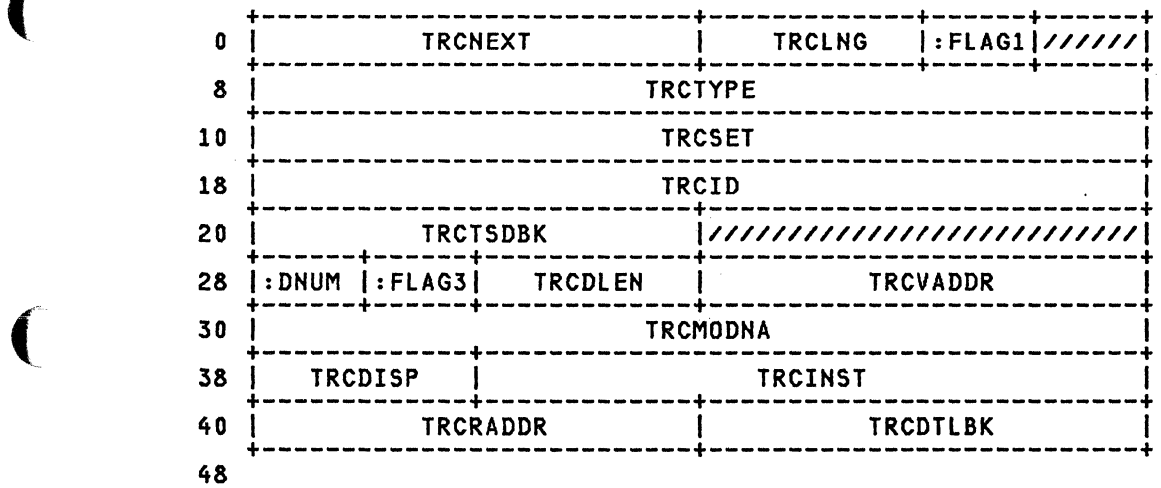
CREATED BY:

HCPTXL

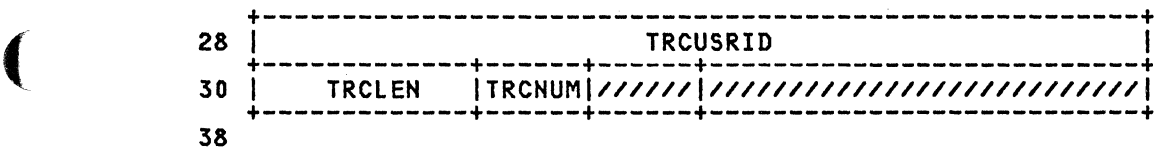
DELETED BY:

HCPTXL

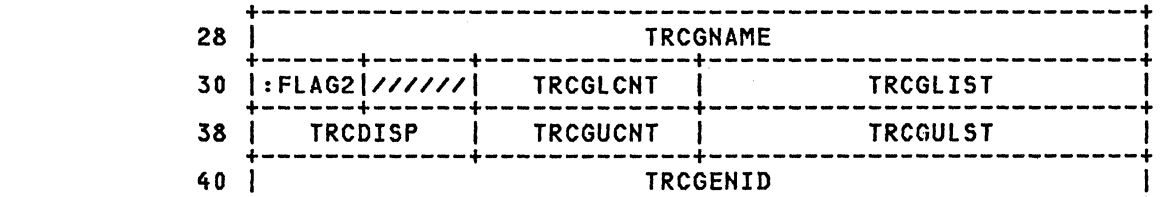
TRCBK - TRACEID BLOCK



REDEFINITION - TYPE IO DEPENDENT INFORMATION



REDEFINITION - TYPE GT DEPENDENT INFORMATION



disp	name	length	description

```
000   TRCNEXT    004      POINTER TO NEXT TRCBK IN CHAIN
004   TRCLNG     002      LENGTH OF TRCBK WITH EXTENSIONS
006   TRCFLAG1   001      TRCBK FLAGS
                          FLAGS DEFINED FOR TRCFLAG1

                    EQUATES

        80    TRCACTIV    TRACEID IS ENABLED
        01    TRCDROP     TRCBK IS TO BE DROPPED


007               XL1      RESERVED
008   TRCTYPE     008      TRACE TYPE OF TRACEID
                           VALID VALUES FOR TRCTYPE ARE;
                           BLANKS, 'DATA', 'GT' AND 'IO'
010   TRCSET      008      TRACE SET OF TRACEID
018   TRCID       008      TRACEID FOR THE TRCBK
020   TRCTSDBK    004      ADDRESS OF TSDBK
024               1F       RESERVED

                    EQUATES

        28    TRCSIZE     TRCBK SIZE IN BYTES
        05    TRCSIZED    TRCBK SIZE IN DOUBLEWORDS
                          TRACE TYPE DEPENDENT INFORMATION FOLLOWS:
                          TYPE DATA DEPENDENT INFORMATION

028   TRCDNUM     001      NUMBER OF DATALINK STRINGS
029   TRCFLAG3    001      FLAG BYTE
                           FLAGS DEFINDED FOR TRCFLAG3

                    EQUATES

        80    TRCVADSP    VIRTUAL ADDRESS SPECIFIED
        40    TRCMODSP    MODNAME + DISPLACEMENT SPECIFIED

02A   TRCDLEN     002      LENGTH OF DATA TO BE COLLECTED
02C   TRCVADDR    004      VIRTUAL ADDRESS OF TRACE POINT
030   TRCMODNA    008      MODULE NAME OF TRACE POINT
038   TRCDISP     002      DISPLACEMENT FROM MODULE ORIGIN
03A   TRCINST     006      INSTRUCTION OVERLAID BY SVC 28
040   TRCRADDR    004      REAL ADDRESS OF TRACE POINT
044   TRCDTLBK    004      POINTER TO PRINTABLE DL SOURCE
048   TRCVARY     002      DATALINKS - VARIABLE LENGTH

                    EQUATES

        20    TRCDTSIZ    TYPE DATA EXTENSION BYTE SIZE
        04    TRCDTSZD    DATA EXTENSION IN DOUBLEWORDS


      REDEFINITION - TYPE IO DEPENDENT INFORMATION

028   TRCUSRID    008      USERID OF WHOM IO IS TRACED
030   TRCLEN      002      NUMBER OF BYTES TRACED FOR EACH CCW
032   TRCNUM      001      NUMBER OF DEV OR DEV RANGES TRACED
033               XL1      RESERVED
034               1F       RESERVED
038   TRCDEVAD    004      START OF DEVADDR/RANGES AREA

                    EQUATES

        10    TRCIOSIZ    TYPE IO EXTENSION BYTE SIZE
        02    TRCIOSZD    IO EXTENSION IN DOUBLEWORDS


      REDEFINITION - TYPE GT DEPENDENT INFORMATION

028   TRCGNAME    008      EITHER USERID OR GROUPNAME
030   TRCFLAG2    001      FLAG BYTE
                           FLAGS DEFINED FOR TRCFLAG2

                    EQUATES
```



```
         80     TRCALLOW    TRCGNAME CONTAINS USERID
         40     TRCGROUP    TRCGNAME CONTAINS GROUP NAME
         08     TRCGINCL    INCLUDE LIST EXISTS
         04     TRCGEXCL    EXCLUDE LIST EXISTS

031                 XL1      RESERVED
032    TRCGLCNT     002      NUMBER OF ENTRIES IN
                              INCLUDE/EXCLUDE LIST
034    TRCGLIST     004      ADDRESS OF INCLUDE/EXCLUDE LIST
038                 1H       RESERVED
03A    TRCGUCNT     002      NUMBER OF ENTRIES IN GROUP TRACE
                              LIST OF ENABLED USERIDS
03C    TRCGULST     004      ADDRESS OF GROUP TRACE LIST
                              OF ENABLED USERIDS
040    TRCGENID     008      USERID WHO ENABLED THE TRACE
```

EQUATES

```
         20     TRCGTSIZ    TYPE GT EXTENSION BYTE SIZE
         04     TRCGTSZD    GT EXTENSION IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
TRCACTIV	001	080	TRCSIZE	001	028
TRCALLOW	001	080	TRCSIZED	001	005
TRCBK	001	000	TRCTSDBK	004	020
TRCDEVAD	004	038	TRCTYPE	008	008
TRCDISP	002	038	TRCUSRID	008	028
TRCDLEN	002	02A	TRCVADDR	004	02C
TRCDNUM	001	028	TRCVADSP	001	080
TRCDROP	001	001	TRCVARY	002	048
TRCDTLBK	004	044			
TRCDTSIZ	001	020			
TRCDTSZD	001	004			
TRCFLAG1	001	006			
TRCFLAG2	001	030			
TRCFLAG3	001	029			
TRCGENID	008	040			
TRCGEXCL	001	004			
TRCGINCL	001	008			
TRCGLCNT	002	032			
TRCGLIST	004	034			
TRCGNAME	008	028			
TRCGROUP	001	040			
TRCGTSIZ	001	020			
TRCGTSZD	001	004			
TRCGUCNT	002	03A			
TRCGULST	004	03C			
TRCID	008	018			
TRCINST	006	03A			
TRCIOSIZ	001	010			
TRCIOSZD	001	002			
TRCLEN	002	030			
TRCLNG	002	004			
TRCMODNA	008	030			
TRCMODSP	001	040			
TRCNEXT	004	000			
TRCNUM	001	032			
TRCRADDR	004	040			
TRCSET	008	010			

HCPTRDBK— TRACEID/TRACESET DISPLAY CHAIN ENTRY

DSECT NAME: TRDBK

DESCRIPTIVE NAME: TRACEID/TRACESET DISPLAY CHAIN ENTRY

FUNCTION: THE TRDBK IS AN ENTRY IN A CHAIN OF EITHER TRACEID NAMES OR TRACESET NAMES. IT ALLOWS TRSOURCE DISPLAY PROCESSING TO PROCESS REQUESTS FROM EITHER THE TRSOURCE DISPLAY PARAMETER OR FROM QUERY TRSOURCE IN THE ORDER THAT IT WAS REQUESTED.

LOCATED BY:

TXCTRDBK

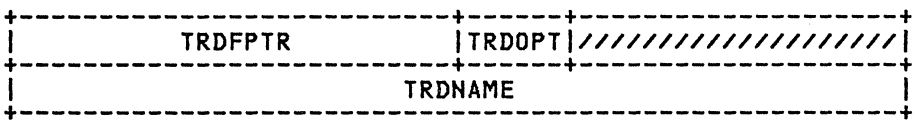
CREATED BY:

HCPTXR, HCPTXQ, HCPTXS

DELETED BY:

HCPTXS

TRDBK - TRACEID/TRACESET DISPLAY CHAIN ENTRY



disp	name	length	description
000	TRDFPTR	004	FORWARD POINTER TO NEXT ENTRY
004	TRDOPT	001	TYPE OF CHAIN BITS DEFINED FOR TRDOPT

EQUATES

80	TRDSET	DISPLAY A TRACESET
40	TRDID	DISPLAY A TRACEID
08	TRDNODRP	NOT DROP PROCESSING
04	TRDQUERY	QUERY TRSOURCE

005		3X	RESERVED
008	TRDNAME	008	TRACESET OR TRACEID NAME

EQUATES

10	TRDSIZEB	TRDBK SIZE IN BYTES
02	TRDSIZE	TRDBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
TRDBK	001	000	TRDNODRP	001	008	TRDSIZE	001	002
TRDFPTR	004	000	TRDOPT	001	004	TRDSIZEB	001	010
TRDID	001	040	TRDQUERY	001	004			
TRDNAME	008	008	TRDSET	001	080			

HCPTRPBK— TRACE TRAP BLOCK

DSECT NAME: TRPBK

DESCRIPTIVE NAME: TRACE TRAP BLOCK

FUNCTION: HCPTRPBK CONTAINS ALL DESCRIPTIVE INFORMATION ABOUT A PARTICULAR TRACE TRAP CURRENTLY DEFINED BY THE TRACE COMMAND.

LOCATED BY:

TRPNEXT CHAINED
TRSANCHR FIELD OF HCPTRSBK

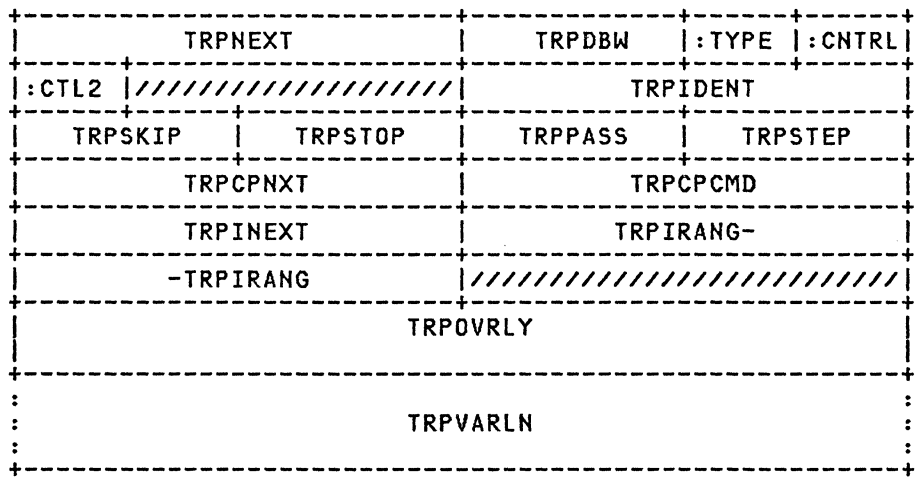
CREATED BY:

HCPTRIP

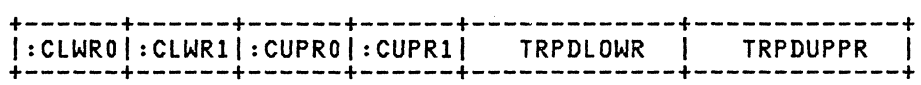
DELETED BY:

HCPTRICL, HCPTRITD, HCPTRIX

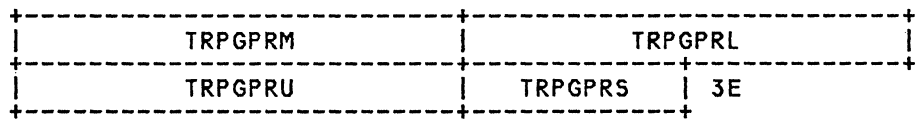
TRPBK - TRACE TRAP BLOCK



REDEFINITION -



REDEFINITION -



REDEFINITION -

```
      REDEFINITION -

   +--------------------------+--------------------------+
30 |          TRPSNEXT        |         TRPSRANG-        |
   +--------------------------+------+-------------------+
38 |         -TRPSRANG        |:SFLAG| 3D
   +--------------------------+------+

      REDEFINITION -

   +-------------+-------------+------+--------------------+
40 |   TRPDATAL  |/////////////|:IFLAG|////////////////////|
   +-------------+-------------+------+--------------------+
48
```

disp	name	length	description
000	TRPNEXT	004	POINTER TO NEXT TRAP BLOCK IN LIST
004	TRPDBW	002	NUMBER OF DOUBLEWORDS IN THIS BLOCK
006	TRPTYPE	001	TRACE TRAP TYPE DEFINITION
	BITS DEFINED IN TRPTYPE (AT HEX DISPLACEMENT: 6)		
007	TRPCNTRL	001	TRACING SCREENING/OUTPUT CONTROL
	BITS DEFINED IN TRPCNTRL (AT HEX DISPLACEMENT: 7)		
	80 TRPPROB		RESTRICT TO PROBLEM MODE ONLY
	40 TRPSUPV		RESTRICT TO SUPERVISOR MODE ONLY
	20 TRPDAT		RESTRICT TO D.A.T. MODE ONLY
	10 TRPNODAT		RESTRICT TO NON-D.A.T. MODE ONLY
	08 TRPPRINT		SEND DISPLAY (IF ANY) TO PRINTER
	04 TRPTERM		SEND DISPLAY (IF ANY) TO TERMINAL
	02 TRPNOSIM		DELETE INSTRUCTION SIMULATION
	01 TRPHIT		TRAP HAS DEFERRED PROCESSING
008	TRPCTL2	001	
009		3X	RESERVED FOR FUTURE IBM USE
00C	TRPIDENT	004	FOUR CHARACTER TRAP IDENTIFIER
010	TRPSKIP	002	COUNT REMAINING IN CURRENT SKIP COUNT
012	TRPSTOP	002	DISPLAYS REMAINING UNTIL CONSOLE STOP
014	TRPPASS	002	PASS COUNT (REFRESHES TRPPASS IF PRESENT)
016	TRPSTEP	002	STEP COUNT (REFRESHES TRPSTOP IF PRESENT)
018	TRPCPNXT	004	POINTER TO NEXT CP COMMAND IN CHAIN
01C	TRPCPCMD	004	POINTER TO THIS CP COMMAND (ZERO IF NONE)
020	TRPINEXT	004	POINTER TO NEXT RANGE AFTER THIS IRANGE.
024	TRPIRANG	004	LOWER AND UPPER IFETCH ADDRESS BOUNDS
02C		F	RESERVED FOR FUTURE USE
030	TRPOVRLY	008	OVERLAY REGION
040	TRPVARLN	001	START OF VARIABLE LENGTH DATA
	REDEFINITION -		
030	TRPCLOWR	002	OPCODE LOWER BOUND
030	TRPCLWR0	001	OPCODE BYTE 0
031	TRPCLWR1	001	OPCODE BYTE 1
032	TRPCUPPR	002	OPCODE UPPER BOUND
032	TRPCUPR0	001	OPCODE BYTE 0
033	TRPCUPR1	001	OPCODE BYTE 1
034	TRPDLOWR	002	DEVICE LOWER BOUND
036	TRPDUPPR	002	DEVICE UPPER BOUND

```
                    EQUATES

        07    TRPCDDBW    NUMBER OF DOUBLEWORDS

         REDEFINITION -

030   TRPGPRM     004       MASK FOR GENERAL REGISTER DATA COMPARE
034   TRPGPRL     004       LOWER DATA BOUND FOR GPR ALTERATION
038   TRPGPRU     004       UPPER BOUND FOR GPR ALTERATION
03C   TRPGPRS     002       MASK FOR GENERAL REGISTER ALTERATION

                    EQUATES

        08    TRPGRDBW    NUMBER OF DOUBLEWORDS

         REDEFINITION -

030   TRPBRANG    004       BRANCH TRAP TARGET RANGE

                    EQUATES

        07    TRPBRDBW    NUMBER OF DOUBLEWORDS

         REDEFINITION -

030   TRPSNEXT    004       LINK PTR FOR STORAGE RANGE
034   TRPSRANG    004       LOWER AND UPPER STORE ADDRESS BOUNDS
03C   TRPSFLAG    001       STORAGE ALTERATION TRAP FLAG

        BITS DEFINED IN TRPSFLAG (AT HEX DISPLACEMENT: 3C)

        80    TRPSPDAT    STORAGE ALTERATION DATA PRESENT
        40    TRPS1ST     FIRST DATA SECTION EQUAL LAST INT.
        20    TRPS2ND     SECOND DATA SECTION EQUAL LAST INT
        10    TRPSLAST    BOTH SECTIONS EQUAL LAST INTERRUPT
        08    TRPSDISP    DISPLAY THIS DATA TRAP
        04    TRPSPMAS    STORAGE ALTERATION MASK PRESENT

03D   TRPSDATA    256       STORAGE ALTERATION DATA

                    EQUATES

        3D    TRPSTLEN    BASE LENGTH FOR STORE TRAPS

         REDEFINITION -

040   TRPDATAL    002       LENGTH OF 'TRACE INSTRUCTION' DATA
042               H         RESERVED
044   TRPIFLAG    001       INSTRUCTION TRAP FLAG

                    EQUATES

        80    TRPIDATP    INSTRUCTION DATA PRESENT

045               3X        RESERVED

                    EQUATES

        48    TRPINLEN    FIXED PORTION OF INSTRUCTION TRAP

048   TRPIDATA    256       'TRACE INSTRUCTION' DATA

                    MORE EQUATES

        008   TRPIOACT    I/O ACTIVITY TRAP (SIO IMPLICIT)
        004   TRPIOINT    I/O INTERRUPTIONS (PSW FLIPS)
        002   TRPIOINS    I/O INSTRUCTIONS
        001   TRPIOCCW    CCW CHAINS FOR GIVEN DEVICE(S)
        001   TRPINTCP    TRACE OF INSTRUCTION BY MNEMONIC
```

002	TRPSVC	SVC INSTRUCTION EVENT TRAP
003	TRPDIAG	DIAG INSTRUCTION EVENT TRAP
004	TRPMCALL	SUCCESSFUL MONITOR CALL TRAP
005	TRPPGM	PROGRAM INTERRUPTION EVENT TRAP
006	TRPEXT	EXTERNAL INTERRUPTION EVENT TRAP
007	TRPMCH	MACHINE CHECK INTERRUPTION EVENT TRAP
080	TRPIDSET	TRAP ID WAS SET VIA 'ID' OPTION

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
TRPBK	001	000	TRPSFLAG	001	03C
TRPBRANG	004	030	TRPSKIP	002	010
TRPBRDBW	001	007	TRPSLAST	001	010
TRPCDDBW	001	007	TRPSNEXT	004	030
TRPCLOWR	002	030	TRPSPDAT	001	080
TRPCLWR0	001	030	TRPSPMAS	001	004
TRPCLWR1	001	031	TRPSRANG	004	034
TRPCNTRL	001	007	TRPSTEP	002	016
TRPCPCMD	004	01C	TRPSTLEN	001	03D
TRPCPNXT	004	018	TRPSTOP	002	012
TRPCTL2	001	008	TRPSUPV	001	040
TRPCUPPR	002	032	TRPSVC	001	002
TRPCUPR0	001	032	TRPS1ST	001	040
TRPCUPR1	001	033	TRPS2ND	001	020
TRPDAT	001	020	TRPTERM	001	004
TRPDATAL	002	040	TRPTYPE	001	006
TRPDBW	002	004	TRPVARLN	001	040
TRPDIAG	001	003			
TRPDLOWR	002	034			
TRPDUPPR	002	036			
TRPEXT	001	006			
TRPGPRL	004	034			
TRPGPRM	004	030			
TRPGPRS	002	03C			
TRPGPRU	004	038			
TRPGRDBW	001	008			
TRPHIT	001	001			
TRPIDATA	256	048			
TRPIDATP	001	080			
TRPIDENT	004	00C			
TRPIDSET	001	080			
TRPIFLAG	001	044			
TRPINEXT	004	020			
TRPINLEN	001	048			
TRPINTCP	001	001			
TRPIOACT	001	008			
TRPIOCCW	001	001			
TRPIOINS	001	002			
TRPIOINT	001	004			
TRPIRANG	004	024			
TRPMCALL	001	004			
TRPMCH	001	007			
TRPNEXT	004	000			
TRPNODAT	001	010			
TRPNOSIM	001	002			
TRPOVRLY	008	030			
TRPPASS	002	014			
TRPPGM	001	005			
TRPPRINT	001	008			
TRPPROB	001	080			
TRPSDATA	256	03D			
TRPSDISP	001	008			

HCPTRQBK— TIMER REQUEST BLOCK

DSECT NAME: TRQBK

DESCRIPTIVE NAME: TIMER REQUEST BLOCK

FUNCTION: HCPTRQBK REPRESENTS A REQUEST FOR NOTIFICATION OF A ROUTINE WHEN A PARTICULAR TOD CLOCK VALUE IS REACHED. THE UN-EXPIRED TRQBKS ARE MAINTAINED BY MODULE HCPTRQ ENQUEUED IN CHAINS WHOSE ANCHORS RESIDE IN A "HASH" TABLE.

LOCATED BY:

TRQFPNT	DOUBLY CHAINED (FORWARD)
TRQBPNT	DOUBLY CHAINED (BACKWARD)
HCPTRQQ	START OF "INDEX" TABLE, POINTING TO PAGES OF HASH TABLE CONTAINING POINTERS TO TRQBKS.
BASETRQS	ANCHOR IN MODULE HCPMIH (MIH TRQBKS ONLY)
GSRTRQBK	FIELD OF HCPGSRBK (GUEST RECOVERY TIMER REQUEST)
PCSTIADD	FIELD OF HCPPCSBK (PROCESSOR CONTROLLER INTERVAL)
RDEVTRQ	FIELD OF HCPRDEV (CONTROL)
VMDTRQPT	FIELD OF HCPVMDBK (GUEST TIMERS)
VMDTRQDL	FIELD OF HCPVMDBK (DELAYED SLEEP OR LOGOFF)
VMDTRQQS	FIELD OF HCPVMDBK (SCHEDULING)
VMDQIORF	FIELD OF HCPVMDBK (PUSH-THRU STACK)

NOTE: THE ABOVE LIST IS PROBABLY NOT EXHAUSTIVE.

CREATED BY:

HCPBVM	GUEST TIMER MANAGEMENT TRQBK DURING LOGON
HCPCFM	TIMEOUT TO FORCE OFF DISCONNECTED USER
HCPCHM	WAIT FOR CHANNEL TIMER TO SYNCHRONIZE WITH TOD CLOCK
HCPCMX	START SLEEP INTERVAL FOR SLEEP COMMAND
HCPGFS	REDRIVE FULLSCREEN GRAPHICS TIMER
HCPGRF	RESET ANY ACTIVE GRAPHICS TIMER
HCPGRF	REDISPLAY LOGO AFTER LOGOFF
HCPIIO	DEVICE INITIALIZATION TIMEOUT
HCPIOP	MONITOR SYSTEM PERFORMANCE AT INTERVALS (RESET IN HCPSTP)
HCPITM	INTERVAL TO SEND MIDNIGHT MESSAGE

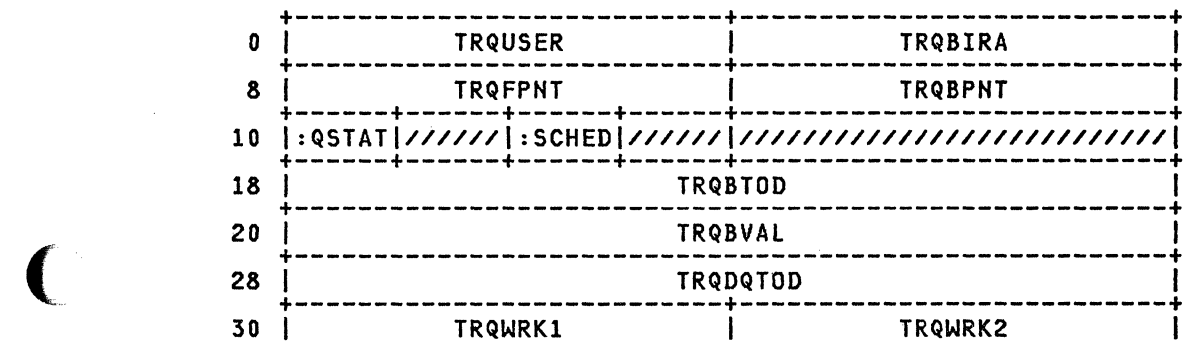
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

DELETED BY:

HCPCFM	TIMEOUT TO FORCE OFF DISCONNECTED USER
HCPCHM	WAIT FOR CHANNEL TIMER TO SYNCHRONIZE WITH TOD CLOCK
HCPCMX	END SLEEP INTERVAL FOR SLEEP COMMAND
HCPGRF	DELETE ANY ACTIVE GRAPHICS TIMER
HCPIIO	DEVICE INITIALIZATION TIMEOUT
HCPMPS	PURGE STORAGE FOR PROCESSOR VARIED OFF
HCPMPC	UNRESPONSIVE PROCESSOR DETECTION
HCPPCR	UNRESPONSIVE PROCESSOR CONTROLLER DETECTION
HCPSTK	SCHEDULING TRQBK DURING LOGOFF
HCPUSO	GUEST TIMER MANAGEMENT TRQBK DURING LOGOFF

NOTE: THE ABOVE LIST IS PROBABLY NOT EXHAUSTIVE.

TRQBK - TIMER REQUEST BLOCK



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   +--------------------------+--------------------------+
38
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REDEFINITION - REDEFINE FOR USE WHILE QUEUED.

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   +--------------------------+--------------------------+
28 |          TRQQANCH        |//////////////////////////|
   +--------------------------+--------------------------+
30
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disp	name	length	description
000	TRQUSER	004	ADDRESS OF VMD BLOCK FOR USER
004	TRQBIRA	004	INTERRUPT RETURN ADDRESS
008	TRQFBPNT	008	FOR REFERENCING BOTH POINTERS
008	TRQFPNT	004	POINTER TO NEXT TRQBK
00C	TRQBPNT	004	POINTER TO PREVIOUS TRQBK
010	TRQQSTAT	001	TRQBK QUEUEING STATUS
	BITS DEFINED IN TRQQSTAT (AT HEX DISPLACEMENT: 10)		
	80 TRQQUED		TRQBK IS QUEUED FOR CLOCK COMPARATOR
	40 TRQACTIV		TRQBK IS ACTIVE IN CLOCK COMPARATOR
	20 TRQQDSP		TRQBK IS STACKED FOR DISPATCHING
	01 TRQANCH		THIS IS A TRQBK ANCHOR
011		X	RESERVED FOR FUTURE IBM USE
012	TRQSCHED	001	TRQBK SCHEDULING, UNSTACK FLAGS
	BITS DEFINED IN TRQSCHED (AT HEX DISPLACEMENT: 12)		
	80 TRQHIPRI		REQUEST TO GRANT A VERY HIGH DISPATCHER/SCHEDULER PRIORITY FOR THE VMDBK IDENTIFIED BY TRQUSER (THIS BIT IS NOT CURRENTLY USED)
	40 TRQUCALL		UNSTACK TRQBK WITH CALL-LINKAGE WHEN UNSTACKED BY THE DISPATCHER
	01 TRQIDTRQ		TRQBK IDENTIFIER (1=TRQBK, 0=IORBK)
013		X	RESERVED FOR FUTURE IBM USE
014		F	RESERVED FOR FUTURE IBM USE (END OF IORBK/TRQBK COMMON FIELDS)
018	TRQBTOD	008	TOD CLOCK VALUE WHEN QUEUED (SET BY THE CALLER IF DESIRED)
020	TRQBVAL	008	TOD CLOCK COMPARATOR VALUE FOR TIME OF INTERRUPTION (REQUEST VALUE SET BY CALLER).
028	TRQDQTOD	008	TOD CLOCK VALUE WHEN DEQUEUED (NOT STORED UNTIL HCPTRQ DEQUEUES THE TRQBK.)
030	TRQWRK1	004	WORK AREA FOR REQUESTOR
034	TRQWRK2	004	WORK AREA FOR REQUESTOR
	EQUATES		
	07 TRQSIZE		TRQBK SIZE IN DOUBLE-WORDS

REDEFINITION - REDEFINE FOR USE WHILE QUEUED.

028	TRQQANCH	004	POINTER TO ANCHOR OF QUEUE THIS TRQBK IS PRESENTLY QUEUED IN.
02C		F	RESERVED FOR FUTURE IBM USE

CROSS REFERENCE

Name	Len	Val/Disp
TRQACTIV	001	040
TRQANCH	001	001
TRQBIRA	004	004
TRQBK	001	000
TRQBPNT	004	00C
TRQBTOD	008	018
TRQBVAL	008	020
TRQDQTOD	008	028
TRQFBPNT	008	008
TRQFPNT	004	008
TRQHIPRI	001	080
TRQIDTRQ	001	001
TRQQANCH	004	028
TRQQDSP	001	020
TRQQSTAT	001	010
TRQQUED	001	080
TRQSCHED	001	012
TRQSIZE	001	007
TRQUCALL	001	040
TRQUSER	004	000
TRQWRK1	004	030
TRQWRK2	004	034

HCPTRSBK— TRACE SET BLOCK

DSECT NAME: TRSBK

DESCRIPTIVE NAME: TRACE SET BLOCK

FUNCTION: HCPTRSBK CONTAINS ALL DESCRIPTIVE INFORMATION ABOUT A PARTICULAR TRACE SET CURRENTLY DEFINED BY THE TRACE COMMAND.

LOCATED BY:

TRSCYCLE CHAINED
TRXTRSET FIELD IN HCPTRXBK

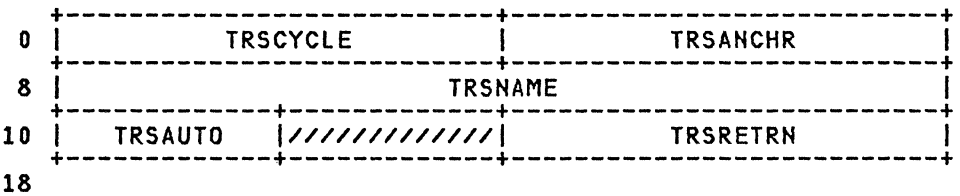
CREATED BY:

HCPTRINT, HCPTRIGO

DELETED BY:

HCPTRICL, HCPTRIX

TRSBK - TRACE SET BLOCK



disp	name	length	description
000	TRSCYCLE	004	CYCLIC POINTER (NEXT TRACE SET IN CHAIN)
004	TRSANCHR	004	ANCHOR FOR TRACE TRAPS IN TRACE SET
008	TRSNAME	008	NAME OF THIS TRACE SET (MUST BE UNIQUE)
010	TRSAUTO	002	TRAP COUNT FOR AUTO-NAME PURPOSES
012		H	RESERVED FOR FUTURE IBM USE
014	TRSRETRN	004	ADDR OF NEXT PREVIOUS SET FOR RETURN

EQUATES

03	TRSSIZE	NUMBER OF DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
TRSANCHR	004	004
TRSAUTO	002	010
TRSBK	001	000
TRSCYCLE	004	000
TRSNAME	008	008
TRSRETRN	004	014
TRSSIZE	001	003

HCPTRXBK— TRACE EXTENSION BLOCK

DSECT NAME: TRXBK

DESCRIPTIVE NAME: TRACE EXTENSION BLOCK

FUNCTION: HCPTRXBK CONTAINS DESCRIPTIVE INFORMATION ABOUT THE TRACE ENVIRONMENT THAT IS CURRENTLY IN EFFECT. IT IS ALSO USED AS A WORK AREA DURING TRACE TRAP PROCESSING.

LOCATED BY:

VMDTREXT FIELD OF HCPVMDBK

CREATED BY:

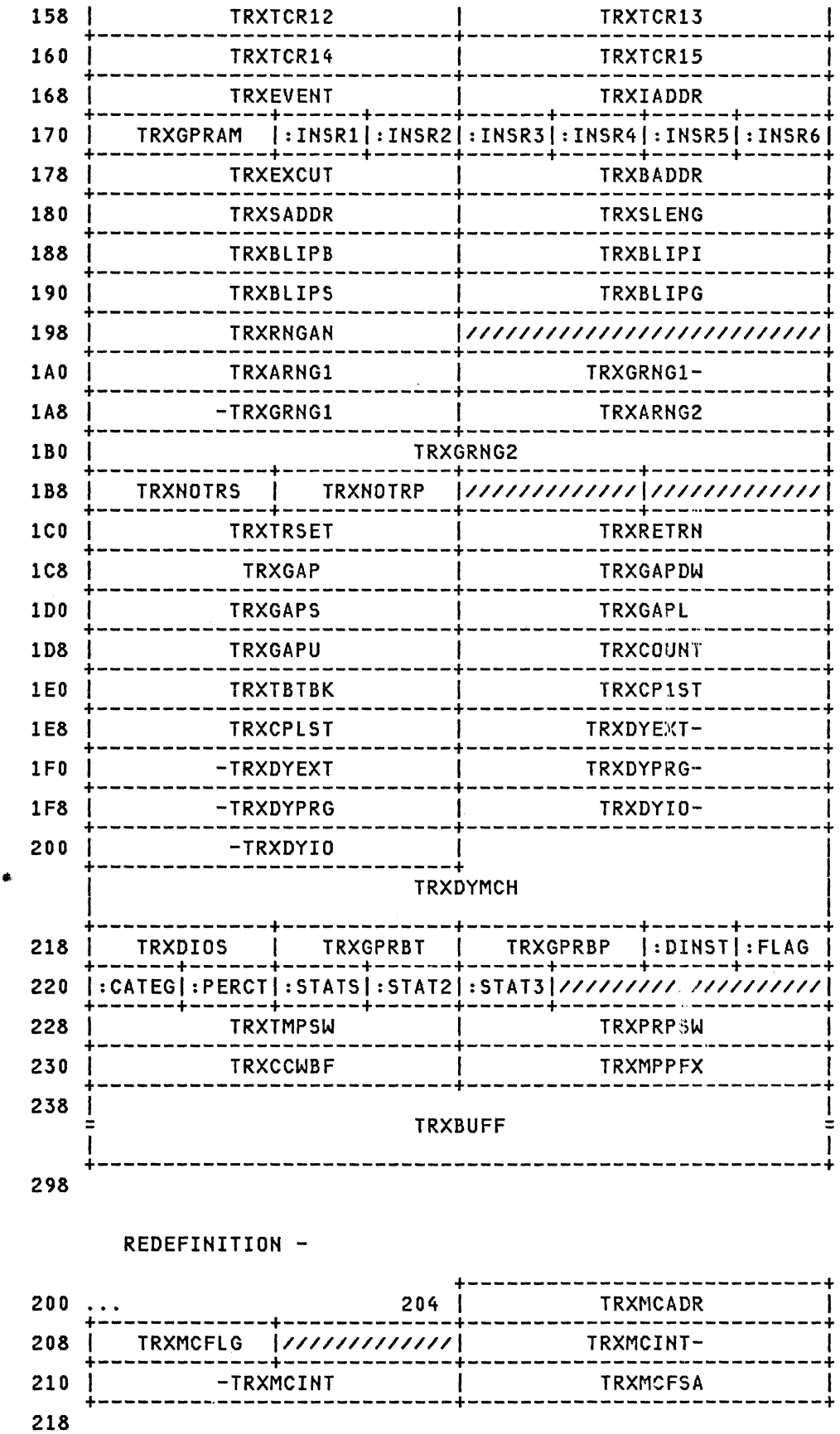
HCPTRINT

DELETED BY:

HCPTRIX

TRXBK - TRACE EXTENSION BLOCK

0	TRXSAVE				
78	TRXNBASE		:ECAM0	:ECAM1	//////////
80	TRXLBASE	TRXTCHBS	//////////		
88	TRXGPRS				
C8	TRXPSW				
D0	TRXSDSVC		TRXSDLCT		TRXSDTCH
D8	TRXSDNTC		TRXSDECA		
E0	TRXAGCR9		TRXVMA	:TVMA	TRXCRALT
E8	TRXGCR0		TRXGCR1		
F0	TRXGCR2		TRXGCR3		
F8	TRXGCR4		TRXGCR5		
100	TRXGCR6		TRXGCR7		
108	TRXGCR8		TRXGCR9		
110	TRXGCR10		TRXGCR11		
118	TRXGCR12		TRXGCR13		
120	TRXGCR14		TRXGCR15		
128	TRXTCR0		TRXTCR1		
130	TRXTCR2		TRXTCR3		
138	TRXTCR4		TRXTCR5		
140	TRXTCR6		TRXTCR7		
148	TRXTCR8		TRXTCR9		
150	TRXTCR10		TRXTCR11		



REDEFINITION -

disp	name	length	description
000	TRXSAVE	120	STANDARD SAVE AREA ***NOTE: THIS FIELD MUST REMAIN FIRST IN THE TRXBK. THE HCPTRXNT ENTRY STATEMENT REFERENCES THE FIELD WITH 'SAVE=(VMDTREXT)'.***
078	TRXNBASE	004	BASE INTERCEPTION BITS (WITHOUT PER)
07C	TRXECMSK	004	MASK OF ECA BITS TO APPLY TO VMDECA
07C	TRXECAM0	001	MASK OF ECA, BYTE 0
	BITS DEFINED FOR TRXECAM0 BY HCPSIEBK SIEECA0		
07D	TRXECAM1	001	MASK OF ECA, BYTE 1
	BITS DEFINED FOR TRXECAM1 BY HCPSIEBK SIEECA1		
07E		2X	RESERVED FOR FUTURE IBM USE
080	TRXLBASE	002	BASE LCTL INTERCEPTION CONTROLS
082	TRXTCHBS	002	BASE TCH INTERCEPTION CONTROLS
084		F	RESERVED FOR FUTURE IBM USE
088	TRXGPRS	004	COPY OF GPRS FOR BASE AND DISPLACEMENT CALCULATIONS
0C8	TRXPSW	008	GUEST PSW AT LAST CALL FROM RUNU
0D0	TRXSDSVC	004	SAVED SVC INTERCEPTION CONTROLS
0D4	TRXSDLCT	002	SAVED LCTL INTERCEPTION CONTROLS
0D6	TRXSDTCH	002	SAVED TCH INTERCEPTION CONTROLS
0D8	TRXSDNTC	004	SAVED INSTRUCTION INTERCEPTION CONTROLS
0DC	TRXSDECA	004	SAVED COPY OF VMDECA
0E0	TRXAGCR9	004	ADJUSTED GUEST CONTROL REGISTER 9.
0E4	TRXVMA	001	SAVE HOST CR6 BYTE 0
0E5	TRXTVMA	001	TRACE-ALTERED VMA RUN-MASK
0E6	TRXCRALT	002	LIST OF ALTERED CONTROL REGS
0E8	TRXGCRS	004	GUEST CONTROL REGISTER VALUES
0E8	TRXGCR0	004	GUEST CONTROL REGISTER 0
0EC	TRXGCR1	004	GUEST CONTROL REGISTER 1
0F0	TRXGCR2	004	GUEST CONTROL REGISTER 2
0F4	TRXGCR3	004	GUEST CONTROL REGISTER 3
0F8	TRXGCR4	004	GUEST CONTROL REGISTER 4
0FC	TRXGCR5	004	GUEST CONTROL REGISTER 5
100	TRXGCR6	004	GUEST CONTROL REGISTER 6
104	TRXGCR7	004	GUEST CONTROL REGISTER 7
108	TRXGCR8	004	GUEST CONTROL REGISTER 8
10C	TRXGCR9	004	GUEST CONTROL REGISTER 9
110	TRXGCR10	004	GUEST CONTROL REGISTER 10
114	TRXGCR11	004	GUEST CONTROL REGISTER 11
118	TRXGCR12	004	GUEST CONTROL REGISTER 12
11C	TRXGCR13	004	GUEST CONTROL REGISTER 13
120	TRXGCR14	004	GUEST CONTROL REGISTER 14
124	TRXGCR15	004	GUEST CONTROL REGISTER 15
128	TRXTCRS	004	TRACE CONTROL REGISTER VALUES
128	TRXTCR0	004	TRACE CONTROL REGISTER 0
12C	TRXTCR1	004	TRACE CONTROL REGISTER 1
130	TRXTCR2	004	TRACE CONTROL REGISTER 2
134	TRXTCR3	004	TRACE CONTROL REGISTER 3
138	TRXTCR4	004	TRACE CONTROL REGISTER 4
13C	TRXTCR5	004	TRACE CONTROL REGISTER 5
140	TRXTCR6	004	TRACE CONTROL REGISTER 6
144	TRXTCR7	004	TRACE CONTROL REGISTER 7
148	TRXTCR8	004	TRACE CONTROL REGISTER 8
14C	TRXTCR9	004	TRACE CONTROL REGISTER 9
150	TRXTCR10	004	TRACE CONTROL REGISTER 10
154	TRXTCR11	004	TRACE CONTROL REGISTER 11
158	TRXTCR12	004	TRACE CONTROL REGISTER 12
15C	TRXTCR13	004	TRACE CONTROL REGISTER 13
160	TRXTCR14	004	TRACE CONTROL REGISTER 14
164	TRXTCR15	004	TRACE CONTROL REGISTER 15
168	TRXTRPNF	008	START OF HCPTRP-SUPPLIED PER INFO
168	TRXEVENT	004	EVENT ADDRESS FOR INTERRUPT PROCESSOR
16C	TRXIADDR	004	INSTRUCTION ADDRESS

			(TARGET IF EXECUTE INSTRUCTION)
170	TRXGPRAM	002	GEN. PURPOSE REGISTER ALTERATION MAP
172	TRXINSTR	006	INSTRUCTION (TARGET INSTR IF EXECUTE)
172	TRXINSR1	001	BYTE 1 OF TARGET INSTRUCTION
173	TRXINSR2	001	BYTE 2 OF TARGET INSTRUCTION
174	TRXINSR3	001	BYTE 3 OF TARGET INSTRUCTION
175	TRXINSR4	001	BYTE 4 OF TARGET INSTRUCTION
176	TRXINS56	002	LAST TWO BYTES OF TARGET INSTRUCTION
176	TRXINSR5	001	BYTE 5 OF TARGET INSTRUCTION
177	TRXINSR6	001	BYTE 6 OF TARGET INSTRUCTION
178	TRXEXCUT	004	EXECUTE INSTRUCTION (ZERO IF NOT PRESENT)
17C	TRXBADDR	004	SUCCESSFUL BRANCH ADDRESS (IF TOP BIT ONE)
180	TRXSADDR	004	STORAGE ALTERATION ADDRESS (IF TOP BIT ONE)
184	TRXSLENG	004	STORAGE ALTERATION LENGTH

EQUATES

20	TRXTRPNL	LENGTH OF HCPTRP-SUPPLIED PER INFORMATION IN BYTES

188	TRXBLIPB	004	BLIP COUNTER FOR BRANCH EVENTS
18C	TRXBLIPI	004	BLIP COUNTER FOR IFETCH EVENTS
190	TRXBLIPS	004	BLIP COUNTER FOR STORE EVENTS
194	TRXBLIPG	004	BLIP COUNTER FOR GREG EVENTS
198	TRXRNGAN	004	ANCHOR FOR OUR LIST OF RANGES.
19C		F	RESERVED
1A0	TRXARNG1	004	POINTER FOR THE FIRST SECTION OF RANGE
1A4	TRXGRNG1	004	FIRST RANGE OF SPLIT GUEST PER RANGE
1AC	TRXARNG2	004	POINTER FOR THE SECOND SECTION OF RANGE
1B0	TRXGRNG2	004	SECOND RANGE OF SPLIT GUEST PER RANGE
1B8	TRXNOTRS	002	NUMBER OF TRACE SETS DEFINED
1BA	TRXNOTRP	002	NUMBER OF TRAPS DEFINED
1BC		H	RESERVED FOR FUTURE USE
1BE		H	RESERVED FOR FUTURE USE
1C0	TRXTRSET	004	POINTER TO CURRENT TRACE SET DESCRIPTOR
1C4	TRXRETRN	004	CURRENT CALL/RETURN SET ADDRESS
1C8	TRXGAP	004	POINTER TO CURRENT GAP MEMBER
1CC	TRXGAPDW	004	NUMBER OF DOUBLEWORDS IN GAP LIST.
1D0	TRXGAPS	004	POINTER TO CURRENT GAP LIST
1D4	TRXGAPL	004	LOWER BOUND GAP LIST ADDRESS
1D8	TRXGAPU	004	UPPER BOUND GAP LIST ADDRESS
1DC	TRXCOUNT	004	CURRENT VALUE OF TRACE COUNT
1E0	TRXTBTBK	004	POINTER TO TRACEBACK TABLE
1E4	TRXCP1ST	004	POINTER TO FIRST CP COMMAND
1E8	TRXCPLST	004	POINTER TO LAST CP COMMAND
1EC	TRXDYEXT	004	EXT ADDR, CODES
1F4	TRXDYPRG	004	PROG ADDR, CODES
1FC	TRXDYIO	004	I/O ADDR, CODES
204	TRXDYMCH	004	MACH. CHECK ADDR.,FLAGS,CODES,FSA
218	TRXDIOS	002	I/O TRACING INFORMATION
21A	TRXGPRBT	002	GPR BIT MASK FOR TERMINAL
21C	TRXGPRBP	002	GPR BIT MASK FOR PRINTER
21E	TRXDINST	001	INSTRUCTION INFO
21F	TRXFLAG	001	TRACE FLAG BYTE

BITS DEFINED IN TRXFLAG (AT HEX DISPLACEMENT: 21F)

80	TRXDOPER	PERFORM PER ON CURRENT EVENT
40	TRXEVSET	EVENT ADDRESS IS SET
20	TRXHVPER	PER INFORMATION PRESENT
10	TRXTPSW	TRXPSW IS SET
08	TRXDATA	STORAGE DATA TRAPS PENDING
04	TRXCFMOD	PLACE USER INTO CONSOLE FUNC MODE
02	TRXCNCLT	TERMINAL OUTPUT CANCELLED
01	TRXCNCLP	PRINTER OUTPUT CANCELLED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220   TRXCATEG   001      TRACING CONTROL CATEGORY SUMMARY
221   TRXPERCT   001      PER TRACING SCREENING SUMMARY
222   TRXSTATS   001      TRACE STATUS CONTROL FLAG

        BITS DEFINED IN TRXSTATS (AT HEX DISPLACEMENT: 222)

        80    TRXRLINK    RE-LINK TRAP RANGES AND
                          RE-ALLOCATE GAP LIST
        40    TRXRSORT    RE-SORT RANGES BEFORE
                          RE-COMPUTING GAPS.
        20    TRXRCOMP    RE-COMPUTE THE GAP LIST.
        10    TRXRSRCH    RESEARCH GAP LIST FOR IFETCH/STORE
        08    TRXSUSP     CURRENT SET IS IN SUSPENSION
        04    TRXPERTR    HYPERVISOR P.E.R. TRACING IS ACTIVE
        02    TRXSVCTR    SOME FORM OF SVC TRACING IS IN EFFECT
        01    TRXINULL    INSTRUCTION EXECUTION NULLIFIED

223   TRXSTAT2   001      TRACE STATUS CONTROL FLAG

        BITS DEFINED IN TRXSTAT2 (AT HEX DISPLACEMENT: 223)

        80    TRXMCALT    GUEST ALTERED FOR MONITOR-CALL TRACING
        40    TRXPPNEM    MNEMONIC POST-SCAN REQUIRED
        20    TRXICNCL    INSTRUCTION EXECUTION CANCELLED
        10    TRXIPOST    ANALYZE INSTRUCTION POST SIM.
        08    TRXIPROG    PROGRAM EXCEP DURING INSTR SIM.
        04    TRXIBSET    BRANCH ADDRESS SET FOR INSTR
        02    TRXIUNKN    UNKNOWN STORAGE ALTERATION
        01    TRXIREAL    ALTERATION TO REAL STORAGE ADDR
        3F    TRXISTAT    BITS IN TRXSTAT2 FOR INSTR STATUS

224   TRXSTAT3   001      MISCELLANEOUS TRACE STATUS

        BITS DEFINED IN TRXSTAT3 (AT HEX DISPLACEMENT: 224)

        80    TRXCTACT    TRACE COUNT IS ACTIVE

225               3X      RESERVED
228   TRXTMPSW    004     PSW ADDR AT LAST DISPLAY TO TERMINAL
22C   TRXPRPSW    004     PSW ADDR AT LAST DISPLAY TO PRINTER
230   TRXCCWBF    004     SYSTEM VIRTUAL ADDR OF CCW
                          TRACE BUFFER
234   TRXMPPFX    004     NN  PREFIX FOR VIRTUAL MP OUTPUT
238   TRXBUFF     096     BUFFER FOR TERMINAL/PRINTER OUTPUT
298   TRXEND      008     END OF TRACE CONTROL BLOCK

                    EQUATES

        53    TRXSIZE     NUMBER OF DOUBLEWORDS IN BLOCK.

         REDEFINITION -

204   TRXMCADR    004     MACHINE CHECK OLD PSW ADDRESS
208   TRXMCFLG    001     FLAGS FOR TERM/PRINT OPTION
20A               2X      RESERVED
20C   TRXMCINT    004     MACHINE CHECK INTERRUPT BITS
214   TRXMCFSA    004     FAILING STORAGE ADDRESS
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
TRXAGCR9	004	0E0	TRXARNG1	004	1A0	TRXARNG2	004	1AC

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
TRXBADDR	004	17C	TRXINSR5	001	176	TRXTVMA	001	0E5
TRXBK	001	000	TRXINSR6	001	177	TRXVMA	001	0E4
TRXBLIPB	004	188	TRXINSTR	006	172			
TRXBLIPG	004	194	TRXINS56	002	176			
TRXBLIPI	004	18C	TRXINULL	001	001			
TRXBLIPS	004	190	TRXIPOST	001	010			
TRXBUFF	096	238	TRXIPROG	001	008			
TRXCATEG	001	220	TRXIREAL	001	001			
TRXCCWBF	004	230	TRXISTAT	001	03F			
TRXCFMOD	001	004	TRXIUNKN	001	002			
TRXCNCLP	001	001	TRXLBASE	002	080			
TRXCNCLT	001	002	TRXMCADR	004	204			
TRXCOUNT	004	1DC	TRXMCALT	001	080			
TRXCPLST	004	1E8	TRXMCFLG	001	208			
TRXCP1ST	004	1E4	TRXMCFSA	004	214			
TRXCRALT	002	0E6	TRXMCINT	004	20C			
TRXCTACT	001	080	TRXMPPFX	004	234			
TRXDATA	001	008	TRXNBASE	004	078			
TRXDINST	001	21E	TRXNOTRP	002	1BA			
TRXDIOS	002	218	TRXNOTRS	002	1B8			
TRXDOPER	001	080	TRXPERCT	001	221			
TRXDYEXT	004	1EC	TRXPERTR	001	004			
TRXDYIO	004	1FC	TRXPPNEM	001	040			
TRXDYMCH	004	204	TRXPRPSW	004	22C			
TRXDYPRG	004	1F4	TRXPSW	008	0C8			
TRXECAM0	001	07C	TRXRCOMP	001	020			
TRXECAM1	001	07D	TRXRETRN	004	1C4			
TRXECMSK	004	07C	TRXRLINK	001	080			
TRXEND	008	298	TRXRNGAN	004	198			
TRXEVENT	004	168	TRXRSORT	001	040			
TRXEVSET	001	040	TRXRSRCH	001	010			
TRXEXCUT	004	178	TRXSADDR	004	180			
TRXFLAG	001	21F	TRXSAVE	120	000			
TRXGAP	004	1C8	TRXSDECA	004	0DC			
TRXGAPDW	004	1CC	TRXSDLCT	002	0D4			
TRXGAPL	004	1D4	TRXSDNTC	004	0D8			
TRXGAPS	004	1D0	TRXSDSVC	004	0D0			
TRXGAPU	004	1D8	TRXSDTCH	002	0D6			
TRXGCRS	004	0E8	TRXSIZE	001	053			
TRXGCR0	004	0E8	TRXSLENG	004	184			
TRXGCR1	004	0EC	TRXSTATS	001	222			
TRXGCR10	004	110	TRXSTAT2	001	223			
TRXGCR11	004	114	TRXSTAT3	001	224			
TRXGCR12	004	118	TRXSUSP	001	008			
TRXGCR13	004	11C	TRXSVCTR	001	002			
TRXGCR14	004	120	TRXTBTBK	004	1E0			
TRXGCR15	004	124	TRXTCHBS	002	082			
TRXGCR2	004	0F0	TRXTCRS	004	128			
TRXGCR3	004	0F4	TRXTCR0	004	128			
TRXGCR4	004	0F8	TRXTCR1	004	12C			
TRXGCR5	004	0FC	TRXTCR10	004	150			
TRXGCR6	004	100	TRXTCR11	004	154			
TRXGCR7	004	104	TRXTCR12	004	158			
TRXGCR8	004	108	TRXTCR13	004	15C			
TRXGCR9	004	10C	TRXTCR14	004	160			
TRXGPRAM	002	170	TRXTCR15	004	164			
TRXGPRBP	002	21C	TRXTCR2	004	130			
TRXGPRBT	002	21A	TRXTCR3	004	134			
TRXGPRS	004	088	TRXTCR4	004	138			
TRXGRNG1	004	1A4	TRXTCR5	004	13C			
TRXGRNG2	004	1B0	TRXTCR6	004	140			
TRXHVPER	001	020	TRXTCR7	004	144			
TRXIADDR	004	16C	TRXTCR8	004	148			
TRXIBSET	001	004	TRXTCR9	004	14C			
TRXICNCL	001	020	TRXTMPSW	004	228			
TRXINSR1	001	172	TRXTPSW	001	010			
TRXINSR2	001	173	TRXTRPNF	008	168			
TRXINSR3	001	174	TRXTRPNL	001	020			
TRXINSR4	001	175	TRXTRSET	004	1C0			

HCPTSDBK— TRACE SERVICE DASD BLOCK

DSECT NAME: TSDBK

DESCRIPTIVE NAME: TRACE SERVICE DASD BLOCK

FUNCTION: CONTAINS DATA RELATED TO TRACING TO DASD

LOCATED BY:

TSTTSDBK (FOR CP TRACING) FIELD IN HCPTSTBK
TRCTSDBK (FOR TRACEIDS) FIELD IN HCPTRCBK

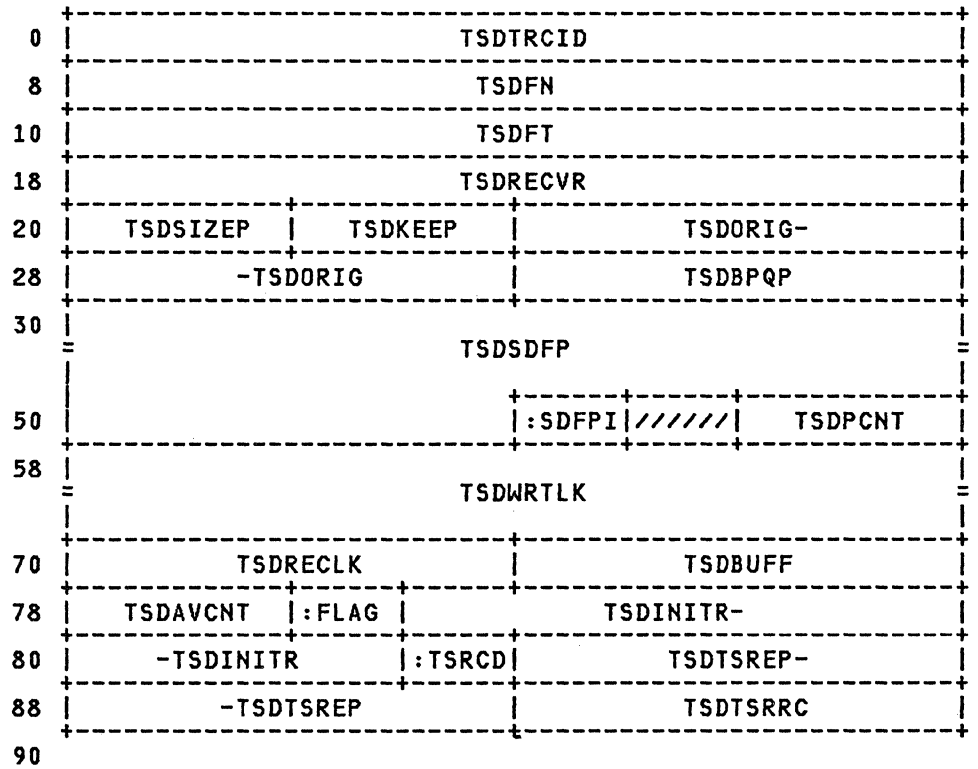
CREATED BY:

INITIALIZES TSDBK FOR TRACEIDS
HCPTSA : WHEN SAVING DASD OPTIONS ON
TRSAVE FOR CP ON DASD ...

DELETED BY:

WHEN TERMINATING THE TRSAVE
FUNCTION FOR CP
HCPTSF : WHEN TERMINATING THE TRSAVE
FUNCTION FOR A TRACEID

TSDBK - TRACE SERVICE DASD BLOCK



disp	name	length	description
000	TSDTRCID	008	TRACEID
008	TSDFN	008	FILENAME
010	TSDFT	008	FILETYPE
018	TSDRECVR	008	RECEIVER OF FILE
020	TSDSIZEP	002	NUMBER OF 4K RECORDS FILE CAN CONTAIN
022	TSDKEEP	002	NUMBER OF TRACE FILES TO KEEP ON DASD
024	TSDORIG	008	ORIGINATOR OF TRACE EQUALS THE USERID ON TRSOURCE FOR USER

```
                              COMMANDS, EQUALS SYSTEM FOR OTHER
                              COMMANDS
02C   TSDBPQP     004       -> TO BUFFER PENDING QUEUE
030   TSDSDFP     004       -> TO SDFBK'S FOR THIS TRACE
054   TSDSDFPI    001       INDEX OF CURRENT SDF BEING USED
055               1X        RESERVED FOR IBM USE
056   TSDPCNT     002       NUMBER OF FILES PURGED
058   TSDWRTLK    008       WRITING LOCK
070   TSDRECLK    004       RECORDING LOCK
074   TSDBUFF     004       -> TO BUFFER WE'RE CURRENTLY RECORDING TO
078   TSDAVCNT    002       NUMBER OF BYTES STILL AVAILABLE IN
                              CURRENT BUFFER
07A   TSDFLAG     001       TSD FLAGS
07B   TSDINITR    008       USERID THAT ENABLED THE TRACE
                              CODES DEFINED FOR TSDTSRCD
083   TSDTSRCD    001       TSR CODE

        CODES DEFINED FOR TSDTSRCD

        01     TSDCD001     LOCKED_SAME_CPU_001
        02     TSDCD002     TOO_MANY_BUFFERS_002
        03     TSDCD003     INVALID_TRCTYPE_003
        63     TSDCD099     RETURN_CODE_099

084   TSDTSREP    008       TSR ENTRY POINT
08C   TSDTSRRC    004       TSR RETURN CODE

                    EQUATES

        12     TSDSIZE      SIZE OF TSDBK IN DOUBLEWORDS


                    MORE EQUATES

        080    TSDM6088     NEED TO ISSUE 6088I
        040    TSDDISBL     DISABLE PROCESSING OCCURRING
        020    TSDWRTER     ERROR OCCURRED IN WRITING TRACE
                              TO DASD
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
TSDAVCNT	002	078	TSDSIZE	001	012
TSDBK	001	000	TSDSIZEP	002	020
TSDBPQP	004	02C	TSDTRCID	008	000
TSDBUFF	004	074	TSDTSRCD	001	083
TSDCD001	001	001	TSDTSREP	008	084
TSDCD002	001	002	TSDTSRRC	004	08C
TSDCD003	001	003	TSDWRTER	001	020
TSDCD099	001	063	TSDWRTLK	008	058
TSDDISBL	001	040			
TSDFLAG	001	07A			
TSDFN	008	008			
TSDFT	008	010			
TSDINITR	008	07B			
TSDKEEP	002	022			
TSDM6088	001	080			
TSDORIG	008	024			
TSDPCNT	002	056			
TSDRECLK	004	070			
TSDRECVR	008	018			
TSDSDFP	004	030			
TSDSDFPI	001	054			

HCPTSTBK— TRACE SERVICE TOOL BLOCK

DSECT NAME: TSTBK

DESCRIPTIVE NAME: TRACE SERVICE TOOL BLOCK

FUNCTION: CONTAINS THE STATUS OF TRACE SERVICE TOOLS AND ANCHORS THE NECESSARY RESOURCES WHEN IT IS ACTIVE

LOCATED BY:

SYSTSTBK

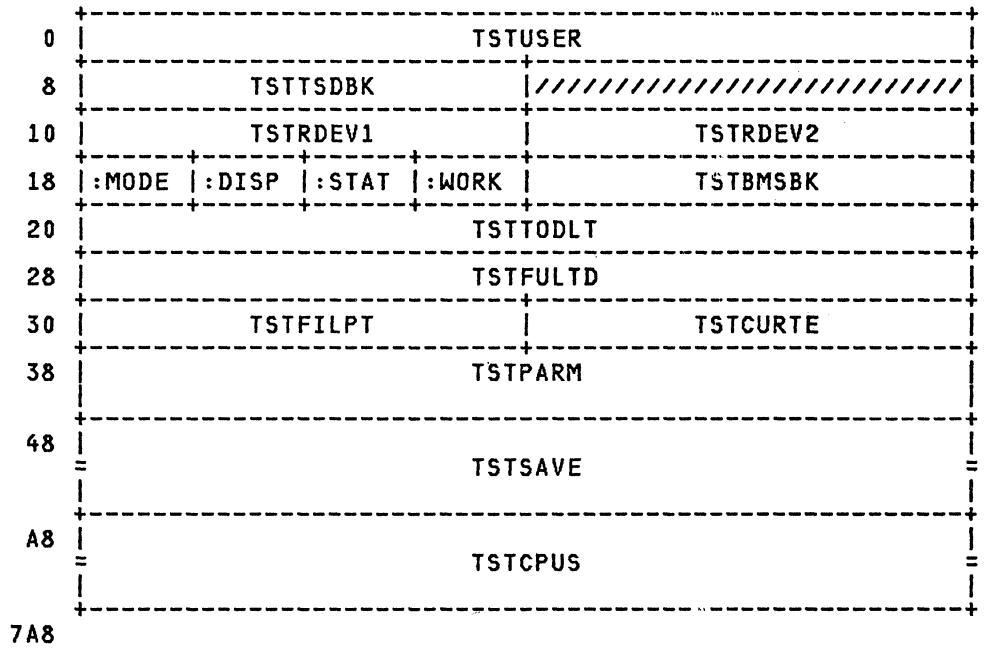
CREATED BY:

WHEN THE TRSAVE ON COMMAND IS FIRST SPECIFIED

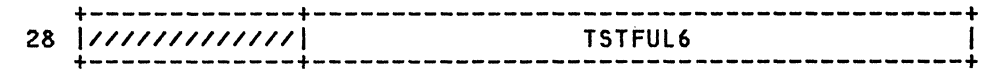
DELETED BY:

WHEN THE TRSAVE FUNCTION IS COMPLETE

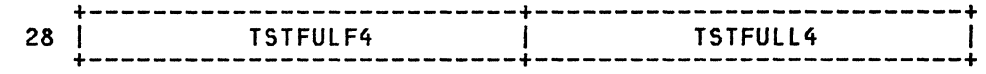
TSTBK - TRACE SERVICE TOOLS BLOCK



REDEFINITION - NEED ONLY LAST 6 BYTES OF FULL TOD



REDEFINITION - NEED BREAK DOWN OF FULL TOD BYTES



REDEFINITION - NEED BREAK DOWN OF FULL TOD BYTES

```
   +-------------+
28 |   TSTFULF2  | 2A
   +-------------+
```

REDEFINITION - PARM LIST USED BY TRACE SERVICE TOOLS

```
   +---------------------------+---------------------------+
38 |          TSTCNT           |          TSTADDR1         |
   +---------------------------+---------------------------+
40 |          TSTADDR2         |          TSTADDR3         |
   +---------------------------+---------------------------+
48
```

REDEFINITION - INFORMATION REPEATED FOR EACH CPU

```
   +---------------------------+---------------------------+
A8 |          TSTLSTTE         |          TSTNXTTE         |
   +------+------+-------------+---------------------------+
B0 |:CPUST|//////|                TSTLSTOD                   |
   +------+------+-------------+---------------------------+
B8 |   TSTCPUID  |                TSTNXTOD                   |
   +-------------+-------------+---------------------------+
C0 |          TSTNEXT          | C4
   +---------------------------+
```

REDEFINITION - NEED BREAK DOWN OF BYTES IN LAST TOD

```
                +------+-----------------------------------+
B0 ...       B2 |:LST1 |///////////////////////////////////|
                +------+-----------------------------------+
B8
```

REDEFINITION - NEED BREAK DOWN OF BYTES IN NEXT TOD

```
                +------+------+---------------------------+
B8 ...       BA |:NXT1 |//////|          TSTNTOD4         |
                +------+------+---------------------------+
C0
```

disp	name	length	description
000	TSTUSER	008	USERID OF TRACE SERVICE TOOL INITIATOR
008	TSTTSDBK	004	ADDRESS OF TSDBK IF TRACING TO DASD
00C		1F	RESERVED FOR IBM USE
010	TSTRDEV1	004	ADDRESS OF 1ST TAPE DRIVE BEING USED
014	TSTRDEV2	004	ADDRESS OF 2ND TAPE DRIVE BEING USED
018	TSTMODE	001	TAPE MODE
	CODES DEFINED IN TSTMODE (AT HEX DISPLACEMENT: 18)		
	04 TST38K		38K RECORDING DENSITY
	03 TST6250		6250 BYTES PER INCH
	02 TST1600		1600 BYTES PER INCH
	01 TST800		800 BYTES PER INCH
019	TSTDISP	001	DISPOSITION OF THE TAPE
	CODES DEFINED IN TSTDISP (AT HEX DISPLACEMENT: 19)		
	02 TSTREW		TAPE WILL BE REWOUND WHEN FULL


```
          01     TSTRUN       TAPE WILL BE REWOUND AND UNLOADED

01A     TSTSTAT     001       TRACE SERVICE TOOL STATUS FLAG

          BITS DEFINED IN TSTSTAT  (AT HEX DISPLACEMENT: 1A)

          80     TSTON        TRACE SERVICE TOOL CURRENTLY ACTIVE
          40     TSTOFF       TRACE SERVICE TOOL TURNED OFF
          20     TSTCANCL     TRACE SERVICE TOOL CANCELLED
          10     TSTFATAL     TRACE SERVICE TOOL FATAL I/O ERROR
          08     TSTABND      TRACE SERVICE TOOL ABEND ISSUED
          04     TSTDASD      CP TRACE RECORDING ABEND ISSUED

01B     TSTWORK     001       TRACE SERVICE TOOK WORK BIT

          BITS DEFINED IN TSTWORK  (AT HEX DISPLACEMENT: 1B)

          80     TSTRECRD     TRACE SERVICE TOOL RECORDING ON
          40     TSTLOST      DATA LOST MESSAGE ISSUED
          20     TSTFFCC      TOD COMMUNICATION ENTRY NEEDED
          10     TSTINIT      INITIALIZE THE FULL TOD ENTRY
          08     TSTSUSP      SUSPEND TRACE SAVING

01C     TSTBMSBK    004       POINTER TO BUFFER MANAGEMENT SERVICE BK
020     TSTTODLT    008       TIME OF DAY WHEN ISSUED LOST MESSAGE
028     TSTFULTD    008       FULL TOD CLOCK
030     TSTFILPT    004       POINTER TO BUFFER CURRENTLY FILLING
034     TSTCURTE    004       POINTER TO NEXT SLOT IN BUFFER TO BE
                              FILLED WITH A TRACE ENTRY
038     TSTPARM     004       PARM LIST USED BY TRACE SERVICE TOOLS
048     TSTSAVE     004       SAVEAREA FOR USE BY TSMRG
0A8     TSTCPUS     004       7 WORDS OF INFO FOR EACH CPU (64 CPUS)
                              NOTE:  THIS AREA MUST BE THE LAST AREA
                              IN THIS CONTROL BLOCK
7A8     TSTCPEND    002       END OF CPU INFO

                      EQUATES

          F5     TSTSIZE      TSTBK SIZE IN DOUBLEWORDS


          REDEFINITION - NEED ONLY LAST 6 BYTES OF FULL TOD

028                 XL2       RESERVED
02A     TSTFUL6     006       LAST 6 BYTES OF THE FULL TOD CLOCK

          REDEFINITION - NEED BREAK DOWN OF FULL TOD BYTES

028     TSTFULF4    004       FIRST 4 BYTES OF THE FULL TOD CLOCK
02C     TSTFULL4    004       LAST 4 BYTES OF THE FULL TOD CLOCK

          REDEFINITION - NEED BREAK DOWN OF FULL TOD BYTES

028     TSTFULF2    002       FIRST 2 BYTES OF THE FULL TOD CLOCK

          REDEFINITION - PARM LIST USED BY TRACE SERVICE TOOLS

038     TSTCNT      004       NUMBER OF BUFFERS
03C     TSTADDR1    004       ADDRESS OF FIRST BUFFER
040     TSTADDR2    004       ADDRESS OF SECOND BUFFER
044     TSTADDR3    004       ADDRESS OF THIRD BUFFER

          REDEFINITION - INFORMATION REPEATED FOR EACH CPU

0A8     TSTLSTTE    004       ADDRESS OF LAST TT ENTRY SAVED
0AC     TSTNXTTE    004       ADDRESS OF NEXT TT ENTRY TO BE SAVED
0B0     TSTCPUST    001       CPU STATUS BYTE

                      EQUATES

          80     TSTCPUON     CPU IS OPERATIONAL
          40     TSTCPUSP     CPU TRACE SAVING IS SUSPENDED
```

```
0B1                 XL1       RESERVED FOR IBM USE
0B2     TSTLSTOD    006       TOD OF LAST ENTRY SAVED TO DETECT WRAP
0B8     TSTCPUID    002       ID OF CPU WHOSE INFORMATION THIS IS
0BA     TSTNXTOD    006       TOD OF NEXT ENTRY SAVED TO DETECT WRAP
0C0     TSTNEXT     004       POINTER TO THE NEXT OPERATIONAL CPU

                        EQUATES

          1C     TSTCPUSZ

0C4     TSTNCPU     004       POINTER TO THE NEXT CPU'S INFORMATION

           REDEFINITION - NEED BREAK DOWN OF BYTES IN LAST TOD

0B2     TSTLST1     001       HIGHEST BYTE OF LAST TOD
0B3                 XL5       RESERVED

           REDEFINITION - NEED BREAK DOWN OF BYTES IN NEXT TOD

0BA     TSTNXT1     001       HIGHEST BYTE OF NEXT TOD
0BB                 XL1       RESERVED
0BC     TSTNTOD4    004       LAST 4 BYTES OF TOD CLOCK OF NEXT ENTRY
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
TSTABND	001	008	TSTNXT1	001	0BA
TSTADDR1	004	03C	TSTOFF	001	040
TSTADDR2	004	040	TSTON	001	080
TSTADDR3	004	044	TSTPARM	004	038
TSTBK	001	000	TSTRDEV1	004	010
TSTBMSBK	004	01C	TSTRDEV2	004	014
TSTCANCL	001	020	TSTRECRD	001	080
TSTCNT	004	038	TSTREW	001	002
TSTCPEND	002	7A8	TSTRUN	001	001
TSTCPUID	002	0B8	TSTSAVE	004	048
TSTCPUON	001	080	TSTSIZE	001	0F5
TSTCPUS	004	0A8	TSTSTAT	001	01A
TSTCPUSP	001	040	TSTSUSP	001	008
TSTCPUST	001	0B0	TSTTODLT	008	020
TSTCPUSZ	001	01C	TSTTSDBK	004	008
TSTCURTE	004	034	TSTUSER	008	000
TSTDASD	001	004	TSTWORK	001	01B
TSTDISP	001	019	TST1600	001	002
TSTFATAL	001	010	TST38K	001	004
TSTFFCC	001	020	TST6250	001	003
TSTFILPT	004	030	TST800	001	001
TSTFULF2	002	028			
TSTFULF4	004	028			
TSTFULL4	004	02C			
TSTFULTD	008	028			
TSTFUL6	006	02A			
TSTINIT	001	010			
TSTLOST	001	040			
TSTLSTOD	006	0B2			
TSTLSTTE	004	0A8			
TSTLST1	001	0B2			
TSTMODE	001	018			
TSTNCPU	004	0C4			
TSTNEXT	004	0C0			
TSTNTOD4	004	0BC			
TSTNXTOD	006	0BA			
TSTNXTTE	004	0AC			

HCPTTABK— TABLE OF TRACE ENTRY CODES

DSECT NAME: TTABK

DESCRIPTIVE NAME: TABLE OF TRACE ENTRY CODES

FUNCTION: THIS CONTROL BLOCK MAPS THE STRUCTURE OF THE TABLE OF TRACE ENTRY CODES AS THEY EXIST EITHER IN HCPTTATB DATA AREA, OR IN FREE STORAGE CREATED BY THE SET CPTRACE COMMAND PROCESSOR.

LOCATED BY:

PFXTTATB POINTS TO THE NON-EXPLICIT (DEFAULT)
COPY OF THE TTABK
VMDTTABK IN EVERY VMDBK

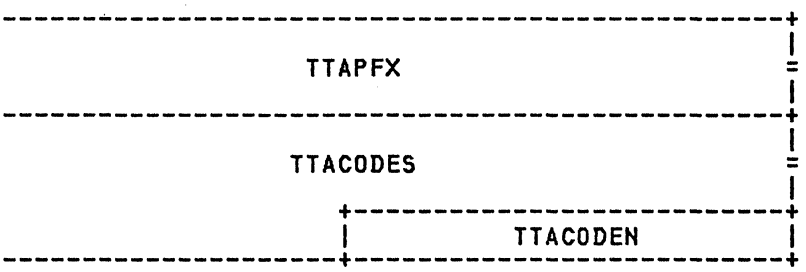
CREATED BY:

HCPCFASC - SET CPTRACE COMMAND PROCESSOR
THE HCPTTATB DATA AREA, ALSO MAPPED BY THIS BLOCK,
IS PART OF THE CP RESIDENT NUCLEUS

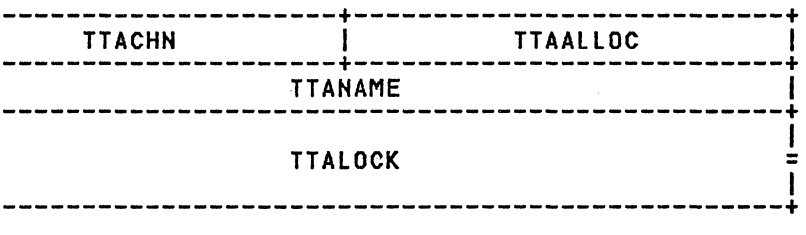
DELETED BY:

HCPCFAFR - FRET TTABK'S WHICH SET CPTRACE ACQUIRED
HCPCFALG - FRET (IF NECESSARY) A VMDBK'S TTABK
DURING LOGOFF PROCESSING
THE HCPTTATB DATA AREA IS NEVER DELETED

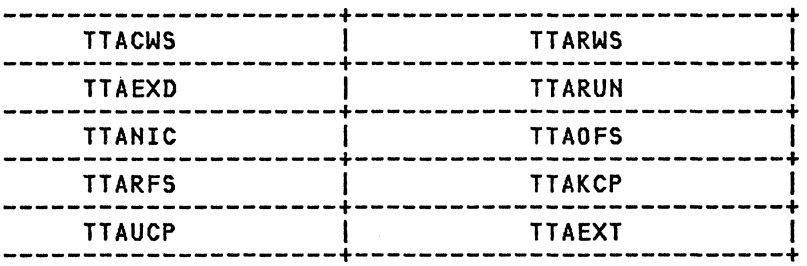
TTABK - TABLE OF TRACE ENTRY CODES



REDEFINITION -



REDEFINITION -



A8	TTAINT	TTATC0
B0	TTASC0	TTAUIO
B8	TTAKIO	TTAIGI
C0	TTAPGM	TTAPTR
C8	TTAGUT	TTAAUL
D0	TTADUL	TTACSW
D8	TTASIO	TTACON
E0	TTAMC0	TTAV35
E8	TTASIF	TTADS1
F0	TTAVIN	TTAV33
F8	TTAXCP	TTASS0
100	TTASVC	TTAMCH
108	TTAOPS	TTARPS
110	TTAVLS	TTAV32
118	TTAV36	TTACC0
120	TTACC3	TTAHC0
128	TTAHC1	TTAHC3
130	TTAMC1	TTAMC3
138	TTASC1	TTASC3
140	TTASS1	TTASS3
148	TTATC1	TTATC3
150	TTARC0	TTARC1
158	TTARC2	TTARC3
160	TTASNS	TTAIQU
168	TTAITM	TTAIRB
170	TTAIDE	TTAISE
178	TTAIRC	TTAIRP
180	TTAITC	TTAIRJ
188	TTAIPU	TTAIAC
190	TTAICO	TTAIDB
198	TTAIQI	TTAIRE
1A0	TTAISV	TTAISM
1A8	TTAISC	TTACNACC
1B0	TTACNPRG	TTACNRCV
1B8	TTACNRPL	TTACNS1
1C0	TTACNS2	TTACNSVR
1C8	TTACNLEC	TTACNRPV

1D0	TTACNCNV	TTACNSVV
1D8	TTACNMS1	TTACNCVL
1E0	TTACNLEV	TTACNLEU
1E8	TTACNSCI	TTACEACC
1F0	TTACERCV	TTACERPL
1F8	TTACES1	TTACES2
200	TTARUV	TTAVSI
208	TTAUCH	TTAUEX
210	TTAMCC	TTAIOC
218	TTASDN	TTAKWB
220	TTADRS	TTASCS
228	TTADRR	TTASCR
230	TTAPCU	TTADS2
238	TTAVMLST	TTAVMUST
240	TTACP0	TTACP3
248	TTAHP0	TTAHP1
250	TTAHP2	TTAHP3
258	TTAMP0	TTAMP1
260	TTAMP2	TTAMP3
268	TTASP0	TTASP1
270	TTASP2	TTASP3
278	TTATP0	TTATP1
280	TTATP3	TTAPP0
288	TTAPP1	TTARP0
290	TTARP1	TTARP2
298	TTARP3	TTAPIN
2A0	TTACL0	TTACL3
2A8	TTAHL0	TTAHL1
2B0	TTAHL3	TTAML0
2B8	TTAML1	TTAML3
2C0	TTASL0	TTASL1
2C8	TTASL3	TTALS0
2D0	TTALS1	TTALS3
2D8	TTATL0	TTATL1
2E0	TTATL3	TTALNS
2E8	TTALIN	TTASGP

```
  2F0 |           TTACSP           |           TTACSH           |
      +-----------------------------+----------------------------+
  2F8 |           TTAEPR           |           TTAFXR           |
      +-----------------------------+----------------------------+
  300 |           TTAABG           |           TTAABS           |
      +-----------------------------+----------------------------+
  308
```

REDEFINITION -

```
                                    +----------------------------+
  338 ...                     33C   |           TTAMWP           |
                                    +----------------------------+
  340
```

disp	name	length	description
000	TTAPFX	128	RESERVE 1 CACHE LINE
080	TTACODES	004	TRACE CODES MODIFIABLE BY SET CPTRACE 000088 0000000000000000
33C	TTACODEN	004	TRACE CODES NOT MODIFIABLE BY SET CPTRACE
340	TTAEND	004	END OF TTABK

EQUATES

78	TTASIZE	SIZE OF TTABK FOR DYNAMIC ALLOCATION. EXTRA SPACE FOR CACHE ALIGNMENT INCLUDED.
05	TTATCTLV	NUMBER OF LEVELS IN TRACE CATEGORY TREE

REDEFINITION -

000	TTACHN	004	TTABK CHAIN POINTER
004	TTAALLOC	004	ADDRESS OF ALLOCATED STORAGE
008	TTANAME	008	EXPLICIT TRACE NAME
010	TTALOCK	008	LOCK
028	TTACODE	004	TRACE CODE (TO USE W/ INDEXING)

REDEFINITION -

080	TTACWS	004	CALL-WITH-SAVEAREA	(SVC)
084	TTARWS	004	RETURN-WITH-SAVEAREA	(SVC)
088	TTAEXD	004	EXIT TO THE DISPATCHER	(DSP)
08C	TTARUN	004	RUN USER	(RUN)
090	TTANIC	004	INTERCEPTION CONDITION, NOT INSTRUCTION	(RUN)
094	TTAOFS	004	OBTAIN FREE STORAGE (FREE)	(FRE)
098	TTARFS	004	RETURN FREE STORAGE (FRET)	(FRE)
09C	TTAKCP	004	STACK CPEBK	(STK)
0A0	TTAUCP	004	UNSTACK CPEBK	(CFM,DSB)
0A4	TTAEXT	004	EXTERNAL INTERRUPTION	(EXT)
0A8	TTAINT	004	I/O INTERRUPTION	(IOS)
0AC	TTATC0	004	TEST SUBCHANNEL CC=0	(IOS)
0B0	TTASC0	004	START SUBCHANNEL CC=0	(IOS)
0B4	TTAUIO	004	UNSTACK IORBK/TRQBK	(DSB)
0B8	TTAKIO	004	STACK IORBK/TRQBK	(STK)
0BC	TTAIGI	004	GUEST INSTRUCTION INTERCEPTION	(PRV)
0C0	TTAPGM	004	PROGRAM INTERRUPTION	(PRG)
0C4	TTAPTR	004	PAGE TRANSLATION RESULTS	(PTR)
0C8	TTAGUT	004	GUEST I/O UNTRANSLATION	(UNT)
0CC	TTAAUL	004	ADD USER TO DISPATCH LIST	(STK)
0D0	TTADUL	004	DROP USER FROM DISPATCH LIST	(STK)
0D4	TTACSW	004	VIRTUAL CSW STORED	(CSW)
0D8	TTASIO	004	VIRTUAL START I/O	(VOH,VOD)

0DC	TTACON	004	ADD OR STACK A COMBK (QCN)
0E0	TTAMC0	004	MODIFY SUBCHANNEL CC=0 (IOS)
0E4	TTAV35	004	VIRTUAL TEST SUBCHANNEL (VOS)
0E8	TTASIF	004	VIRTUAL START I/O FAST (VOD)
0EC	TTADS1	004	DEMAND SCAN PASS 1 (ALD)
0F0	TTAVIN	004	VIRTUAL 370-XA I/O INTERRUPTION (VIS)
0F4	TTAV33	004	VIRTUAL START SUBCHANNEL (VOS)
0F8	TTAXCP	004	EXECUTE CP COMMAND (CFM)
0FC	TTASS0	004	START SUBCHANNEL CC=0 SENSE (PTI)
100	TTASVC	004	SVC INTERRUPTION (SVC)
104	TTAMCH	004	MACHINE CHECK INTERRUPTION (MCH)
108	TTAOPS	004	OBTAIN PAGEABLE FREE STORAGE
10C	TTARPS	004	RETURN PAGEABLE FREE STORAGE
110	TTAVLS	004	LOAD/STORE VECTOR FACILITY (VSM)
114	TTAV32	004	VIRTUAL MODIFY SUBCHANNEL (VOL)
118	TTAV36	004	VIRTUAL TEST PENDING INTERRUPTION (VOS)
11C	TTACC0	004	CLEAR SUBCHANNEL CC=0 (IOS)
120	TTACC3	004	CLEAR SUBCHANNEL CC=3 (IOS)
124	TTAHC0	004	HALT SUBCHANNEL CC=0 (IOS)
128	TTAHC1	004	HALT SUBCHANNEL CC=1 (IOS)
12C	TTAHC3	004	HALT SUBCHANNEL CC=3 (IOS)
130	TTAMC1	004	MODIFY SUBCHANNEL CC=1 (IOS)
134	TTAMC3	004	MODIFY SUBCHANNEL CC=3 (IOS)
138	TTASC1	004	START SUBCHANNEL CC=1 (IOS)
13C	TTASC3	004	START SUBCHANNEL CC=3 (IOS)
140	TTASS1	004	START SUBCHANNEL CC=1 SENSE (PTI)
144	TTASS3	004	START SUBCHANNEL CC=3 SENSE (PTI)
148	TTATC1	004	TEST SUBCHANNEL CC=1 (IOS)
14C	TTATC3	004	TEST SUBCHANNEL CC=3 (IOS)
150	TTARC0	004	RESUME SUBCHANNEL CC=0 (VIR,VOS,VOD)
154	TTARC1	004	RESUME SUBCHANNEL CC=1 (VIR,VOS,VOD)
158	TTARC2	004	RESUME SUBCHANNEL CC=2 (VIR,VOS,VOD)
15C	TTARC3	004	RESUME SUBCHANNEL CC=3 (VIR,VOS,VOD)
160	TTASNS	004	I/O SENSE DATA RECEIVED (IOS)
164	TTAIQU	004	IUCV QUERY FUNCTION (IUA)
168	TTAITM	004	IUCV TEST MESSAGE FUNCTION (IUA)
16C	TTAIRB	004	IUCV RETRIEVE BUFFER FCN (IUA)
170	TTAIDE	004	IUCV DESCRIBE FUNCTION (IUA)
174	TTAISE	004	IUCV SEND FUNCTION (IUA)
178	TTAIRC	004	IUCV RECEIVE FUNCTION (IUA)
17C	TTAIRP	004	IUCV REPLY FUNCTION (IUA)
180	TTAITC	004	IUCV TEST COMPLETION FCN (IUA)
184	TTAIRJ	004	IUCV REJECT FUNCTION (IUA)
188	TTAIPU	004	IUCV PURGE FUNCTION (IUA)
18C	TTAIAC	004	IUCV ACCEPT FUNCTION (IUA)
190	TTAICO	004	IUCV CONNECT FUNCTION (IUA)
194	TTAIDB	004	IUCV DECLARE BUFFER FCN (IUA)
198	TTAIQI	004	IUCV QUIESCE FUNCTION (IUA)
19C	TTAIRE	004	IUCV RESUME FUNCTION (IUA)
1A0	TTAISV	004	IUCV SEVER FUNCTION (IUA)
1A4	TTAISM	004	IUCV SET MASK FUNCTION (IUA)
1A8	TTAISC	004	IUCV SET CONTROL MASK FCN (IUA)
1AC	TTACNACC	004	CCS ACCEPT
1B0	TTACNPRG	004	CCS PURGE
1B4	TTACNRCV	004	CCS RECEIVE
1B8	TTACNRPL	004	CCS REPLY
1BC	TTACNS1	004	CCS SEND 1 WAY
1C0	TTACNS2	004	CCS SEND 2 WAY
1C4	TTACNSVR	004	CCS SEVER
1C8	TTACNLEC	004	CCS LOGIC ERROR IN CCS INTERFACE CB
1CC	TTACNRPV	004	CCS REPLY FROM VSM
1D0	TTACNCNV	004	CCS CONNECT FOR VSM
1D4	TTACNSVV	004	CCS SEVER FROM VSM
1D8	TTACNMS1	004	CCS MESSAGE COMPLETE FROM VSM, 1 WAY SEND

1DC	TTACNCVL	004	CCS CONNECT FROM VSM FOR LU
1E0	TTACNLEV	004	CCS LOGIC ERROR IN VSM INTERFACE CB
1E4	TTACNLEU	004	CCS ERROR IN USER ENVIRONMENT, SEVER USER
1E8	TTACNSCI	004	CCS SNA CONTROL BLOCK CHAIN INVALID
1EC	TTACEACC	004	CCS ACCEPT ERROR
1F0	TTACERCV	004	CCS RECEIVE ERROR
1F4	TTACERPL	004	CCS REPLY ERROR
1F8	TTACES1	004	CCS SEND 1 WAY ERROR
1FC	TTACES2	004	CCS SEND 2 WAY ERROR
200	TTARUV	004	RUN USER IN VIRTUAL SIE MODE(WRU)
204	TTAVSI	004	VIRTUAL SIE INTERCEPTION (WRU)
208	TTAUCH	004	UNIT CHECK (TRE)
20C	TTAUEX	004	UNIT EXCEPTION (RDE)
210	TTAMCC	004	I/O RELATED MACHINE CHECK (RFC)
214	TTAIOC	004	CHANNEL CHECK (RFC)
218	TTASDN	004	CHANNEL CHECK AT TERMINATION(RFC)
21C	TTAKWB	004	STACK WORK BITS (STK)
220	TTADRS	004	PROCESSOR CONTROLLER DIAGNOSE R&DCEST STARTED (PCA)
224	TTASCS	004	PROCESSOR CONTROLLER SERVICE CALL R&DCEST STARTED (PCB)
228	TTADRR	004	PROCESSOR CONTROLLER DIAGNOSE R&DCEST RETURNED (PCA)
22C	TTASCR	004	PROCESSOR CONTROLLER SERVICE CALL R&DCEST RETURNED (PCB)
230	TTAPCU	004	UNSOLICITED PROCESSOR CONTROLLER INTERRUPT RECEIVED (PCR)
234	TTADS2	004	DEMAND SCAN PASS 2 (ALD)
238	TTAVMLST	004	VIRTUAL MACHINE LOCK STORAGE
23C	TTAVMUST	004	VIRTUAL MACHINE UNLOCK STORAGE
			I/O PASSTHROUGH ENTRIES:
240	TTACP0	004	I/O PASSTHRU CSCH, CC=0 (PTI)
244	TTACP3	004	I/O PASSTHRU CSCH, CC=3 (PTI)
248	TTAHP0	004	I/O PASSTHRU HSCH, CC=0 (PTI)
24C	TTAHP1	004	I/O PASSTHRU HSCH, CC=1 (PTI)
250	TTAHP2	004	I/O PASSTHRU HSCH, CC=2 (PTI)
254	TTAHP3	004	I/O PASSTHRU HSCH, CC=3 (PTI)
258	TTAMP0	004	I/O PASSTHRU MSCH, CC=0 (PTI)
25C	TTAMP1	004	I/O PASSTHRU MSCH, CC=1 (PTI)
260	TTAMP2	004	I/O PASSTHRU MSCH, CC=2 (PTI)
264	TTAMP3	004	I/O PASSTHRU MSCH, CC=3 (PTI)
268	TTASP0	004	I/O PASSTHRU SSCH, CC=0 (PTI)
26C	TTASP1	004	I/O PASSTHRU SSCH, CC=1 (PTI)
270	TTASP2	004	I/O PASSTHRU SSCH, CC=2 (PTI)
274	TTASP3	004	I/O PASSTHRU SSCH, CC=3 (PTI)
278	TTATP0	004	I/O PASSTHRU TSCH, CC=0 (PTI)
27C	TTATP1	004	I/O PASSTHRU TSCH, CC=1 (PTI)
280	TTATP3	004	I/O PASSTHRU TSCH, CC=3 (PTI)
284	TTAPP0	004	I/O PASSTHRU TPI, CC=0 (PTI)
288	TTAPP1	004	I/O PASSTHRU TPI, CC=1 (PTI)
28C	TTARP0	004	I/O PASSTHRU RSCH, CC=0 (PTI)
290	TTARP1	004	I/O PASSTHRU RSCH, CC=1 (PTI)
294	TTARP2	004	I/O PASSTHRU RSCH, CC=2 (PTI)
298	TTARP3	004	I/O PASSTHRU RSCH, CC=3 (PTI)
29C	TTAPIN	004	I/O PASSTHRU INTERRUPTION (IPT)
2A0	TTACL0	004	CLEAR LOGICAL SUBCHANNEL CC=0 (IOS)
2A4	TTACL3	004	CLEAR LOGICAL SUBCHANNEL CC=3 (IOS)
2A8	TTAHL0	004	HALT LOGICAL SUBCHANNEL CC=0 (IOS)
2AC	TTAHL1	004	HALT LOGICAL SUBCHANNEL CC=1 (IOS)
2B0	TTAHL3	004	HALT LOGICAL SUBCHANNEL CC=3 (IOS)
2B4	TTAML0	004	MODIFY LOGICAL SUBCHANNEL CC=0 (IQM)
2B8	TTAML1	004	MODIFY LOGICAL SUBCHANNEL CC=1 (IQM)
2BC	TTAML3	004	MODIFY LOGICAL SUBCHANNEL


```
                                CC=3                        (IQM)
2C0     TTASL0      004         START LOGICAL SUBCHANNEL
                                CC=0                        (IOS)
2C4     TTASL1      004         START LOGICAL SUBCHANNEL
                                CC=1                        (IOS)
2C8     TTASL3      004         START LOGICAL SUBCHANNEL
                                CC=3                        (IOS)
2CC     TTALS0      004         START LOGICAL SUBCHANNEL SENSE
                                CC=0                        (IOS)
2D0     TTALS1      004         START LOGICAL SUBCHANNEL SENSE
                                CC=1                        (IOS)
2D4     TTALS3      004         START LOGICAL SUBCHANNEL SENSE
                                CC=3                        (IOS)
2D8     TTATL0      004         TEST LOGICAL SUBCHANNEL
                                CC=0                        (IOS)
2DC     TTATL1      004         TEST LOGICAL SUBCHANNEL
                                CC=1                        (IOS)
2E0     TTATL3      004         TEST LOGICAL SUBCHANNEL
                                CC=3                        (IOS)
2E4     TTALNS      004         LOGICAL I/O SENSE DATA
                                RECEIVED                    (IOS)
2E8     TTALIN      004         LOGICAL I/O INTERRUPTION    (IOS)
2EC     TTASGP      004         SIGP INSTRUCTION            (SGP)
2F0     TTACSP      004         CPU IS CHECK STOPPED        (MCH)
2F4     TTACSH      004         CHECK STOP CPU RECOVERY     (MCH)
2F8     TTAEPR      004         RETURN FREE STORAGE FRAME
2FC     TTAFXR      004         OBTAIN FREE STORAGE FRAME
                                DC    A(X'FFCC')    RESERVED FOR TRACE SERVICE TOOLS
                                DC    A(X'FFDD')    RESERVED FOR TRACE SERVICE TOOLS
300     TTAABG      004         RESUME TRACE AFTER SOFT     (ABN)
                                ABEND
304     TTAABS      004         SUSPEND TRACE DURING SOFT   (ABN)
                                ABEND
                                ENDTTA

        REDEFINITION -

33C     TTAMWP      004         TRACE PAGE FULL DURING      (MCH)
                                MACHINE CHECK HANDLING
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
TTAABG	004	300	TTACNLEV	004	1E0	TTACWS	004	080
TTAABS	004	304	TTACNMS1	004	1D8	TTADRR	004	228
TTAALLOC	004	004	TTACNPRG	004	1B0	TTADRS	004	220
TTAAUL	004	0CC	TTACNRCV	004	1B4	TTADS1	004	0EC
TTABK	001	000	TTACNRPL	004	1B8	TTADS2	004	234
TTACC0	004	11C	TTACNRPV	004	1CC	TTADUL	004	0D0
TTACC3	004	120	TTACNSCI	004	1E8	TTAEND	004	340
TTACEACC	004	1EC	TTACNSVR	004	1C4	TTAEPR	004	2F8
TTACERCV	004	1F0	TTACNSVV	004	1D4	TTAEXD	004	088
TTACERPL	004	1F4	TTACNS1	004	1BC	TTAEXT	004	0A4
TTACES1	004	1F8	TTACNS2	004	1C0	TTAFXR	004	2FC
TTACES2	004	1FC	TTACODE	004	028	TTAGUT	004	0C8
TTACHN	004	000	TTACODEN	004	33C	TTAHC0	004	124
TTACL0	004	2A0	TTACODES	004	080	TTAHC1	004	128
TTACL3	004	2A4	TTACON	004	0DC	TTAHC3	004	12C
TTACNACC	004	1AC	TTACP0	004	240	TTAHL0	004	2A8
TTACNCNV	004	1D0	TTACP3	004	244	TTAHL1	004	2AC
TTACNCVL	004	1DC	TTACSH	004	2F4	TTAHL3	004	2B0
TTACNLEC	004	1C8	TTACSP	004	2F0	TTAHP0	004	248
TTACNLEU	004	1E4	TTACSW	004	0D4	TTAHP1	004	24C

Name	Len	Val/Disp	Name	Len	Val/Disp
TTAHP2	004	250	TTASCR	004	22C
TTAHP3	004	254	TTASCS	004	224
TTAIAC	004	18C	TTASC0	004	0B0
TTAICO	004	190	TTASC1	004	138
TTAIDB	004	194	TTASC3	004	13C
TTAIDE	004	170	TTASDN	004	218
TTAIGI	004	0BC	TTASGP	004	2EC
TTAINT	004	0A8	TTASIF	004	0E8
TTAIOC	004	214	TTASIO	004	0D8
TTAIPU	004	188	TTASIZE	001	078
TTAIQI	004	198	TTASL0	004	2C0
TTAIQU	004	164	TTASL1	004	2C4
TTAIRB	004	16C	TTASL3	004	2C8
TTAIRC	004	178	TTASNS	004	160
TTAIRE	004	19C	TTASP0	004	268
TTAIRJ	004	184	TTASP1	004	26C
TTAIRP	004	17C	TTASP2	004	270
TTAISC	004	1A8	TTASP3	004	274
TTAISE	004	174	TTASS0	004	0FC
TTAISM	004	1A4	TTASS1	004	140
TTAISV	004	1A0	TTASS3	004	144
TTAITC	004	180	TTASVC	004	100
TTAITM	004	168	TTATCTLV	001	005
TTAKCP	004	09C	TTATC0	004	0AC
TTAKIO	004	0B8	TTATC1	004	148
TTAKWB	004	21C	TTATC3	004	14C
TTALIN	004	2E8	TTATL0	004	2D8
TTALNS	004	2E4	TTATL1	004	2DC
TTALOCK	008	010	TTATL3	004	2E0
TTALS0	004	2CC	TTATP0	004	278
TTALS1	004	2D0	TTATP1	004	27C
TTALS3	004	2D4	TTATP3	004	280
TTAMCC	004	210	TTAUCH	004	208
TTAMCH	004	104	TTAUCP	004	0A0
TTAMC0	004	0E0	TTAUEX	004	20C
TTAMC1	004	130	TTAUIO	004	0B4
TTAMC3	004	134	TTAVIN	004	0F0
TTAML0	004	2B4	TTAVLS	004	110
TTAML1	004	2B8	TTAVMLST	004	238
TTAML3	004	2BC	TTAVMUST	004	23C
TTAMP0	004	258	TTAVSI	004	204
TTAMP1	004	25C	TTAV32	004	114
TTAMP2	004	260	TTAV33	004	0F4
TTAMP3	004	264	TTAV35	004	0E4
TTAMWP	004	33C	TTAV36	004	118
TTANAME	008	008	TTAXCP	004	0F8
TTANIC	004	090			
TTAOFS	004	094			
TTAOPS	004	108			
TTAPCU	004	230			
TTAPFX	128	000			
TTAPGM	004	0C0			
TTAPIN	004	29C			
TTAPP0	004	284			
TTAPP1	004	288			
TTAPTR	004	0C4			
TTARC0	004	150			
TTARC1	004	154			
TTARC2	004	158			
TTARC3	004	15C			
TTARFS	004	098			
TTARPS	004	10C			
TTARP0	004	28C			
TTARP1	004	290			
TTARP2	004	294			
TTARP3	004	298			
TTARUN	004	08C			
TTARUV	004	200			
TTARWS	004	084			

HCPTTEBK— TRACE TABLE ENTRY FORMAT

DSECT NAME: TTEBK

DESCRIPTIVE NAME: TRACE TABLE ENTRY FORMAT

FUNCTION: THIS CONTROL BLOCK DEFINES THE FORMAT OF A CP TRACE TABLE ENTRY CREATED BY HARDWARE FROM THE TRACE INSTRUCTION'S EXECUTION (AS CODED IN VM/XA). EACH CP TRACE ENTRY MADE HAS A UNIQUE TRACE CODE USED WHEN EXECUTING THE TRACE INSTRUCTION. ALL THE TRACE ENTRY CODES ARE DEFINED IN THE TTABK DSECT.

LOCATED BY:

CONTROL REGISTER 12: CONTAINS THE ADDRESS OF THE NEXT ENTRY TO BE GENERATED IN EACH CPU'S TRACE TABLE.

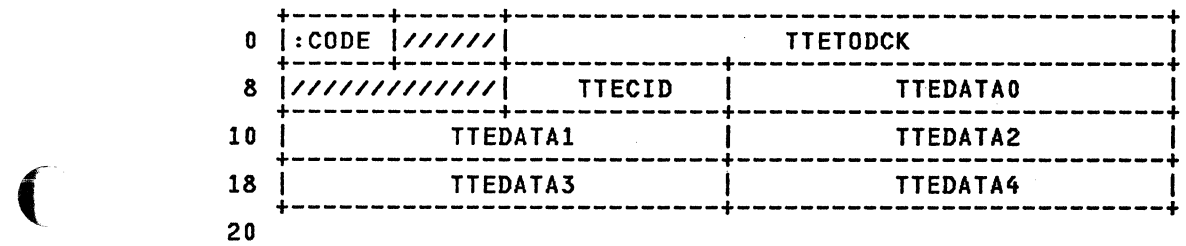
CREATED BY:

NOT APPLICABLE. DSECT DEFINES FORMAT USED BY TRACE INSTRUCTION.

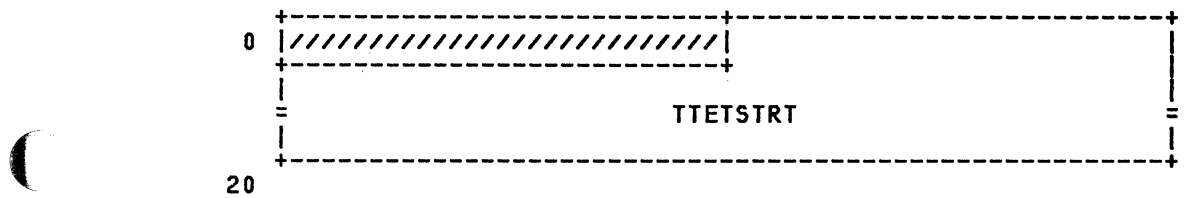
DELETED BY:

NOT APPLICABLE.

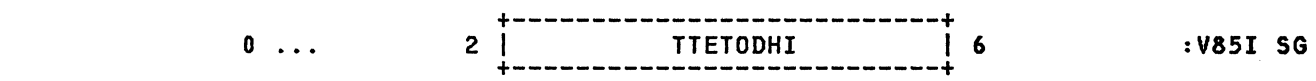
TTEBK - TRACE TABLE ENTRY FORMAT



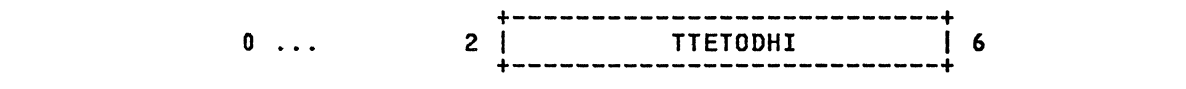
REDEFINITION - TRACE SERVICE TOOLS TAPE ENTRY



REDEFINITION - LAST 6 BYTES OF TOD CLOCK, BY



REDEFINITION - LAST 6 BYTES OF TOD CLOCK, BY



disp	name	length	description
000	TTECODE	001	HARDWARE TRACE ENTRY IDENTIFIER

			'7N' (N IS THE NO. OF REGISTERS MINUS ONE STORED: 4 FOR VM/XA)
001		X'00'	HARDWARE ARCHITECTED TO X'00'
002	TTETODCK	006	LAST 6 BYTES OF TOD CLOCK, BY HARDWARE
			ALL OF THE ABOVE FIELDS ARE SUPPLIED BY THE HARDWARE EXECUTION OF THE TRACE INSTRUCTION
			THE FOLLOWING FIELDS ARE THE DATA PASSED BY THE TRACE INSTRUCTION BY THE SOFTWARE.
008		XL2'00'	RESERVED FOR HARDWARE USE
00A	TTECID	002	TRACE ENTRY ID (IE 0A00=RUN USER)
			THE FOLLOWING FIELDS ARE PASSED TO THE TRACE INSTRUCTION IN CONSECUTIVE GENERAL PURPOSE REGISTERS.
00C	TTEDATA0	004	FIRST DATA FIELD PASSED (RX)
010	TTEDATA1	004	SECOND DATA FIELD PASSED (RX+1)
014	TTEDATA2	004	THIRD DATA FIELD PASSED (RX+2)
018	TTEDATA3	004	FOURTH DATA FIELD PASSED (RX+3)
01C	TTEDATA4	004	FIFTH DATA FIELD PASSED (RX+4)
020	TTENEXT	004	NEXT TRACE ENTRY

EQUATES

04	TTESIZE	:SIZE OF BLOCK IN DOUBLE WORDS
20	TTELEN	:LENGTH OF BLOCK IN BYTES

REDEFINITION - TRACE SERVICE TOOLS TAPE ENTRY

000		F	1ST WORD NOT SAVED ON TAPE
004	TTETSTRT	028	LAST HALF OF TOD ON IS SAVED

EQUATES

1C	TTETSTSZ	SIZE OF TST TRACE ENTRY ON TAPE

REDEFINITION - LAST 6 BYTES OF TOD CLOCK, BY

REDEFINITION - LAST 6 BYTES OF TOD CLOCK, BY

002	TTETODHI	004	FIRST 4 BYTES OF TTATODCK

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
TTEBK	001	000	TTEDATA2	004	014	TTESIZE	001	004
TTECID	002	00A	TTEDATA3	004	018	TTETODCK	006	002
TTECODE	001	000	TTEDATA4	004	01C	TTETODHI	004	002
TTEDATA0	004	00C	TTELEN	001	020	TTETSTRT	028	004
TTEDATA1	004	010	TTENEXT	004	020	TTETSTSZ	001	01C

HCPTTPBK— TRACE TABLE PAGE FORMAT

DSECT NAME: TTPBK

DESCRIPTIVE NAME: TRACE TABLE PAGE FORMAT

FUNCTION: THIS CONTROL BLOCK DEFINES THE FORMAT OF ONE TRACE TABLE PAGE AS USED BY CP.

LOCATED BY:

PFXTTPNT - FULL WORD POINTER USED TO LOCATE TRACE TABLE PAGES DURING SYSTEM INITIALIZATION AND FOR DUMPS
TTPFPNT - FORWARD POINTER FOR CHAIN OF TRACE TABLE PAGES
TTPBPNT - BACKWARD POINTER FOR CHAIN OF TRACE TABLE PAGES

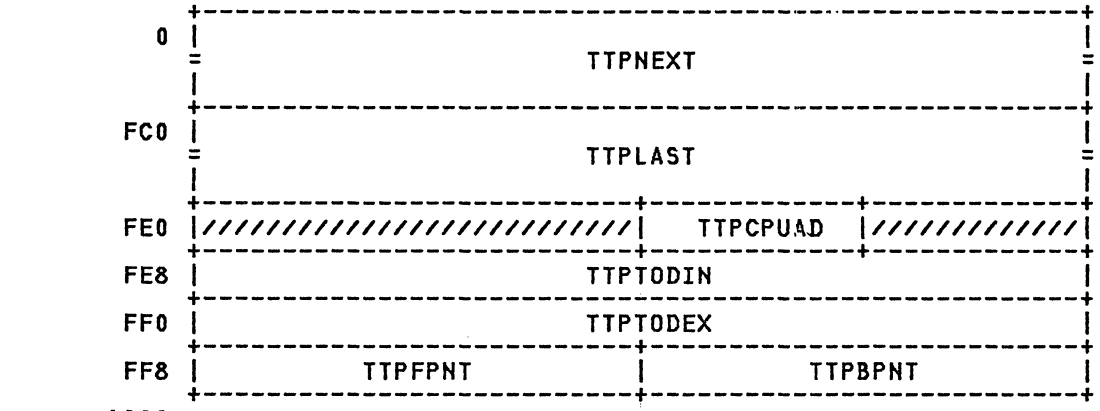
CREATED BY:

HCPMPSON - WHILE ACQUIRING TRACE TABLE PAGES FOR A PROCESSOR BEING BROUGHT ONLINE

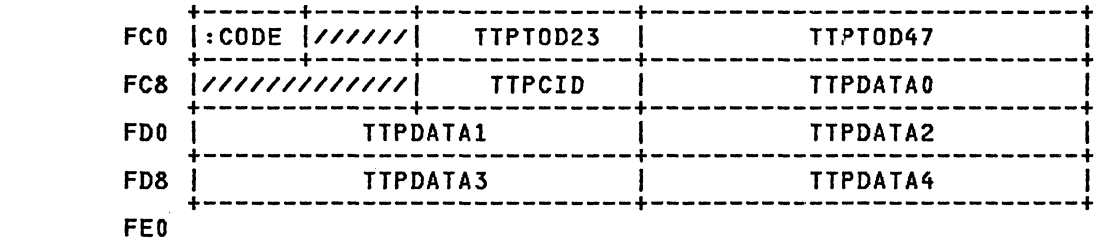
DELETED BY:

HCPMPSOF - WHEN RELEASING TRACE TABLE PAGES FOR A PROCESSOR BEING TAKEN OFFLINE

TTPBK - TRACE TABLE PAGE BLOCK



REDEFINITION - THIS TRACE ENTRY IS BUILT BY HAND



disp	name	length	description
000	TTPNEXT	032	TRACE ENTRIES
FC0	TTPLAST	032	TRACE INTERRUPT TRACE ENTRY (HAND BUILT TO RECORD INTERRUPT)
FE0		F	RESERVED FOR FUTURE USE

```
FE4   TTPCPUAD   002       CPU ADDR OF OWNER OF THIS PAGE
FE6              H         RESERVED FOR FUTURE USE
FE8   TTPTODIN   008       TOD CLOCK ON ENTRY TO PAGE
FF0   TTPTODEX   008       TOD CLOCK ON EXIT FROM PAGE
FF8   TTPFPNT    004       FORWARD POINTER FOR TRACE
                           TABLE CHAIN
FFC   TTPBPNT    004       BACKWARD POINTER FOR TRACE
                           TABLE CHAIN

        REDEFINITION - THIS TRACE ENTRY IS BUILT BY HAND

FC0   TTPCODE    001       HARDWARE TRACE ENTRY IDENTIFIER
                           X'7N' (WHERE N IS THE NUMBER OF
                           REGISTERS STORED MINUS ONE, WILL
                           ALWAYS BE FOUR IN VM)
FC1              X'00'     RESERVED FOR FUTURE HARDWARE USE
FC2   TTPTODCK   006       LAST 6 BYTES OF TOD CLOCK,
                           HARDWARE SUPPLIED.
FC2   TTPTOD23   002       BYTES 2 AND 3 OF TOD CLOCK
FC4   TTPTOD47   004       BYTES 4 THROUGH 7 OF TOD CLOCK

                           ALL OF THE ABOVE FIELDS ARE SUPPLIED
                           BY THE HARDWARE EXECUTION OF THE
                           TRACE INSTRUCTION.

                           THE FOLLOWING FIELDS ARE THE DATA
                           PASSED TO THE TRACE INSTRUCTION BY
                           THE SOFTWARE.

FC8   TTPTRCCD   004       TRACE ENTRY IDENTIFIER
FC8              XL2'00'   TRACE PARAMETER, ARCHITECTED TO
                           BE ZEROES.
FCA   TTPCID     002       TRACE ENTRY ID
                           (IE 0300 = PROGRAM INTERRUPT)

                           THE FOLLOWING FIELDS ARE PASSED TO THE
                           TRACE INSTRUCTION IN CONSECUTIVE GENERAL
                           PURPOSE REGISTERS.

FCC   TTPDATA0   004       FIRST DATA FIELD PASSED TO TRACE
FD0   TTPDATA1   004       SECOND DATA FIELD PASSED TO TRACE
FD4   TTPDATA2   004       THIRD DATA FIELD PASSED TO TRACE
FD8   TTPDATA3   004       FOURTH DATA FIELD PASSED TO TRACE
FDC   TTPDATA4   004       FIFTH DATA FIELD PASSED TO TRACE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
TTPBK	001	000	TTPTODIN	008	FE8
TTPBPNT	004	FFC	TTPTOD23	002	FC2
TTPCID	002	FCA	TTPTOD47	004	FC4
TTPCODE	001	FC0	TTPTRCCD	004	FC8
TTPCPUAD	002	FE4			
TTPDATA0	004	FCC			
TTPDATA1	004	FD0			
TTPDATA2	004	FD4			
TTPDATA3	004	FD8			
TTPDATA4	004	FDC			
TTPFPNT	004	FF8			
TTPLAST	032	FC0			
TTPNEXT	032	000			
TTPTODCK	006	FC2			
TTPTODEX	008	FF0			

HCPTTSBK— TRACE TABLE SAVE ENTRY FORMAT

DSECT NAME: TTSBK

DESCRIPTIVE NAME: TRACE TABLE SAVE ENTRY FORMAT

FUNCTION: THIS CONTROL BLOCK DEFINES THE FORMAT OF A 28-BYTE CP TRACE TABLE ENTRY, SAVED ONTO TAPE BY HSERV AND USED BY DVF FOR TRACE SERVICE TOOLS. THIS CONTROL BLOCK IS IDENTICAL TO THE FORMAT OF THE HARDWARE TRACE ENTRIES, EXCEPT THAT THE FIRST FULLWORD HAS BEEN REMOVED AND THE ID OF THE PRO- CESSOR GENERATING THE TRACE ENTRY HAS BEEN INCLUDED THE TRACE ENTRY HAS BEEN INCLUDED. IF THIS CONTROL BLOCK IS CHANGED, THE TTEBK MUST BE VERIFIED TO SEE IF THE SAME CHANGE EXISTS THERE.

LOCATED BY:

WORK REGISTERS IN HCPTSM (SAVES THE TRACE ENTRIES)

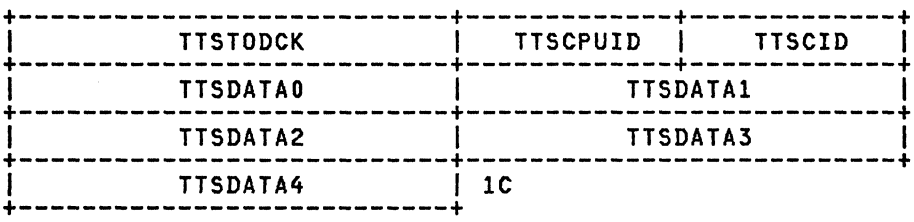
CREATED BY:

NOT APPLICABLE. DSECT DEFINES FORMAT USED BY TRACE INSTRUCTION.

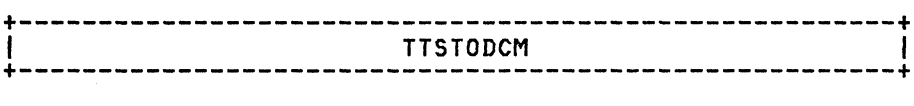
DELETED BY:

NOT APPLICABLE.

TTSBK - TRACE TABLE SAVE ENTRY FORMAT



REDEFINITION - COMMUNICATION ENTRY



disp	name	length	description
000	TTSTODCK	004	LAST 4 BYTES OF TOD CLOCK
004	TTSCPUID	002	ID OF THE PROCESSOR GENERATING THIS TRACE INSTRUCTION
006	TTSCID	002	TRACE ENTRY ID (IE 0A00=RUN USER)
008	TTSDATA0	004	FIRST DATA FIELD PASSED (RX)
00C	TTSDATA1	004	SECOND DATA FIELD PASSED (RX+1)
010	TTSDATA2	004	THIRD DATA FIELD PASSED (RX+2)
014	TTSDATA3	004	FOURTH DATA FIELD PASSED (RX+3)
018	TTSDATA4	004	FIFTH DATA FIELD PASSED (RX+4)

EQUATES

```
04    TTSSIZE     :SIZE OF BLOCK IN DOUBLE WORDS
1C    TTSLEN      :LENGTH OF BLOCK IN BYTES
```

THE FOLLOWING IS A REDEFINITION OF THE FIRST TWO *

008 TTSTODCM 008 FULL 8-BYTE TOD ENTRY FOR COMMUNICATION TO DVF

CROSS REFERENCE

Name	Len	Val/Disp
TTSBK	001	000
TTSCID	002	006
TTSCPUID	002	004
TTSDATA0	004	008
TTSDATA1	004	00C
TTSDATA2	004	010
TTSDATA3	004	014
TTSDATA4	004	018
TTSLEN	001	01C
TTSSIZE	001	004
TTSTODCK	004	000
TTSTODCM	008	008

HCPTXCCM— TRSOURCE COMMON DATA AREA

DSECT NAME: TXCCM

DESCRIPTIVE NAME: TRSOURCE COMMON DATA AREA

FUNCTION: MAPS THE TRSOURCE COMMON DATA AREA WHICH EXISTS IN MODULE HCPTXC.

LOCATED BY:

EXTERNAL NAME HCPTXCCM

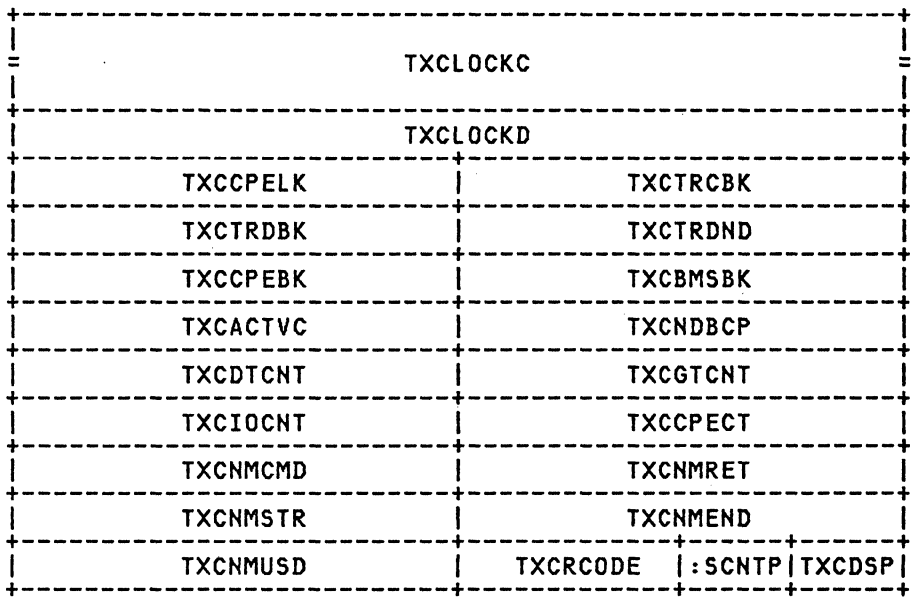
CREATED BY:

THIS IS A MAP OF RESIDENT CP MODULE
HCPTXC

DELETED BY:

NONE

TXCCM - TRSOURCE COMMON DATA AREA



disp	name	length	description
000	TXCLOCKC	008	TRSOURCE COMMAND LOCK
018	TXCLOCKD	008	TRSOURCE DATA LOCK
020	TXCCPELK	004	TRSOURCE CPEBK CHAIN LOCK
024	TXCTRCBK	004	ADDRESS OF FIRST TRCBK ON CHAIN
028	TXCTRDBK	004	ADDRESS OF FIRST TRDBK ON CHAIN
02C	TXCTRDND	004	ADDRESS OF LAST TRDBK ON CHAIN
030	TXCCPEBK	004	ANCHOR FOR TRSOURCE CPEBK CHAIN
034	TXCBMSBK	004	ADDRESS OF BMSBK
038	TXCACTVC	004	ENABLED COUNT OF ALL TRACES
03C	TXCNDBCP	004	TYPE DATA AND IO ENABLED COUNT
040	TXCDTCNT	004	TYPE DATA ENABLED COUNT
044	TXCGTCNT	004	TYPE GT ENABLED COUNT
048	TXCIOCNT	004	TYPE IO ENABLED COUNT
04C	TXCCPECT	004	COUNT OF CPEBKS ON TRSOURCE CHAIN
050	TXCNMCMD	004	COMMAND TABLE START ADDRESS
054	TXCNMRET	004	TRSOURCE ID/SET ROUTINE RETURN ADDRESS
058	TXCNMSTR	004	TABLE SEARCH START ADDRESS
05C	TXCNMEND	004	TABLE SEARCH END ADDRESS
060	TXCNMUSD	004	TRSOURCE COMMAND USED TABLE

```
064   TXCRCODE   002       RETURN CODE OF ERROR MESSAGE
066   TXCSCNTP   001       TRSOURCE COMMAND CONTROL
                           BITS DEFINED FOR TXCSCNTP

                     EQUATES

        80     TXCCMD      SCAN TRSOURCE COMMAND
        40     TXCOPT      SCAN NEXT OPTION
        20     TXCID       SCAN FOR VALID TRACEID
        10     TXCSET      SCAN FOR VALID TRACESET
        08     TXCMULT     SCAN MULTIPLE OPTION
        04     TXCTDP      ALREADY SCANNED TYPE PARMS

067   TXCDSP     001       TRSOURCE DISPLAY OPTIONS
                           BITS DEFINED FOR TXCDSP

                     EQUATES

        08     TXCDSPAL    DISPLAY ALL
        04     TXCDSPLY    DISPLAY SPECIFIED

        0D     TXCSIZE     TXCCM SIZE IN DOUBLEWORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
TXCACTVC	004	038
TXCBMSBK	004	034
TXCCM	001	000
TXCCMD	001	080
TXCCPEBK	004	030
TXCCPECT	004	04C
TXCCPELK	004	020
TXCDSP	001	067
TXCDSPAL	001	008
TXCDSPLY	001	004
TXCDTCNT	004	040
TXCGTCNT	004	044
TXCID	001	020
TXCIOCNT	004	048
TXCLOCKC	008	000
TXCLOCKD	008	018
TXCMULT	001	008
TXCNDBCP	004	03C
TXCNMCMD	004	050
TXCNMEND	004	05C
TXCNMRET	004	054
TXCNMSTR	004	058
TXCNMUSD	004	060
TXCOPT	001	040
TXCRCODE	002	064
TXCSCNTP	001	066
TXCSET	001	010
TXCSIZE	001	00D
TXCTDP	001	004
TXCTRCBK	004	024
TXCTRDBK	004	028
TXCTRDND	004	02C

HCPTXLPL— PARAMETER LIST FOR TRCBK CHAIN SERVICES

DSECT NAME: TXLPL

DESCRIPTIVE NAME: PARAMETER LIST FOR TRCBK CHAIN SERVICES

FUNCTION: PARAMETER LIST FOR TRCBK CHAIN SERVICES

LOCATED BY:

R1 ON CALLS TO TRCBK CHAIN SERVICES

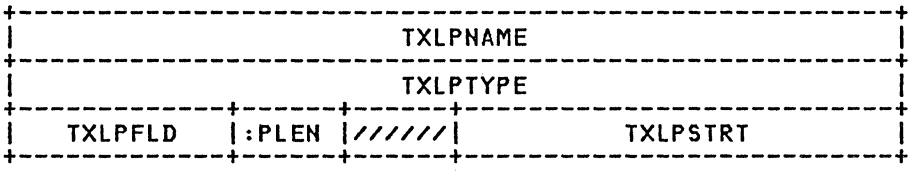
CREATED BY:

HCPTXP, HCPTXR, HCPTXG, HCPTXD, HCPTXI,
HCPTXQ, HCPTXS

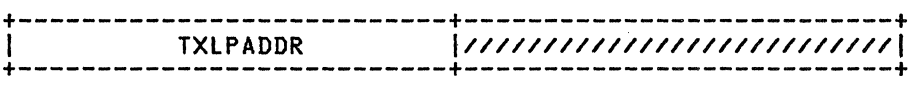
DELETED BY:

HCPTXP, HCPTXR, HCPTXG, HCPTXD, HCPTXI,
HCPTXQ, HCPTXS

TXLPL - PARAMETER LIST FOR TRCBK CHAIN SERVICES



REDEFINITION - REDEFINE FOR ADCON



disp	name	length	description
000	TXLPNAME	008	SEARCH STRING
008	TXLPTYPE	008	TYPE SPECIFICATION
010	TXLPFLD	002	DISPLACEMENT INTO TRCBK
012	TXLPLEN	001	STRING LENGTH
013		XL1	RESERVED
014	TXLPSTRT	004	STARTING TRCBK ADDRESS

EQUATES

18	TXLSIZB	TXLPL SIZE IN BYTES
03	TXLSIZE	TXLPL SIZE IN DOUBLEWORDS

REDEFINITION - REDEFINE FOR ADCON

000	TXLPADDR	004	TRCBK SEARCH ADDRESS
004		XL4	RESERVED

CROSS REFERENCE

Name	Len	Val/Disp
TXLPADDR	004	000
TXLPFLD	002	010
TXLPL	001	000
TXLPLEN	001	012
TXLPNAME	008	000
TXLPSTRT	004	014
TXLPTYPE	008	008
TXLSIZB	001	018
TXLSIZE	001	003

HCPUZPAG— PREFIX STORAGE AREA - MACHINE USAGE

DSECT NAME: UZPAG

DESCRIPTIVE NAME: PREFIX STORAGE AREA - MACHINE USAGE

FUNCTION: THIS CONTROL BLOCK DESCRIBES THE ARCHITECTED FIELDS IN PAGE ZERO (EITHER REAL ZERO OR ABSOLUTE ZERO DEPENDING ON USAGE). THIS IS USED TO REFER TO GUEST PAGE ZERO. FOR HOST PAGE ZERO, THE PFXBK COPY FILE IS USED INSTEAD OF UZPAG.

LOCATED BY:

VMDPAGZP (WHILE NOT IN CONSOLE FUNCTION MODE)
- HOST REAL ADDRESS OF THE GUEST PAGE ZERO

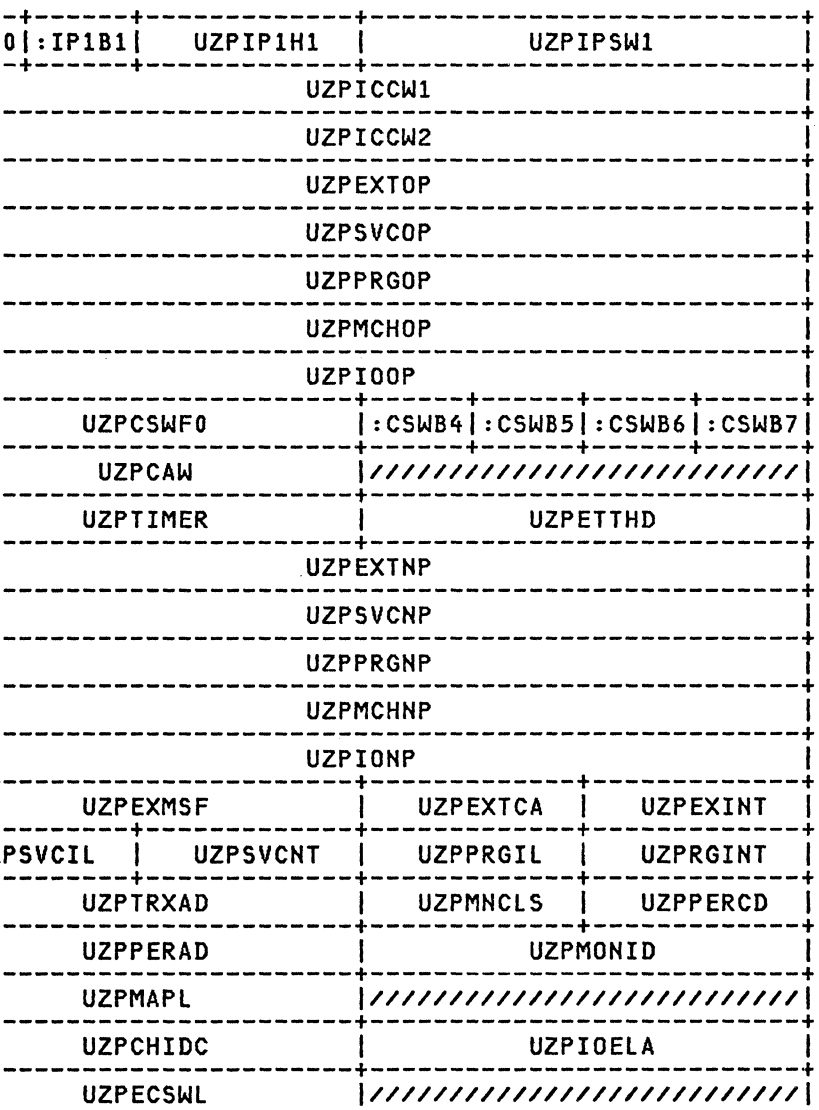
CREATED BY:

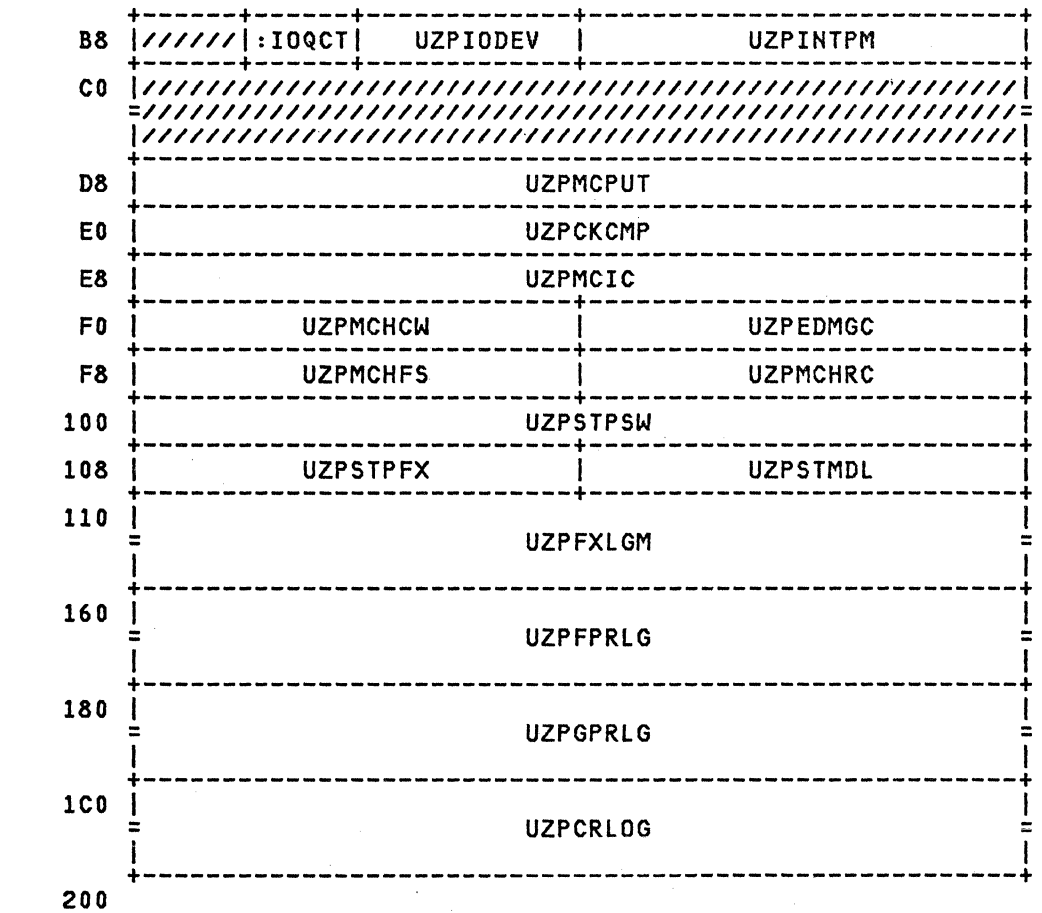
NOT APPLICABLE (CREATE AS A FUNCTION OF THE GUEST OPERATING SYSTEM

DELETED BY:

NOT APPLICABLE

UZPAG - PREFIX STORAGE AREA - MACHINE USAGE





disp	name	length	description
000	UZPIPSW	008	IPL START PSW
000	UZPIPSW0	004	
000	UZPIP1B0	001	
001	UZPIP1B1	001	EXTENDED MODE
002	UZPIP1H1	002	IPL DEVICE ADDRESS
004	UZPIPSW1	004	(ALSO RESTART NEW PSW)
008	UZPICCW1	008	IPL CCW, FIRST (ALSO RESTART OLD PSW)
010	UZPICCW2	008	IPL CCW, SECOND
018	UZPEXTOP	008	EXTERNAL OLD PSW
020	UZPSVCOP	008	SVC OLD PSW
028	UZPPRGOP	008	PROGRAM OLD PSW
030	UZPMCHOP	008	MACHINE-CHECK OLD PSW
038	UZPIOOP	008	INPUT/OUTPUT OLD PSW
040	UZPCSW	008	CHANNEL STATUS WORD
040	UZPCSWF0	004	KEY AND ADDRESS OF FULL CSW
044	UZPCSWF1	004	2ND FULLWORD OF CSW
044	UZPCSWH	002	HALFWORD CSW
044	UZPCSWB4	001	5TH BYTE OF CSW
045	UZPCSWB5	001	6TH BYTE OF CSW
046	UZPCSWB6	001	COUNT FIELD OF FULL CSW
047	UZPCSWB7	001	COUNT FIELD OF FULL CSW
048	UZPCAW	004	CHANNEL ADDRESS WORD
04C		F	NOT REFERENCED
050	UZPTIMER	004	INTERVAL TIMER
054	UZPETTHD	004	EXT. FACIL. TRACE TABLE HDR
058	UZPEXTNP	008	EXTERNAL NEW PSW
060	UZPSVCNP	008	SVC NEW PSW


```
068    UZPPRGNP    008       PROGRAM NEW PSW
070    UZPMCHNP    008       MACHINE-CHECK NEW PSW
078    UZPIONP     008       INPUT/OUTPUT NEW PSW
080    UZPEXMSF    004       MSF DATA BLOCK ADDR-CLASS 21 EXT
084    UZPEXTCD    004       EXTERNAL INTERRUPT CODE,FULLWORD
084    UZPEXTCA    002       EXTERNAL IRPT. CPU ADDRESS
086    UZPEXINT    002       EXTERNAL INTERRUPT CODE,HALFWORD
088    UZPSVCIL    002       SVC INSTRUCTION LENGTH CODE
08A    UZPSVCNT    002       SVC INTERRUPT CODE
08C    UZPPRGCD    004       PROGRAM ILC AND INTERRUPT CODE
08C    UZPPRGIL    002       PROGRAM INSTRUCTION LENGTH CODE
08E    UZPRGINT    002       PROGRAM INTERRUPT CODE
090    UZPTRXAD    004       TRANSLATION EXCEPTION ADDRESS
094    UZPMNCLS    002       MONITOR CLASS
096    UZPPERCD    002       PROGRAM EVENT RECORDER(PER) CODE
098    UZPPERAD    004       PER ADDRESS
09C    UZPMONID    004       MONITOR CODE
0A0    UZPMAPL     004       CONTROL BLOCK FOR EXT. FACIL.
0A4                F         RESERVED FOR FUTURE HARDWARE USE
0A8    UZPCHIDC    004       CHANNEL IDENTIFIER FROM 'STIDC'
0AC    UZPIOELA    004       I/O EXTENDED LOGOUT AREA POINTER
0B0    UZPECSWL    004       LIMITED CHANNEL LOGOUT (ECSW)
0B4                F         RESERVED FOR FUTURE HARDWARE USE
0B8    UZPIOSID    004       370/XA I/O INTERRUPT SUBSYS ID
0B8                X         370: UNUSED, 370/XA: ZERO
0B9    UZPIOQCT    001       370: QUEUED I/O COUNT, 370/XA:01
0BA    UZPIODEV    002       370: DEVICE ADDRESS,
                             370/XA: SUBCHANNEL NUMBER
0BC    UZPINTPM    004       370/XA I/O INTERRUPTION PARM
0C0                3D        RESERVED FOR FUTURE HARDWARE USE
0D8    UZPMCPUT    008       CPU TIMER LOGOUT
0E0    UZPCKCMP    008       TOD COMPARATOR LOGOUT ON MACHINE
0E8    UZPMCIC     008       MACHINE-CHECK INTERRUPT CODE

                      EQUATES

       E8     UZPMCI01       OVLY FOR FIRST TWO BYTES OF MCIC

0F0    UZPMCHCW    004       MACHINE CHECK CHAN. REPORT WORD
0F4    UZPEDMGC    004       EXTERNAL DAMAGE CODE
0F8    UZPMCHFS    004       MACHINE CHECK FAILING STOR. ADDR
0FC    UZPMCHRC    004       MACHINE CHECK REGION CODE
100    UZPFCLOG    096       GUEST FULL CHANNEL LOGOUT
100    UZPFXLOG    096       MACHINE CHECK FIXED LOGOUT AREA
100    UZPSTPSW    008       STORE STATUS PSW LOGOUT AREA
108    UZPSTPFX    004       STORE STATUS PREFIX LOGOOUT AREA
10C    UZPSTMDL    004       STORE STATUS MODEL DEPENDENT
110    UZPFXLGM    008       REMAINDER OF FIXED LOGOUT AREA
160    UZPFPRLG    008       FLOATING POINT REG. LOGOUT AREA
180    UZPGPRLG    004       GENERAL REGISTER LOGOUT AREA
1C0    UZPCRLOG    004       CONTROL REGISTER LOGOUT AREA

                      EQUATES

       00     UZPLAP         LIMIT OF LOW ADDRESS PROTECTION
                             FIELDS ABOVE ADDRESS 512 ARE NOT SPECIFIED BY
                             PROCESSOR ARCHITECTURE.
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
UZPAG	001	000	UZPCAW	004	048	UZPCHIDC	004	0A8

Name	Len	Val/Disp
UZPCKCMP	008	0E0
UZPCRLOG	004	1C0
UZPCSW	008	040
UZPCSWB4	001	044
UZPCSWB5	001	045
UZPCSWB6	001	046
UZPCSWB7	001	047
UZPCSWF0	004	040
UZPCSWF1	004	044
UZPCSWH	002	044
UZPECSWL	004	0B0
UZPEDMGC	004	0F4
UZPETTHD	004	054
UZPEXINT	002	086
UZPEXMSF	004	080
UZPEXTCA	002	084
UZPEXTCD	004	084
UZPEXTNP	008	058
UZPEXTOP	008	018
UZPFCLOG	096	100
UZPFPRLG	008	160
UZPFXLGM	008	110
UZPFXLOG	096	100
UZPGPRLG	004	180
UZPICCW1	008	008
UZPICCW2	008	010
UZPINTPM	004	0BC
UZPIODEV	002	0BA
UZPIOELA	004	0AC
UZPIONP	008	078
UZPIOOP	008	038
UZPIOQCT	001	0B9
UZPIOSID	004	0B8
UZPIPSW	008	000
UZPIPSW0	004	000
UZPIPSW1	004	004
UZPIP1B0	001	000
UZPIP1B1	001	001
UZPIP1H1	002	002
UZPLAP	001	200
UZPMAPL	004	0A0
UZPMCHCW	004	0F0
UZPMCHFS	004	0F8
UZPMCHNP	008	070
UZPMCHOP	008	030
UZPMCHRC	004	0FC
UZPMCIC	008	0E8
UZPMCI01	002	0E8
UZPMCPUT	008	0D8
UZPMNCLS	002	094
UZPMONID	004	09C
UZPPERAD	004	098
UZPPERCD	002	096
UZPPRGCD	004	08C
UZPPRGIL	002	08C
UZPPRGNP	008	068
UZPPRGOP	008	028
UZPRGINT	002	08E
UZPSTMDL	004	10C
UZPSTPFX	004	108
UZPSTPSW	008	100
UZPSVCIL	002	088
UZPSVCNP	008	060
UZPSVCNT	002	08A
UZPSVCOP	008	020
UZPTIMER	004	050
UZPTRXAD	004	090

HCPVDEV— VIRTUAL DEVICE CONTROL BLOCK

DSECT NAME: VDEV

DESCRIPTIVE NAME: VIRTUAL DEVICE CONTROL BLOCK

FUNCTION: DESCRIBE THE STATUS OF AN I/O DEVICE (REAL OR VIRTUAL) ACCESSABLE BY A VIRTUAL MACHINE.

LOCATED BY:

A POINTER IN THE LOWEST LEVEL INDEX VECTOR IN THE
FOUR-LEVEL TREE ANCHORED IN:
VMDCHRSN - FOR ACCESS VIA SUBCHANNEL NUMBER
VMDCHRDN - FOR ACCESS VIA DEVICE NUMBER
RDEVVDEV - DEDICATED DEVICE ONLY
BLKVDEVA - DEVICES CONNECTED TO DASD BLOCK I/O SYSTEM SERVICE
VDEVBASE - MULTIPLE EXPOSURE DEVICE ONLY
VMDVSPRT - PRINTER TO USE IN DUMP, TRACE, ... CMDS
VMDVCONS - CONSOLE
MDIRVDEV - VDEV TO WHICH A MINI-DISK EXTENT IS VIRTUALLY RESERVED.
WHILE AN I/O EVENT IS OUTSTANDING FOR A VIRTUAL MACHINE, THE ADDRESS OF A VDEV MAY APPEAR IN:
CHCQUEUE(I) - FIRST DEVICE WITH AN INTERRUPT PENDING ON CHANNEL I (OR IN CHANNEL CLASS I)
VDEVFPNT - NEXT DEVICE WITH INTERRUPT PENDING ON THIS CHANNEL (OR THIS VDEV, IF LAST)
VDEVBPNT - PREVIOUS INTERRUPT PENDING DEVICE ON THIS CHANNEL (OR THIS VDEV, IF FIRST)
VMDWVDEV - DEVICE CAUSING I/O WAIT CONDITION
- SYNCHRONOUS I/O VIA DIAGNOSE 18 OR 20
- VIRTUAL MACHINE LOOPING ON TIO INSTR.
IORVDEV - VDEV WITH WHICH VIRTUAL MACHINE'S I/O REQUEST IS ASSOCIATED.
I/O SUPERVISOR ROUTINES NORMALLY USE REGISTER 6 TO ADDRESS THE VDEV ASSOCIATED WITH THE EVENT BEING PROCESSED.

CREATED BY:

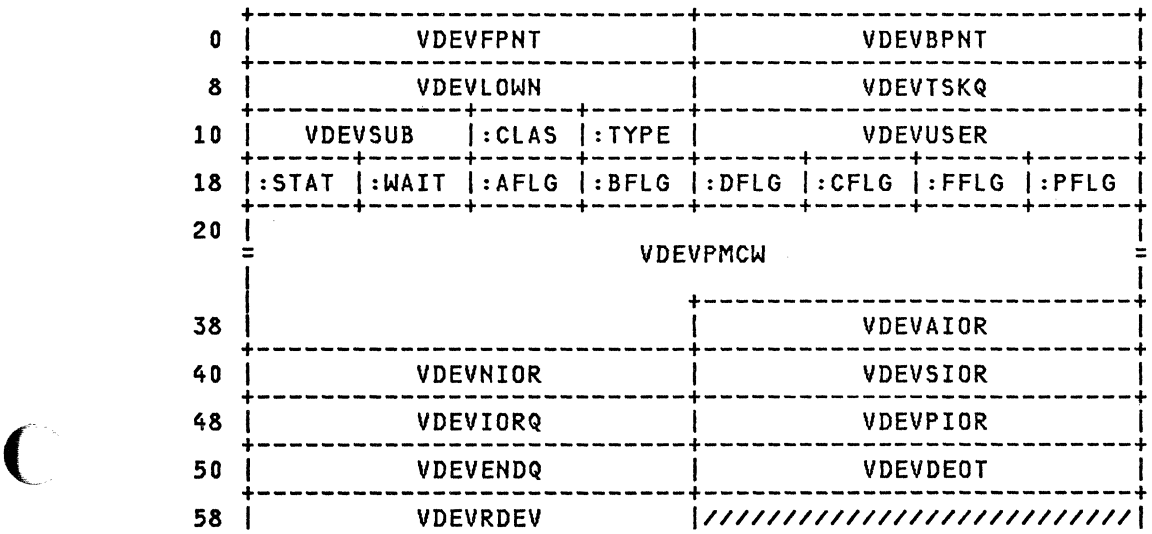
HCPVDB

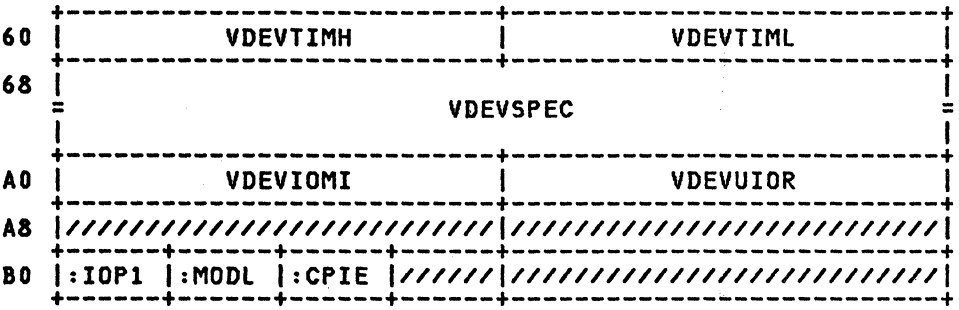
DELETED BY:

HCPVDB

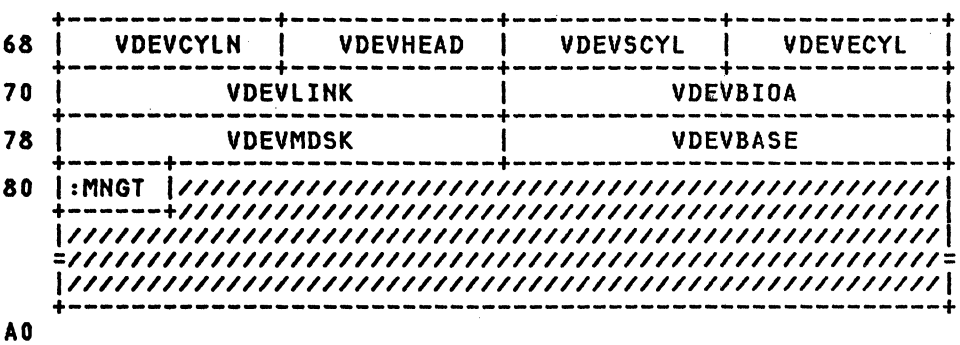
BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

VDEV - VIRTUAL DEVICE CONTROL BLOCK

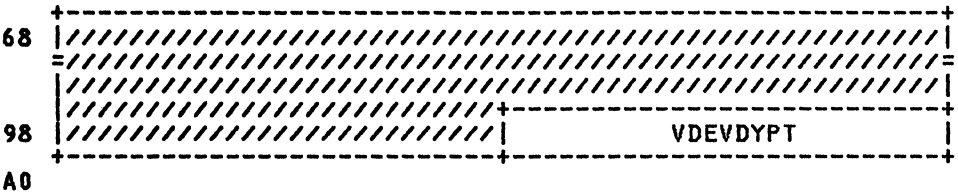




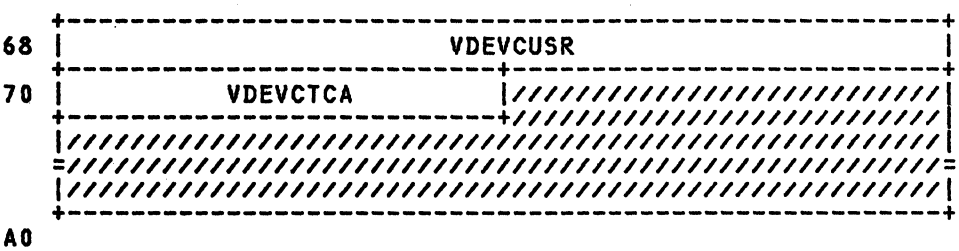
REDEFINITION - DASD SPECIFICATION VALUES



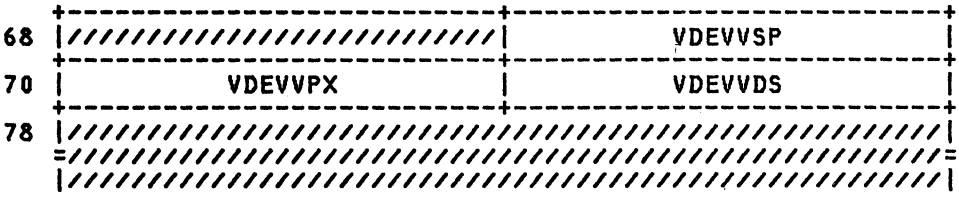
REDEFINITION - TAPE SPECIFICATION VALUES



REDEFINITION - VIRTUAL CTCA SPECIFICATION VALUES



REDEFINITION - SPOOL CONSOLE AND UNIT RECORD SPEC.




```
   +-------------------------------------------------------+
A0
```

REDEFINITION - DEFINE PATH MANAGEMENT CONTROL WORD

```
   +-------------------------+------+------+------+------+
20 |          VDEVINTP       |:IRCF | :CTL |:DEVC |:DEVU |
   +------+------+------+------+------+------+------+------+
28 | :LPM |:PNOM |:LPUM | :PIM |   VDEVMBI   | :POM | :PAM |
   +------+------+------+------+-------------+------+------+
30 |                    VDEVCPID                           |
   +------+------+------+------+--------------------------+
38 |:ZONE |:VISC |//////|:ECFG | 3C
   +------+------+------+------+
```

REDEFINITION - VIRTUAL DEVICE SUBCHANNEL NUMBER

```
   +------+------+
10 |:SUBL |:SUBR | 12
   +------+------+
```

disp	name	length	description
000	VDEVFPNT	004	FORWARD INTERRUPTION POINTER
004	VDEVBPNT	004	BACKWARD INTERRUPTION POINTER
008	VDEVLOCK	008	VIRTUAL DEVICE LOCKWORD
008	VDEVLOWN	004	ADDRESS OF LOCK OWNER'S VMDBK
00C	VDEVTSKQ	004	ANCHOR FOR QUEUE OF WAITING TASKS
010	VDEVSUB	002	VIRTUAL SUBCHANNEL NUMBER
012	VDEVCODE	002	VIRTUAL DEVICE IDENTITY CODE
012	VDEVCLAS	001	DEVICE CLASS
	BITS DEFINED FOR VDEVCLAS BY HCPDVTYP DEVCLAS		
013	VDEVTYPE	001	DEVICE TYPE
	BITS DEFINED FOR VDEVTYPE BY HCPDVTYP DEVTYPE		
014	VDEVUSER	004	POINTER TO VMDBK OF OWNER
018	VDEVSTAT	001	DEVICE STATUS - OWNED BY VIRTUAL I/O INSTRUCTION SIMULATION. THIS IS NOT TO BE USED BY VIRTUAL DEVICE SIMULATION.
	BITS DEFINED IN VDEVSTAT (AT HEX DISPLACEMENT: 18)		
	80 VDEVBUSY		START FUNCTION
	40 VDEVPRCE		CHANNEL END RECEIVED
	20 VDEVCLRF		CLEAR FUNCTION
	10 VDEVHLTF		HALT FUNCTION
	F0 VDEVACTV		
	08 VDEVSUSP		SUBCHANNEL SUSPENDED
	04 VDEVRPND		RESUME PENDING
	02 VDEVQUED		DEVICE-BUSY RECEIVED - VDEVNIOR CONTAINS THE ADDRESS OF AN IORBK WHICH RECEIVED AN INITIAL STATUS OF BUSY-ALONE AND IS AWAITING AN UNSOLICITED DEVICE END.
019	VDEVWAIT	001	WAIT STATUS CONTROLS
	BITS DEFINED IN VDEVWAIT (AT HEX DISPLACEMENT: 19)		
	80 VDEVIMRS		VM SUSPENDED PENDING I/O RESPONSE
	40 VDEVWINT		CPU(S) AWAITING STATUS (TIO/TSCH BUSY)

01A	VDEVAFLG	001	DEVICE ALLOCATION FLAG

BITS DEFINED IN VDEVAFLG (AT HEX DISPLACEMENT: 1A)

80	VDEVINTV	SIMULATED INTERVENTION REQUIRED
40	VDEVTDSK	DEVICE IS DASD TDISK
20	VDEVVSIM	DEVICE IS SIMULATED BY VDSBK
10	VDEVFULL	DEVICE IS A COMPLETE VOLUME
08	VDEVDED	DEVICE IS ATTACHED TO VDEVRDEV
04	VDEVMPLX	MULTIPLE EXPOSURE DEVICE

01B	VDEVBFLG	001	BACKUP STATUS FLAG - OWNED BY HALT SIMULATION PROCESSING TO PRESERVE INTERMEDIATE STATUS ACROSS HALT.

BITS DEFINED IN VDEVBFLG (AT HEX DISPLACEMENT: 1B)

80	VDEVBCC0	BACKUP CONFIRMED CC 0 FLAG
40	VDEVBPCI	BACKUP PCI FLAG
20	VDEVBSUI	BACKUP SUSPENSION INTERRUPT FLAG

01C	VDEVDFLG	001	DEVICE CONTROL FLAGS

BITS DEFINED IN VDEVDFLG (AT HEX DISPLACEMENT: 1C)

80	VDEVRO	DEVICE- READ ONLY ACCESS
40	VDEVENAB	COMMUNICATION LINE - ENABLED
20	VDEVDIAL	COMMUNICATION LINE - DIALED
10	VDEVSDIA	COMMUNICATION LINE - SNA DIALED
04	VDEVRSRL	RESERVE/RELEASE VALID CCW'S
02	VDEVNSEG	NO CHAN PROG SEGMENTATION ALLOWED

01D	VDEVCFLG	001	CONSOLE PROCESSING CONTROLS

BITS DEFINED IN VDEVCFLG (AT HEX DISPLACEMENT: 1D)

40	VDEVPPA1	REFLECT PA1 KEY TO THE VIRTUAL MACHINE
20	VDEVGSUS	FULL SCREEN GUEST WAS SUSPENDED WITH UNIT EXCEPTION. CP MUST GENERATE AN UNSOLICITED DEVICE END TO RESUME GUEST
10	VDEVDINP	DIAL IN PROGRESS

01E	VDEVFFLG	001	RESERVED FOR FUTURE IBM USE
01F	VDEVPFLG	001	DEVICE PROCESSING FLAG

BITS DEFINED IN VDEVPFLG (AT HEX DISPLACEMENT: 1F)

80	VDEVCPCL	DEVICE CLOSED BY CP COMMAND
40	VDEVPURG	DEVICE CLOSED AND PURGED BY CP COMMAND
20	VDEVNRSM	DEVICE CANNOT RESUME CHANNEL PROGRAM
10	VDEVDPRE	DYMAMIC PATHING HAS BEEN REQUESTED

020	VDEVPMCW	028	PATH MANAGEMENT CONTROL WORD
03C	VDEVAIOR	004	POINTER TO THE ACTIVE IORBK
040	VDEVNIOR	004	SSCH PNDING (NOT YET STARTED) IORBK
044	VDEVSIOR	004	IORBK HOLDING SENSE DATA FOR DEVICE
048	VDEVIORQ	004	RDEV-TO-VDEV LOCK SWAPPING PIVOT
04C	VDEVPIOR	004	PENDING INTERRUPT IORBK
050	VDEVENDQ	004	COMPLETION TASK QUEUE ANCHOR
054	VDEVDEOT	004	DELAYED ENDOP TRQBK ANCHOR
058	VDEVRDEV	004	POINTER TO RDEV OF ACTUAL DEVICE
05C		1F	RESERVED FOR FUTURE IBM USE
060	VDEVTIME	008	TOD CLOCK AT DEVICE CREATION
060	VDEVTIMH	004	HI ORDER TOD CLOCK ROUGHLY IN SECONDS
064	VDEVTIML	004	LO ORDER TOD CLOCK
068	VDEVSPEC	008	DEVICE-DEPENDENT SPECIFICATIONS
0A0	VDEVIOMI	004	ADDRESS OF VIRTUAL I/O MANAGEMENT INFO
0A4	VDEVUIOR	004	PENDING UNSOLICITED IORBK CAME IN AFTER UNIT CHECK
0A8		1F	RESERVED FOR FUTURE IBM USE
0AC		1F	RESERVED FOR FUTURE IBM USE
0B0	VDEVIOP1	001	I/O PASS THROUGH FLAGS

BITS DEFINED IN VDEVIOP1 (AT HEX DISPLACEMENT: B0)

40	VDEVIOPA	DEV IS OPERATING UNDER PASS THROUGH
20	VDEVIOPI	DEV BEING PUT UNDER I/O PASS THROUGH
10	VDEVIOPO	TAKE DEVICE OUT OF PASS THROUGH AT NEXT OPPORTUNITY
08	VDEVIOPR	DEV BEING REMOVED FROM PASS THROUGH
02	VDEVIOPX	DEVICE IS ELIGIBLE FOR XA I/O PASS THROUGH
01	VDEVIOP3	DEVICE IS ELIGIBLE FOR 370 I/O PASS THROUGH

0B1	VDEVMODL	001	VIRTUAL DEVICE MODEL NUMBER
0B2	VDEVCPIE	001	CHANNEL PATH IN ERROR MASK
0B3		1X	RESERVED FOR FUTURE IBM USE
0B4		1F	RESERVED FOR FUTURE IBM USE

EQUATES

17	VDEVSIZE	VDEV SIZE IN DOUBLE-WORDS

REDEFINITION - DASD SPECIFICATION VALUES

068	VDEVPOSN	004	VIRTUAL DASD ARM POSITION
068	VDEVCYLN	002	VIRTUAL DASD CYLINDER NUMBER

EQUATES

68	VDEVCYL0	1ST BYTE OF CYLINDER INFORMATION
69	VDEVCYL1	2ND BYTE OF CYLINDER INFORMATION

06A	VDEVHEAD	002	VIRTUAL DASD HEAD NUMBER

EQUATES

6A	VDEVHED0	1ST BYTE OF HEAD INFORMATION
6B	VDEVHED1	2ND BYTE OF HEAD INFORMATION

06C	VDEVEXTN	004	VIRTUAL DASD CYLINDER EXTENTS
06C	VDEVSCYL	002	MINIDISK STARTING CYLINDER
06E	VDEVECYL	002	MINIDISK ENDING CYLINDER
070	VDEVLINK	004	NEXT VDEV ON THIS MDISK
074	VDEVBIOA	004	BLOCK I/O CONNECT BLOCK
078	VDEVMDSK	004	MINI-DISK BLOCK FOR RESERVE/RELEASE
07C	VDEVBASE	004	BASE ADDRESS VDEV FOR MULT-EXPOSURE
080	VDEVMNGT	001	LEVEL OF CONTROL FOR CACHED DASD

BITS DEFINED IN VDEVMNGT (AT HEX DISPLACEMENT: 80)

80	VDEVCA	CACHING AVAILABLE TO A MINIDISK
40	VDEVCNA	CACHING NOT AVAILABLE TO A MINIDISK
20	VDEVSCTL	SYSTEM CONTROL FOR CACHED DASD
10	VDEVDCTL	DEVICE CONTROL FOR CACHED DASD
08	VDEVNCTL	NO CONTROL FOR CACHED DASD

081		1XL31	RESERVED FOR FUTURE IBM USE

REDEFINITION - TAPE SPECIFICATION VALUES

068		XL52	RESERVED FOR FUTURE IBM USE
09C	VDEVDYPT	004	POINTER TO TAPE PATHING CONTROL BLOCK

REDEFINITION - VIRTUAL CTCA SPECIFICATION VALUES

068	VDEVCUSR	008	RESTRICTED USERID FOR COUPLING
070	VDEVCTCA	004	ADDRESS OF CACBK
074		1XL44	RESERVED FOR FUTURE IBM USE

REDEFINITION - SPOOL CONSOLE AND UNIT RECORD SPEC.

```
068                 1F        RESERVED FOR FUTURE IBM USE
06C   VDEVVSP       004       ADDRESS OF THE VIRTUAL SPOOL BLOCK
070   VDEVVPX       004       ADDRESS OF PRT EXTENSION BLOCK
074   VDEVVDS       004       DEVICE SIMULATION POINTER
078                 1XL40     RESERVED FOR FUTURE IBM USE

          REDEFINITION - DEFINE PATH MANAGEMENT CONTROL WORD

020   VDEVPMW0      004       WORD 0 OF PMCW
020   VDEVINTP      004       INTERRUPT PARAMETER
024   VDEVPMW1      004       WORD 1 OF PMCW
024   VDEVIRCF      001       SUBCHANNEL INTERUPT REQUEST CODE

        BITS DEFINED FOR VDEVIRCF BY HCPEQUAT CSWIRCF

025   VDEVCTL       001       SUBCHANNEL STATUS CONTROL

        BITS DEFINED FOR VDEVCTL BY HCPEQUAT CSWCTL

026   VDEVDEV       002       INTERNAL DEVICE NUMBER
026   VDEVDEVC      001       CHANNEL NUMBER
027   VDEVDEVU      001       DEVICE/CONTROL UNIT NUMBER
028   VDEVPMW2      004       WORD 2 OF PMCW
028   VDEVLPM       001       SUBCHANNEL LOGICAL PATH MASK
029   VDEVPNOM      001       SUBCHANNEL PATH NOT OPERATIONAL MASK
02A   VDEVLPUM      001       SUBCHANNEL LAST PATH USED MASK
02B   VDEVPIM       001       SUBCHANNEL PATH INSTALLED MASK
02C   VDEVPMW3      004       WORD 3 OF PMCW
02C   VDEVMBI       002       MEASUREMENT BLOCK INDEX
02E   VDEVPOM       001       SUBCHANNEL OPERATIONAL MASK
02F   VDEVPAM       001       SUBCHANNEL PATH AVAILABLE MASK
030   VDEVCPID      001       CHANNEL PATH IDENTIFIERS 0 - 7
038   VDEVZONE      001       ZONE
039   VDEVVISC      001       GUEST ISC
03A                 1X        RESERVED
03B   VDEVECFG      001       EXTENDED CONTROL FLAGS

          REDEFINITION - VIRTUAL DEVICE SUBCHANNEL NUMBER

010   VDEVSUBL      001       LEFT DIGIT OF SUBCHANNEL NUMBER
011   VDEVSUBR      001       RIGHT DIGIT OF SUBCHANNEL NUMBER
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VDEV	001	000	VDEVCPCL	001	080	VDEVDPRE	001	010
VDEVACTV	001	0F0	VDEVCPID	001	030	VDEVDYPT	004	09C
VDEVAFLG	001	01A	VDEVCPIE	001	0B2	VDEVECFG	001	03B
VDEVAIOR	004	03C	VDEVCTCA	004	070	VDEVECYL	002	06E
VDEVBASE	004	07C	VDEVCTL	001	025	VDEVENAB	001	040
VDEVBCC0	001	080	VDEVCUSR	008	068	VDEVENDQ	004	050
VDEVBFLG	001	01B	VDEVCYLN	002	068	VDEVEXTN	004	06C
VDEVBIOA	004	074	VDEVCYL0	001	068	VDEVFFLG	001	01E
VDEVBPCI	001	040	VDEVCYL1	001	069	VDEVFPNT	004	000
VDEVBPNT	004	004	VDEVDCTL	001	010	VDEVFULL	001	010
VDEVBSUI	001	020	VDEVDED	001	008	VDEVGSUS	001	020
VDEVBUSY	001	080	VDEVDEOT	004	054	VDEVHEAD	002	06A
VDEVCA	001	080	VDEVDEV	002	026	VDEVHED0	001	06A
VDEVCFLG	001	01D	VDEVDEVC	001	026	VDEVHED1	001	06B
VDEVCLAS	001	012	VDEVDEVU	001	027	VDEVHLTF	001	010
VDEVCLRF	001	020	VDEVDFLG	001	01C	VDEVIMRS	001	080
VDEVCNA	001	040	VDEVDIAL	001	020	VDEVINTP	004	020
VDEVCODE	002	012	VDEVDINP	001	010	VDEVINTV	001	080

Name	Len	Val/Disp	Name	Len	Val/Disp
VDEVIOMI	004	0A0	VDEVWINT	001	040
VDEVIOPA	001	040	VDEVZONE	001	038
VDEVIOPI	001	020			
VDEVIOPO	001	010			
VDEVIOPR	001	008			
VDEVIOPX	001	002			
VDEVIOP1	001	0B0			
VDEVIOP3	001	001			
VDEVIORQ	004	048			
VDEVIRCF	001	024			
VDEVLINK	004	070			
VDEVLOCK	008	008			
VDEVLOWN	004	008			
VDEVLPM	001	028			
VDEVLPUM	001	02A			
VDEVMBI	002	02C			
VDEVMDSK	004	078			
VDEVMNGT	001	080			
VDEVMODL	001	0B1			
VDEVMPLX	001	004			
VDEVNCTL	001	008			
VDEVNIOR	004	040			
VDEVNRSM	001	020			
VDEVNSEG	001	002			
VDEVPAM	001	02F			
VDEVPFLG	001	01F			
VDEVPIM	001	02B			
VDEVPIOR	004	04C			
VDEVPMCW	028	020			
VDEVPMW0	004	020			
VDEVPMW1	004	024			
VDEVPMW2	004	028			
VDEVPMW3	004	02C			
VDEVPNOM	001	029			
VDEVPOM	001	02E			
VDEVPOSN	004	068			
VDEVPPA1	001	040			
VDEVPRCE	001	040			
VDEVPURG	001	040			
VDEVQUED	001	002			
VDEVRDEV	004	058			
VDEVRO	001	080			
VDEVRPND	001	004			
VDEVRSRL	001	004			
VDEVSCTL	001	020			
VDEVSCYL	002	06C			
VDEVSDIA	001	010			
VDEVSIOR	004	044			
VDEVSIZE	001	017			
VDEVSPEC	008	068			
VDEVSTAT	001	018			
VDEVSUB	002	010			
VDEVSUBL	001	010			
VDEVSUBR	001	011			
VDEVSUSP	001	008			
VDEVTDSK	001	040			
VDEVTIME	008	060			
VDEVTIMH	004	060			
VDEVTIML	004	064			
VDEVTSKQ	004	00C			
VDEVTYPE	001	013			
VDEVUIOR	004	0A4			
VDEVUSER	004	014			
VDEVVDS	004	074			
VDEVVISC	001	039			
VDEVVPX	004	070			
VDEVVSIM	001	020			
VDEVVSP	004	06C			
VDEVWAIT	001	019			

HCPVDSBK— VIRTUAL DEVICE SIMULATION BLOCK

DSECT NAME: VDSBK

DESCRIPTIVE NAME: VIRTUAL DEVICE SIMULATION BLOCK

FUNCTION: THIS CONTROL BLOCK CONTAINS INFORMATION NECESSARY FOR SIMULATION OF A VIRTUAL DEVICE.

LOCATED BY:

VDEVVDS FIELD OF HCPVDEV

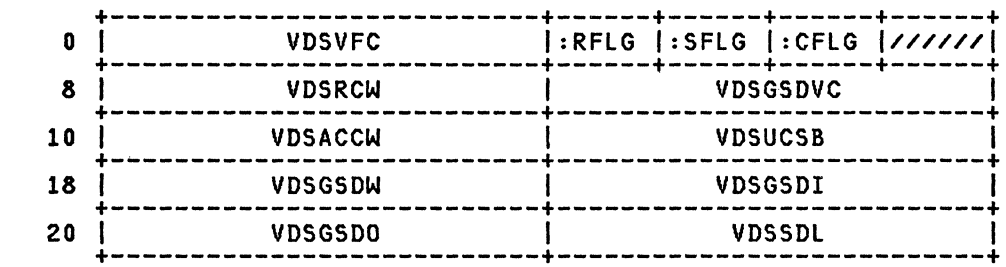
CREATED BY:

HCPVDSDF - WHILE DEFINING A VIRTUAL DEVICE.

DELETED BY:

HCPVDBDL - WHEN DELETING A VIRTUAL DEVICE.

VDSBK - VIRTUAL DEVICE SIMULATION BLOCK



disp	name	length	description
000	VDSVFC	004	POINTER TO VFCBLOK
004	VDSFLAGS	004	DEVICE SIMULATION FLAGS
004	VDSRFLG	001	DEVICE SIMULATION REQUEST FLAG
	BITS DEFINED IN VDSRFLG (AT HEX DISPLACEMENT: 4)		
	80 VDSATTN		CONS - 2 OR MORE ATTENTIONS SEEN
	40 VDSDIAG		DIAGNOSE I/O ACTIVE ON THIS DEVICE
005	VDSSFLG	001	DEVICE SIMULATION STATUS FLAG
	BITS DEFINED IN VDSSFLG (AT HEX DISPLACEMENT: 5)		
	80 VDSCCW1		PROCESSING FIRST CCW IN CHAIN
	40 VDSCPOST		VIRTUAL COND. CODE PRESENTED
	20 VDSLTIC		LAST CCW PROCESSED WAS A TIC
	10 VDSDTRAN		DATA XFER IN THIS CCW STRING
	08 VDSFEED		RDR - LAST CCW DID A 'FEED'
	04 VDSCRCW		TIC SCAN PASSED CURR RCWTASK
	02 VDSREJLT		PRESENT COMMAND REJECT LATER
	01 VDSUE		UNIT EXCEPTION HAS BEEN PRESENTED
006	VDSCFLG	001	DEVICE SIMULATION CONTROL FLAG
	BITS DEFINED IN VDSCFLG (AT HEX DISPLACEMENT: 6)		
	08 VDSAUCR		CONS - AUTO CR ON FIRST READ
007		1X	RESERVED FOR FUTURE IBM USE
008	VDSRCW	004	POINTER TO CURRENT RCWTASK
00C	VDSGSDVC	004	POINTER TO WORK GSDBLOK
010	VDSACCW	004	ADDRESS OF CURRENT CCW IN RCWTASK
014	VDSUCSB	004	POINTER TO UCSB DATA BLOCK

018	VDSGSDW	004	POINTER TO VSP WORK GSDBLOK
01C	VDSGSDI	004	POINTER TO INPUT GSDBLOK
020	VDSGSDO	004	POINTER TO OUTPUT GSDBLOK
024	VDSSDL	004	POINTER TO AN SDLBK

EQUATES

05	VDSSIZE	VDSBK SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp
VDSACCW	004	010
VDSATTN	001	080
VDSAUCR	001	008
VDSBK	001	000
VDSCCW1	001	080
VDSCFLG	001	006
VDSCPOST	001	040
VDSCRCW	001	004
VDSDIAG	001	040
VDSDTRAN	001	010
VDSFEED	001	008
VDSFLAGS	004	004
VDSGSDI	004	01C
VDSGSDO	004	020
VDSGSDVC	004	00C
VDSGSDW	004	018
VDSLTIC	001	020
VDSRCW	004	008
VDSREJLT	001	002
VDSRFLG	001	004
VDSSDL	004	024
VDSSFLG	001	005
VDSSIZE	001	005
VDSUCSB	004	014
VDSUE	001	001
VDSVFC	004	000

HCPVDUBK— VIRTUAL MACHINE DUMP BLOCK

DSECT NAME: VDUBK

DESCRIPTIVE NAME: VIRTUAL MACHINE DUMP BLOCK

FUNCTION: TO PASS VMDUMP COMMAND PARAMETERS FROM HCPVMD TO AND TO PROVIDE A SAVEAREA FOR SUBROUTINES IN HCPVDU.

LOCATED BY:

SEE REGISTER USAGE IN MODULES HCPVMD AND HCPVDU.

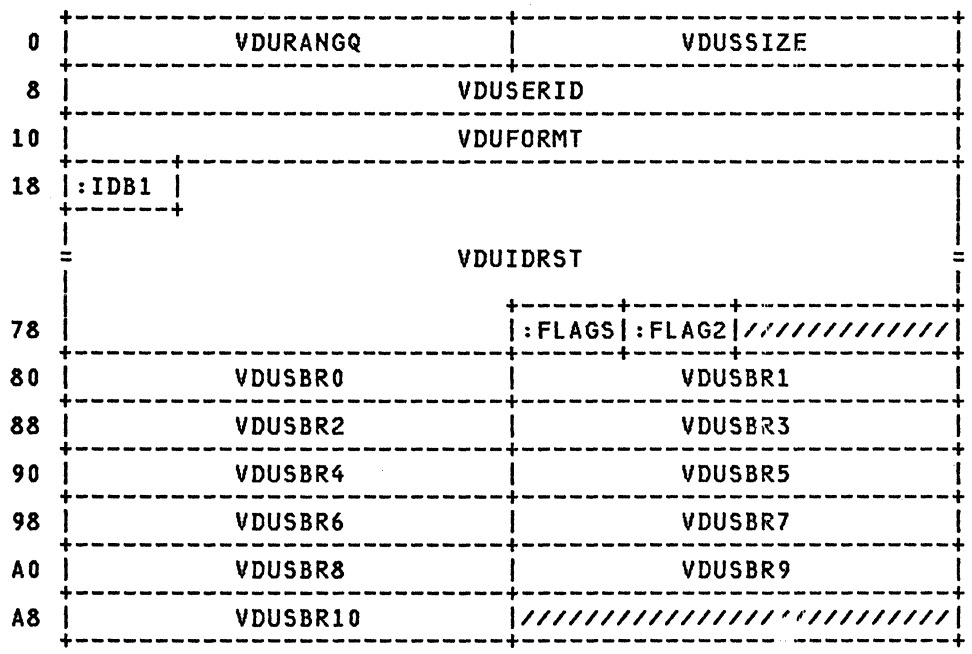
CREATED BY:

HCPVMDMP

DELETED BY:

HCPVMDMP

VDUBK - VIRTUAL MACHINE DUMP BLOCK



disp	name	length	description
000	VDURANGQ	004	QUEUE OF ADDRESS RANGES TO DUMP
004	VDUSSIZE	004	VIRT. MACH. STORAGE SIZE INCLUDING DCSS AREAS IF ANY
008	VDUSERID	008	USER TO RECEIVE THE DUMP FILE
010	VDUFORMT	008	THE DUMP FILE FORMAT (FILE TYPE)
018	VDUDMPID	100	THE DUMP ID (IF SPECIFIED)
018	VDUIDB1	001	. . . BYTE 1
019	VDUIDRST	099	. . . REST OF THE IDENTIFIER
07C	VDUFLAGS	001	DUMP FLAGS
07D	VDUFLAG2	001	SECOND BYTE OF DUMP FLAGS
07E		XL2	RESERVED FOR FUTURE IBM USE
080	VDUSBRGS	044	SUBROUTINE SAVEAREA FOR HCPVDU
080	VDUSBR0	004	SUBROUTINE REGISTER 0
084	VDUSBR1	004	SUBROUTINE REGISTER 1
088	VDUSBR2	004	SUBROUTINE REGISTER 2
08C	VDUSBR3	004	SUBROUTINE REGISTER 3
090	VDUSBR4	004	SUBROUTINE REGISTER 4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094   VDUSBR5    004       SUBROUTINE REGISTER 5
098   VDUSBR6    004       SUBROUTINE REGISTER 6
09C   VDUSBR7    004       SUBROUTINE REGISTER 7
0A0   VDUSBR8    004       SUBROUTINE REGISTER 8
0A4   VDUSBR9    004       SUBROUTINE REGISTER 9
0A8   VDUSBR10   004       SUBROUTINE REGISTER 10
0AC              F         RESERVED FOR FUTURE IBM USE
```

EQUATES

```
  16    VDUSIZE     VDUBK LENGTH IN DOUBLE WORDS
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MORE EQUATES

```
001     VDUTO       'TO' OR 'SYSTEM' WAS SPECIFIED
002     VDUFORM     'FORMAT' WAS SPECIFIED
004     VDUNRTRN    'NORETURN' WAS SPECIFIED
010     VDUDUMP     'DUMP' WAS SPECIFIED
020     VDUTSELF    'TO SELF' WAS SPECIFIED
040     VDUINLIN    INLINE RANGE FOUND
080     VDUXA       DUMP IS TO BE IN 370-XA FORMAT
080     VDUDIAG     VMDUMP RESULTING FROM A
                    DIAGNOSE X'94' REQUEST
```

CROSS REFERENCE

Name	Len	Val/Disp
VDUBK	001	000
VDUDIAG	001	080
VDUDMPID	100	018
VDUDUMP	001	010
VDUFLAGS	001	07C
VDUFLAG2	001	07D
VDUFORM	001	002
VDUFORMT	008	010
VDUIDB1	001	018
VDUIDRST	099	019
VDUINLIN	001	040
VDUNRTRN	001	004
VDURANGQ	004	000
VDUSBRGS	044	080
VDUSBR0	004	080
VDUSBR1	004	084
VDUSBR10	004	0A8
VDUSBR2	004	088
VDUSBR3	004	08C
VDUSBR4	004	090
VDUSBR5	004	094
VDUSBR6	004	098
VDUSBR7	004	09C
VDUSBR8	004	0A0
VDUSBR9	004	0A4
VDUSERID	008	008
VDUSIZE	001	016
VDUSSIZE	004	004
VDUTO	001	001
VDUTSELF	001	020
VDUXA	001	080

HCPVECBK— GUEST VECTOR FACILITY CONTROL BLOCK

DSECT NAME: VECBK

DESCRIPTIVE NAME: GUEST VECTOR FACILITY CONTROL BLOCK

FUNCTION: HCPVECBK IS THE PRIMARY CONTROL BLOCK FOR A VIRTUAL CPU'S VECTOR FACILITY. IT CONTAINS OR REFERS TO ALL GUEST VECTOR FACILITY REGISTERS, PLUS ADDITIONAL VECTOR ACTIVITY COUNTERS.

LOCATED BY:

VMDVECTR IN THE VMBDK OF THE OWNING VIRTUAL CPU.

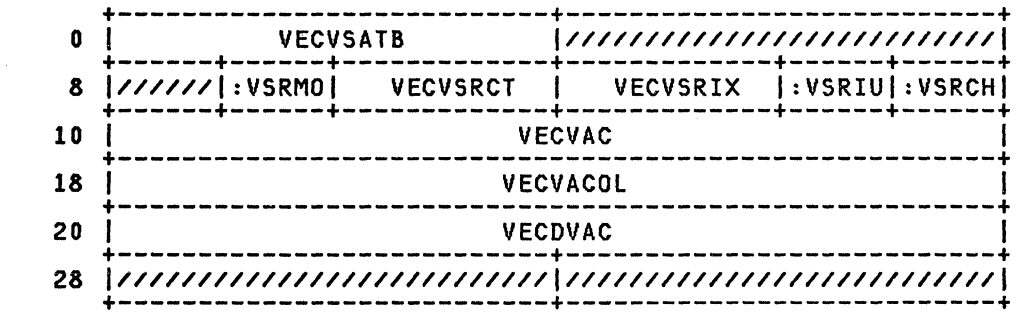
CREATED BY:

HCPVFVIN - VIRTUAL VECTOR FACILITY INITIALIZATION.

DELETED BY:

HCPVFVDE - VIRTUAL VECTOR FACILITY DE-INITIALIZATION.

VECBK - GUEST VECTOR FACILITY CONTROL BLOCK



disp	name	length	description
000	VECVSATB	004	POINTER TO THE VECTOR REGISTER SAVE AREA BLOCK
004		F	RESERVED FOR FUTURE IBM USE
008	VECVSR	008	GUEST VECTOR STATUS REGISTER:
008		XL1	..RESERVED FOR FUTURE IBM USE
009	VECVSRMO	001	..VECTOR MODE FLAGS
	BITS DEFINED IN VECVSRMO (AT HEX DISPLACEMENT: 9)		
	01 VECVSRMM		....VECTOR MASK MODE
00A	VECVSRCT	002	..VECTOR COUNT (OF ELEMENTS TO ....PARTICIPATE IN OPERATIONS)
00C	VECVSRIX	002	..VECTOR INTERRUPTION INDEX (NEXT ....ELEMENT NUMBER)
00E	VECVSRIC	002	..VECTOR IN-USE AND CHANGE MASK
00E	VECVSRIU	001	....VECTOR IN-USE MASK (ONE BIT ......PER VR PAIR)
00F	VECVSRCH	001	....VECTOR CHANGE MASK (ONE BIT ......PER VR PAIR)
010	VECVAC	008	GUEST VECTOR ACTIVITY COUNT
018	VECVACOL	008	GUEST VECTOR ACTIVITY COUNT AT THE TIME OF LAST UPDATING OF ACCOUNTING VALUES
020	VECDVAC	008	GUEST VECTOR ACTIVITY COUNT AT THE START OF THE TIMESLICE
028		F	RESERVED FOR FUTURE IBM USE
02C		F	RESERVED FOR FUTURE IBM USE

EQUATES

	06	VECSIZE	SIZE OF VECBK IN DOUBLEWORDS EXCLUDING VECVMR
030	VECVMR	001	GUEST VECTOR MASK REGISTER THE SIZE OF VECVMR IS (SECTION SIZE / 2) BYTES

CROSS REFERENCE

Name	Len	Val/Disp
VECBK	001	000
VECDVAC	008	020
VECSIZE	001	006
VECVAC	008	010
VECVACOL	008	018
VECVMR	001	030
VECVSATB	004	000
VECVSR	008	008
VECVSRCH	001	00F
VECVSRCT	002	00A
VECVSRIC	002	00E
VECVSRIU	001	00E
VECVSRIX	002	00C
VECVSRMM	001	001
VECVSRMO	001	009

HCPVFCBK— VIRTUAL FORMS BUFFER CONTROL BLOCK

DSECT NAME: VFCBK

DESCRIPTIVE NAME: VIRTUAL FORMS BUFFER CONTROL BLOCK

FUNCTION: CONTAINS THE FORMS CONTROL BUFFER DATA AND CONTROL INFORMATION FOR A VIRTUAL SPOOLING DEVICE.

LOCATED BY:

VDSVFC FIELD OF HCPVDSBK

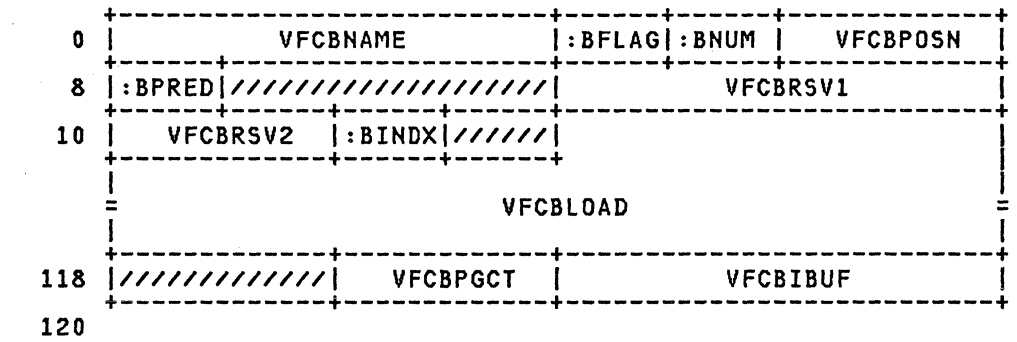
CREATED BY:

HCPSCB - FOR PROCESSING THE LOADBUF COMMAND

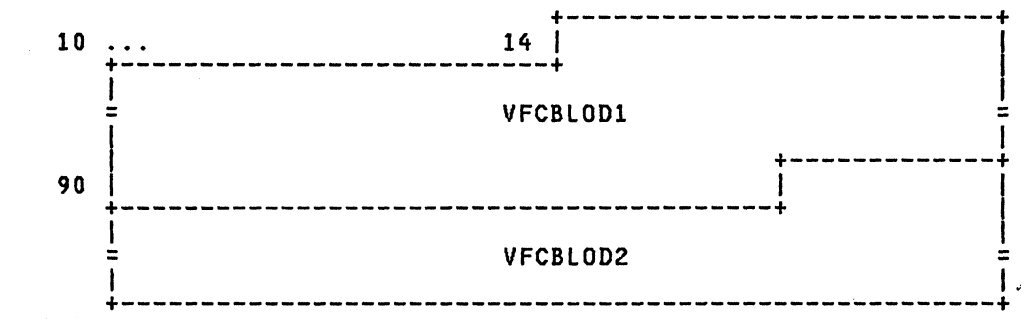
DELETED BY:

HCPDTD - WHEN THE DEVICE IS DETACHED

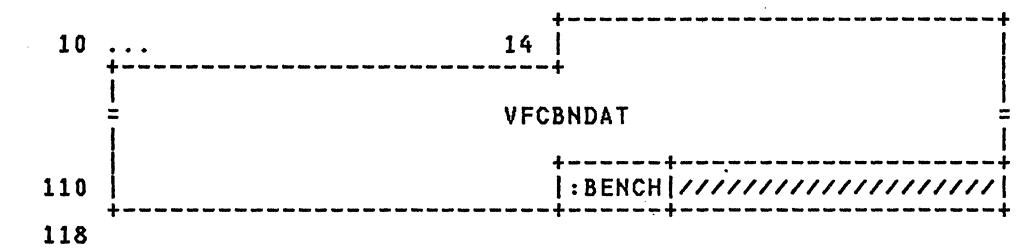
VFCBK - VIRTUAL FORMS BUFFER CONTROL BLOCK



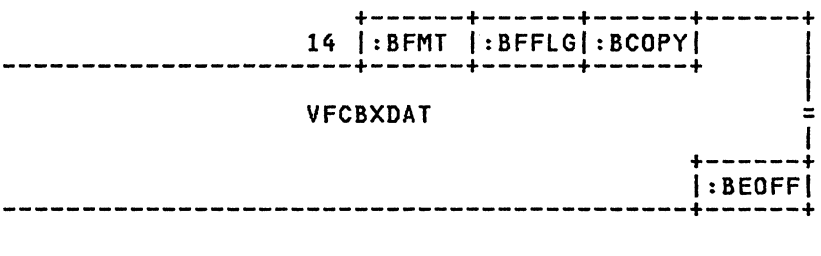
REDEFINITION - REDEF FCB DATA FOR CLEARING FCB



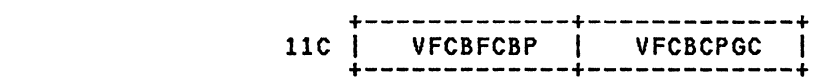
REDEFINITION - REDEF FCB DATA FOR NORMAL FCB



REDEFINITION - REDEF FCB DATA FOR EXTENDED FCB



REDEFINITION - 'SENSE INTERMEDIATE BUFFER' INFO



disp	name	length	description
000	VFCBNAME	004	FCB'S NAME
004	VFCBFLAG	001	STATUS FLAGS

BITS DEFINED IN VFCBFLAG (AT HEX DISPLACEMENT: 4)

80	VFCBEOF	END OF FORMS PASSED ONCE
40	VFCBDIAG	USED IN 'READ BUFFER' SUPPORT

005	VFCBNUM	001	CHANNEL NUMBER OR SPACE COUNT
006	VFCBPOSN	002	CURRENT LINE NUMBER
008	VFCBWORK	004	WORK WORD
008	VFCBPRED	001	THE LAST CCW ISSUED
009		3X	SPACE
00C	VFCBRSV1	004	RESERVED FOR FUTURE IBM USE
010	VFCBRSV2	002	RESERVED FOR FUTURE IBM USE
012	VFCBINDX	001	FCB INDEX BYTE VALUE
013		1X	RESERVED FOR FUTURE IBM USE
014	VFCBLOAD	260	FORMS CONTROL BUFFER DATA
118		2X	RESERVED FOR FUTURE IBM USE
11A	VFCBPGCT	002	CURRENT PAGE COUNT
11C	VFCBIBUF	004	'SENSE INTERMEDIATE BUFFER' INFO
120	VFCBEND	008	END OF VFC BUFFER BLOCK

EQUATES

24	VFCBSIZE	BLOCK SIZE IN DBLWDS
00	VFCBLEN	NORMAL FCB DATA LENGTH
04	VFCBXLEN	EXTENDED FCB DATA LENGTH

REDEFINITION - REDEF FCB DATA FOR CLEARING FCB

014	VFCBLOD1	130	FOR CLEARING: FCB 1ST HALF
096	VFCBLOD2	130	FOR CLEARING: FCB 2ND HALF

REDEFINITION - REDEF FCB DATA FOR NORMAL FCB

014	VFCBNDAT	256	NORMAL FCB DATA
114	VFCBENCH	001	END-OF-FCB FENCE
115		XL3	(UNUSED PORTION OF EXTENDED FCB)

REDEFINITION - REDEF FCB DATA FOR EXTENDED FCB

014	VFCBFMT	001	FCB FORMAT INDICATOR

CODES DEFINED IN VFCBFMT (AT HEX DISPLACEMENT: 14)

```
        7E    VFCBXTND    EXTENDED FCB FORMAT

015   VFCBFFLG   001       FCB FLAGS

        BITS DEFINED IN VFCBFFLG (AT HEX DISPLACEMENT: 15)

        10    VFCBXDUP    DUPLICATE COPY ENABLED
        80    VFCBZERO    BIT ZERO MUST BE 0 BY DEFINITION

016   VFCBCOPY   001       COPY COUNT
017   VFCBXDAT   256       EXTENDED FCB: ACTUAL FCB DATA
117   VFCBEOFF   001       EXTENDED FCB END-OF-FORMS MARKER

        CODES DEFINED IN VFCBEOFF (AT HEX DISPLACEMENT: 117)

        FE    VFCBXEOF    EXTENDED FCB END-OF-FORMS CODE

         REDEFINITION - 'SENSE INTERMEDIATE BUFFER' INFO

11C   VFCBFCBP   002       CURRENT FCB POINTER
11E   VFCBCPGC   002       CURRENT PAGE COUNTER
```

CROSS REFERENCE

Name	Len	Val/Disp
VFCBCOPY	001	016
VFCBCPGC	002	11E
VFCBDIAG	001	040
VFCBENCH	001	114
VFCBEND	008	120
VFCBEOF	001	080
VFCBEOFF	001	117
VFCBFCBP	002	11C
VFCBFFLG	001	015
VFCBFLAG	001	004
VFCBFMT	001	014
VFCBIBUF	004	11C
VFCBINDX	001	012
VFCBK	001	000
VFCBLEN	001	100
VFCBLOAD	260	014
VFCBLOD1	130	014
VFCBLOD2	130	096
VFCBNAME	004	000
VFCBNDAT	256	014
VFCBNUM	001	005
VFCBPGCT	002	11A
VFCBPOSN	002	006
VFCBPRED	001	008
VFCBRSV1	004	00C
VFCBRSV2	002	010
VFCBSIZE	001	024
VFCBWORK	004	008
VFCBXDAT	256	017
VFCBXDUP	001	010
VFCBXEOF	001	0FE
VFCBXLEN	001	104
VFCBXTND	001	07E
VFCBZERO	001	080

HCPVIOMI— VIRTUAL I/O MANAGEMENT INFORMATION

DSECT NAME: VIOMI

DESCRIPTIVE NAME: VIRTUAL I/O MANAGEMENT INFORMATION

FUNCTION: VIOMI MAPS THE VIRTUAL I/O MANAGEMENT INFORMATION AREA POINTED TO BY THE DCTBL.

LOCATED BY:

DCTVIODD FIELD OF DCTBL, FOR DEDICATED DEVICES
DCTVIOSH FIELD OF DCTBL, FOR SHARED DEVICES
DCTVIOSM FIELD OF DCTBL, FOR SIMULATED DEVICES
VDEVIOMI FIELD OF VDEV

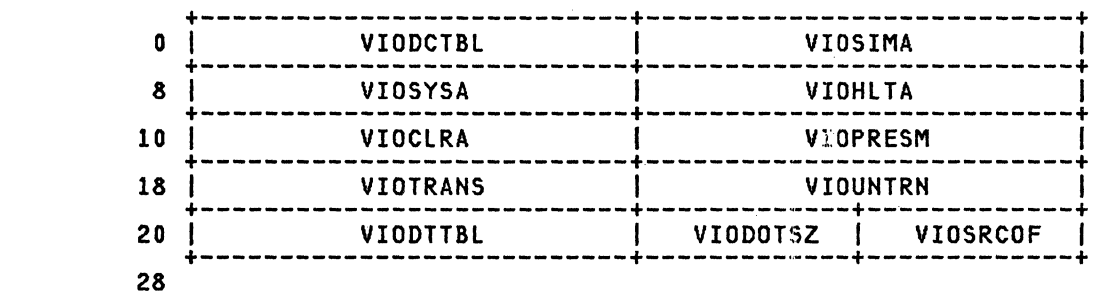
CREATED BY:

INVOCATION OF THE HCPVIOGN MACRO.

DELETED BY:

THIS CONTROL BLOCK IS NEVER DELETED.

VIOMI - VIRTUAL I/O MANAGEMENT INFORMATION



disp	name	length	description
000	VIODCTBL	004	POINTER TO DCTBL FOR THIS VIOMI
004	VIOSIMA	004	ADDRESS OF SIMULATION ROUTINE
008	VIOSYSA	004	ADDRESS OF SYSTEM RESET ROUTINE
00C	VIOHLTA	004	ADDRESS OF INTERFACE DISCONNECT ROUTINE
010	VIOCLRA	004	ADDRESS OF SELECTIVE RESET ROUTINE
014	VIOPRESM	004	ADDRESS OF PRESIMULATION ROUTINE
018	VIOTRANS	004	ADDRESS OF DEVICE TRANSLATOR FOR CHANNEL PROGRAM TRANSLATION
01C	VIOUNTRN	004	ADDRESS OF DEVICE UNTRANSLATOR FOR CHANNEL PROGRAM TRANSLATION
020	VIODTTBL	004	ADDRESS OF DEVICE TRANSLATION TABLE FOR CHANNEL PROGRAM TRANSLATION
024	VIODOTSZ	002	DOUBLEWORD SIZE OF THE DOTWA
026	VIOSRCOF	002	OFFSET FROM VMDVSRCA TO PROPER VIRTUAL START COUNTER THIS DEVICE/SUPPORT FOR THIS DEVICE CLASS AND/OR TYPE

EQUATES

05	VIOSIZE	SIZE, IN DOUBLEWORDS, OF VIOMI

CROSS REFERENCE

Name	Len	Val/Disp
VIOCLRA	004	010
VIODCTBL	004	000
VIODOTSZ	002	024
VIODTTBL	004	020
VIOHLTA	004	00C
VIOMI	001	000
VIOPRESM	004	014
VIOSIMA	004	004
VIOSIZE	001	005
VIOSRCOF	002	026
VIOSYSA	004	008
VIOTRANS	004	018
VIOUNTRN	004	01C

VMCBLOK— VMCF COMMUNICATIONS BLOCK

DSECT NAME: VMCBLOK

DESCRIPTIVE NAME: VMCF COMMUNICATIONS BLOCK

FUNCTION: VMCBLOK CONTAINS DATA TRANSFER AND STATUS INFORMATION USED BY THE VIRTUAL MACHINE CONFIGURATION FACILITY (VMCF).

LOCATED BY:

VMCFPNT FIELD OF VMCBLOK (POINTER TO NEXT VMCBLOK)
VMDVMCB FIELD OF HCPVMDBK

CREATED BY:

HCPVMC (TO HANDLE VMCF FUNCTIONS)

DELETED BY:

HCPVMC (VMCF PROCESSING)

disp	name	length	description
000	VMCSTAT	001	VMCBLOK USER STATUS
	BITS DEFINED IN VMCSTAT		
	80 VMCRESP		FINAL RESPONSE INTERRUPT
	40 VMCRJCT		MESSAGE REJECTED
	20 VMCPRTY		PRIORITY MESSAGE
	10 VMCACCT		CP ACNT RECORD (CP USE ONLY)
	08 VMCEREP		CP EREP RECORD (CP USE ONLY)
	04 VMCVMCF		VMCF RECORD (CP USE ONLY)
	02 VMCHADR		VMCF LOOP SWITCH (CP USE ONLY)
			CODES DEFINED FOR VMCEFLG BY VMCMHDR VMCMEFLG
001	VMCEFLG	001	DATA TRANSFER RETURN CODE
			CODES DEFINED FOR VMCFUNC BY VMCPARM VMCPFUNC
	CODES DEFINED FOR VMCEFLG BY VMCMHDR VMCMEFLG		
002	VMCFUNC	002	SUB - FUNCTION CODE
	CODES DEFINED FOR VMCFUNC BY VMCPARM VMCPFUNC		
004	VMCMID	004	MESSAGE IDENTIFIER
008	VMCUSER	008	SOURCE / SINK USERID (VMUSER)
010	VMCVADA	004	VADDR OF MESSAGE BUFFER
014	VMCLENA	004	LENGTH OF MESSAGE
018	VMCVADB	004	VADDR OF REPLY BUFFER (SEND / RECV ONLY)
01C	VMCLENB	004	LENGTH OF REPLY BUFFER (SEND / RECV ONLY)
020	VMCUSE	008	USER SUPPLIED DOUBLE-WORD
028	VMCFPNT	004	ADDRESS OF NEXT VMCBLOK
02C	VMCKEY	001	USER PSW KEY
			BITS DEFINED IN VMCCSTAT
02D	VMCCSTAT	001	VMCBLOK CONTROL STATUS
	BITS DEFINED IN VMCCSTAT		
	80 VMCCXINT		EXTERNAL INTERRUPT VMCBLOK
	40 VMCCRECP		TRANSACTION PROCESSED
	20 VMCCBUSY		VMCBLOK BUSY
	10 VMCCPURG		VMCBLOK SCHEDULED FOR PURGE
			BITS DEFINED IN VMCASTAT
02E	VMCASTAT	001	VMCBLOK AUTHORIZATION STATUS

BITS DEFINED IN VMCASTAT

80	VMCAAUTS	AUTHORIZED SPECIFIC
40	VMCAPRTY	AUTHORIZED PRIORITY
20	VMCAQIES	USER QUIESCING
10	VMCASPEC	Blocks queued to non specific id

02F	VMCSVMWT	001	SERVICE VIRTUAL MACHINE (SVM)

EQUATES

80	VMCEND	transaction end flag
06	VMCBSIZE	SIZE OF VMCBLOK (DOUBLEWORDS)

002	VMCACNT	002	ACTIVE MESSAGE COUNT

CROSS REFERENCE

Name	Len	Val/Disp
VMCAAUTS	001	080
VMCACCT	001	010
VMCACNT	002	002
VMCAPRTY	001	040
VMCAQIES	001	020
VMCASPEC	001	010
VMCASTAT	001	02E
VMCBLOK	001	000
VMCBSIZE	001	006
VMCCBUSY	001	020
VMCCPURG	001	010
VMCCRECP	001	040
VMCCSTAT	001	02D
VMCCXINT	001	080
VMCEFLG	001	001
VMCEND	001	080
VMCEREP	001	008
VMCFPNT	004	028
VMCFUNC	002	002
VMCHADR	001	002
VMCKEY	001	02C
VMCLENA	004	014
VMCLENB	004	01C
VMCMID	004	004
VMCPRTY	001	020
VMCRESP	001	080
VMCRJCT	001	040
VMCSTAT	001	000
VMCSVMWT	001	02F
VMCUSE	008	020
VMCUSER	008	008
VMCVADA	004	010
VMCVADB	004	018
VMCVMCF	001	004

VMCMHDR— VMCF COMMUNICATION MESSAGE HEADER

DSECT NAME: VMCMHDR

DESCRIPTIVE NAME: VMCF COMMUNICATION MESSAGE HEADER

FUNCTION: VMCMHDR PROVIDES INFORMATION TO IDENTIFY THE SPECIAL VMCF EXTERNAL INTERRUPTS.

LOCATED BY:

XMCMHDR	FIELD IN MODULE HCPRET
RECVMCHA	FIELD IN MODULE HCPREC
VMCVADA	FIELD IN VMCBLOCK
VMCPVADA	FIELD IN VMCPARM

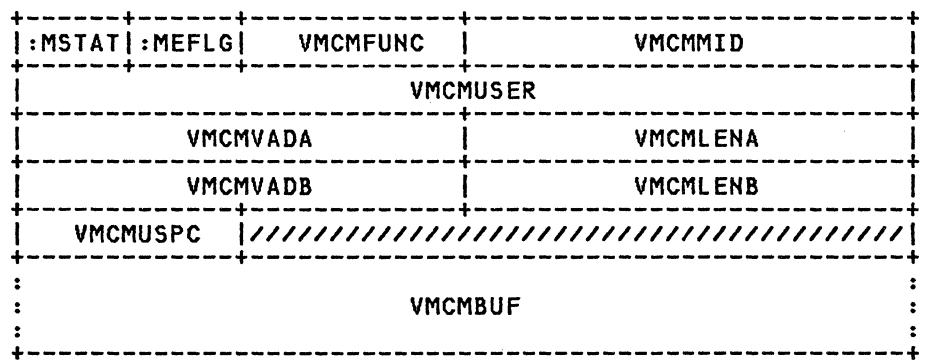
CREATED BY:

HCPREC (FOR CP VMCF COMMUNICATION)
A VIRTUAL MACHINE INVOKING VMCF

DELETED BY:

A VIRTUAL MACHINE

VMCMHDR - VMCF COMMUNICATION MESSAGE HEADER



disp	name	length	description
000	VMCMSTAT	001	MESSAGE STATUS BYTE

BIITS DEFINED IN VMCMSTAT (AT HEX DISPLACEMENT: 0)

80	VMCMRESP	FINAL RESPONSE INTERRUPT
40	VMCMRJCT	MESSAGE REJECTED
20	VMCMPRTY	PRIORITY MESSAGE

001	VMCMEFLG	001	DATA TRANSFER RETURN CODE

CODES DEFINED IN VMCMEFLG (AT HEX DISPLACEMENT: 1)

01	VMC01	INVALID VIRTUAL ADDRESS
02	VMC02	INVALID SUB-FUNCTION CODE
03	VMC03	PROTOCOL VIOLATION
04	VMC04	USER NOT AUTHORIZED (SOURCE)
05	VMC05	USER NOT AVAILABLE
06	VMC06	PROTECTION VIOLATION
07	VMC07	SENDX DATA TOO LARGE
08	VMC08	DUPLICATE MESSAGE
09	VMC09	TARGET VM QUIESCING
0A	VMC10	MESSAGE LIMIT EXCEEDED
0B	VMC11	CANCEL - REPLY CANCELLED
0C	VMC12	MESSAGE NOT FOUND
0D	VMC13	SYNCHRONIZATION ERROR

```
         0E     VMC14        CANCEL - TOO LATE
         0F     VMC15        PAGING I/O ERROR
         10     VMC16        INCORRECT LENGTH
         11     VMC17        DESTRUCTIVE OVERLAP
         12     VMC18        USER NOT AUTHORIZED PRIORITY
         13     VMC19        DATA TRANSFER ERROR
         14     VMC20        CANCEL - BUSY

002   VMCMFUNC    002        SUB-FUNCTION CODE (ORIGINAL REQ)

         CODES DEFINED IN VMCMFUNC (AT HEX DISPLACEMENT: 2)

         02     VMCMSEND     SEND
         03     VMCMSENR     SEND/RECV
         04     VMCMSENX     SENDX
         0A     VMCMIDEN     IDENTIFY

004   VMCMMID     004        MESSAGE IDENTIFIER
008   VMCMUSER    008        SOURCE / SINK USERID (VMUSER)
010   VMCMVADA    004        VIRTUAL BUFFER ADDRESS
014   VMCMLENA    004        MESSAGE LENGTH
018   VMCMVADB    004        VIRTUAL REPLY BUFFER ADDRESS
01C   VMCMLENB    004        REPLY BUFFER LENGTH
020   VMCMUSE     008        USER SUPPLIED DOUBLE-WORD
020   VMCMUSPC    002        USER SUPPLIED PROTOCOL
022               XL6        REST OF USER SUPPLIED DOUBLE-WORD
028   VMCMBUF     001        START OF VARIABLE LENGTH DATA

                    EQUATES

         28     VMCMLEN      LENGTH OF VMCMHDR (BYTES)


                    MORE EQUATES

        032     VMCSMAX      MAXIMUM ACTIVE MESSAGE LIMIT
        001     VMCXCODE     VMCF EXTERNAL INTERRUPT CODE
        001     VMCXMASK     VMCF CR0 EXTERNAL INTERRUPT MASK
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VMCMBUF	001	028	VMCSMAX	001	032	VMC19	001	013
VMCMEFLG	001	001	VMCXCODE	001	001	VMC20	001	014
VMCMFUNC	002	002	VMCXMASK	001	001			
VMCMHDR	001	000	VMC01	001	001			
VMCMIDEN	001	00A	VMC02	001	002			
VMCMLEN	001	028	VMC03	001	003			
VMCMLENA	004	014	VMC04	001	004			
VMCMLENB	004	01C	VMC05	001	005			
VMCMMID	004	004	VMC06	001	006			
VMCMPRTY	001	020	VMC07	001	007			
VMCMRESP	001	080	VMC08	001	008			
VMCMRJCT	001	040	VMC09	001	009			
VMCMSEND	001	002	VMC10	001	00A			
VMCMSENR	001	003	VMC11	001	00B			
VMCMSENX	001	004	VMC12	001	00C			
VMCMSTAT	001	000	VMC13	001	00D			
VMCMUSE	008	020	VMC14	001	00E			
VMCMUSER	008	008	VMC15	001	00F			
VMCMUSPC	002	020	VMC16	001	010			
VMCMVADA	004	010	VMC17	001	011			
VMCMVADB	004	018	VMC18	001	012			

VMCPARM— VMCF COMMUNICATIONS PARAMETER LIST

DSECT NAME: VMCPARM

DESCRIPTIVE NAME: VMCF COMMUNICATIONS PARAMETER LIST

FUNCTION: VMCPARM CONTAINS THE USER-SUPPLIED PARAMETERS WHEN A VMCF SUBFUNCTION IS EXECUTED.

LOCATED BY:

RECVMCPA FIELD IN MODULE HCPREC
XMCPARM FIELD IN MODULE HCPRET
RX REGISTER OF A DIAGNOSE X'68' INSTRUCTION

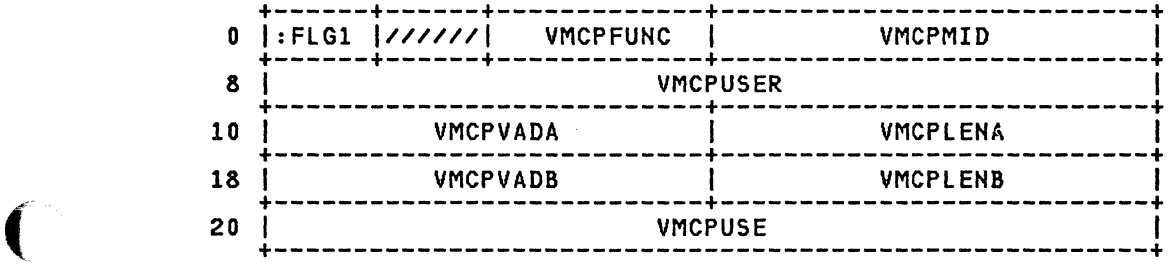
CREATED BY:

HCPREC FOR VMCF
A VIRTUAL MACHINE (FOR VMCF)

DELETED BY:

A VIRTUAL MACHINE (FOR VMCF)

VMCPARM - VMCF COMMUNICATIONS PARAMETER LIST



REDEFINITION - REDEFINITION OF VMCPMID

disp	name	length	description
000	VMCPFLG1	001	VMCPARM FLAG BYTE
	BITS DEFINED IN VMCPFLG1 (AT HEX DISPLACEMENT: 0)		
	80 VMCPAUTS		AUTHORIZE SPECIFIC REQUEST
	40 VMCPPRTY		PRIORITY MESSAGE
	20 VMCPSMSG		RECEIVING SPECIAL MESSAGES
001		1X	RESERVED FOR FUTURE IBM USE
002	VMCPFUNC	002	SUB - FUNCTION CODE
	CODES DEFINED IN VMCPFUNC (AT HEX DISPLACEMENT: 2)		
	00 VMCPAUTH		AUTHORIZE
	01 VMCPUAUT		UN-AUTHORIZE
	02 VMCPSEND		SEND
	03 VMCPSENR		SEND/RECV
	04 VMCPSENX		SENDX
	05 VMCPRECV		RECEIVE
	06 VMCPCANC		CANCEL
	07 VMCPREPL		REPLY

	08	VMCPQUIE	QUIESCE
	09	VMCPRESM	RESUME
	0A	VMCPIDEN	IDENTIFY
	0B	VMCPRJCT	REJECT
004	VMCPMID	004	MESSAGE IDENTIFIER
008	VMCPUSER	008	TARGET USERID
010	VMCPVADA	004	VADDR OF MESSAGE BUFFER
014	VMCPLENA	004	LENGTH OF MESSAGE
018	VMCPVADB	004	VADDR OF REPLY BUFFER (SEND/RECV ONLY)
01C	VMCPLENB	004	LENGTH OF REPLY BUFFER (SEND/RECV ONLY)
020	VMCPUSE	008	USER SUPPLIED DOUBLE-WORD

EQUATES

28	VMCPLEN	LENGTH OF VMCPARM (BYTES)

REDEFINITION - REDEFINITION OF VMCPMID

004	VMCPITYP	004	RETRIEVE ACCOUNTING OR EREP RECDS (IDENTIFY ONLY)

CROSS REFERENCE

Name	Len	Val/Disp
VMCPARM	001	000
VMCPAUTH	001	000
VMCPAUTS	001	080
VMCPCANC	001	006
VMCPFLG1	001	000
VMCPFUNC	002	002
VMCPIDEN	001	00A
VMCPITYP	004	004
VMCPLEN	001	028
VMCPLENA	004	014
VMCPLENB	004	01C
VMCPMID	004	004
VMCPPRTY	001	040
VMCPQUIE	001	008
VMCPRECV	001	005
VMCPREPL	001	007
VMCPRESM	001	009
VMCPRJCT	001	00B
VMCPSEND	001	002
VMCPSENR	001	003
VMCPSENX	001	004
VMCPSMSG	001	020
VMCPUAUT	001	001
VMCPUSE	008	020
VMCPUSER	008	008
VMCPVADA	004	010
VMCPVADB	004	018

HCPVMDBK— VIRTUAL MACHINE DEFINITION BLOCK

DSECT NAME: VMDBK

DESCRIPTIVE NAME: VIRTUAL MACHINE DEFINITION BLOCK

FUNCTION: HCPVMDBK IS USED AS THE PRIMARY CONTROL BLOCK FOR ALMOST ALL ACTIVITIES RELATED TO A SINGLE VIRTUAL MACHINE. THE BLOCK CONTAINS THE FOLLOWING INFORMATION: THE DISPATCH AND PRIORITY LEVEL OF THE VIRTUAL MACHINE, THE VIRTUAL MACHINE'S PROCESSOR REGISTERS, PREFERRED VIRTUAL MACHINE OPTION VALUES, AND OTHER VALUES SIGNIFICANT TO VIRTUAL MACHINE OPERATIONS.

LOCATED BY:

VMDQFPNT	DOUBLY CHAINED	(DISPATCH LIST)
VMDQBPNT	DOUBLY CHAINED	(DISPATCH LIST)
COMUSER	FIELD OF HCPCOMBK	(ADDRESS OF DESTINATION USER)
MCVVMDBK	FIELD OF HCPMCVBK	(USER ON FAILING PROCESSOR)
MCVFSAUS	FIELD OF HCPMCVBK	(USER OWNING BAD FRAME)
MWRSNDR	FIELD OF HCPMWRBK	(SENDER'S)
MWRRCVR	FIELD OF HCPMWRBK	(RECEIVER'S)
PCSIOCPW	FIELD OF HCPPCSBK	(IOCP WRITE REQUEST)
PCSIOCPR	FIELD OF HCPPCSBK	(IOCP READ REQUEST)
PFXSYSVM	FIELD OF HCPPFXPG	(SYSTEM)
PFXSYSOP	FIELD OF HCPPFXPG	(SYSTEM OPERATOR)
PFXUDEDM	FIELD OF HCPPFXPG	(DEDICATED TO THIS CPU)
PGMVM	FIELD OF HCPPGMBK	(PGMBK OWNER)
SRMELIST	FIELD OF HCPSRMBK	(ELIGIBLE LIST)
SRMMLIST	FIELD OF HCPSRMBK	(DORMANT LIST)
SYSVMVR	FIELD OF HCPSYSCM	(V=R USER LOGGED ON)
SYSVMGCB	FIELD OF HCPSYSCM	(SYSTEM)
SYSVRLOC	FIELD OF HCPSYSCM	(V=R USER LOGGED OFF)
TRQUSER	FIELD OF HCPTRQBK	(USER'S)
VCTXOTHR	FIELD OF HCPVCTCA	(Y-SIDE USER)
VCTYOTHR	FIELD OF HCPVCTCA	(X-SIDE USER)
VDEVLOWN	FIELD OF HCPVDEV	(LOCK OWNER)
VDEVUSER	FIELD OF HCPVDEV	(OWNER)
VMDBUFVM	FIELD OF HCPVMDBK	(CONSOLE FUNCTION BUF OUTPUT)

BLK HCPBLK (CP) VM/XA - SYSTEM PRODUCT 5664-308

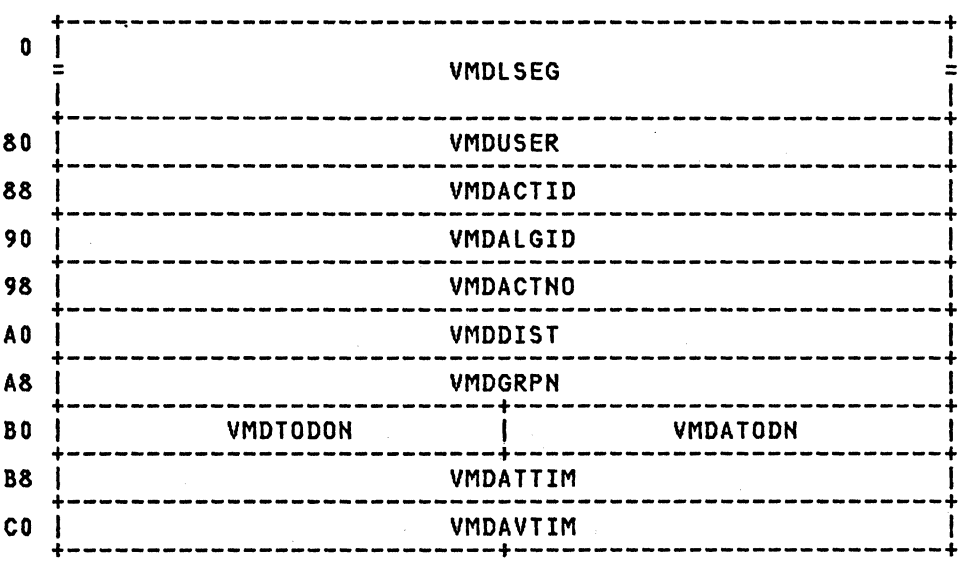
CREATED BY:

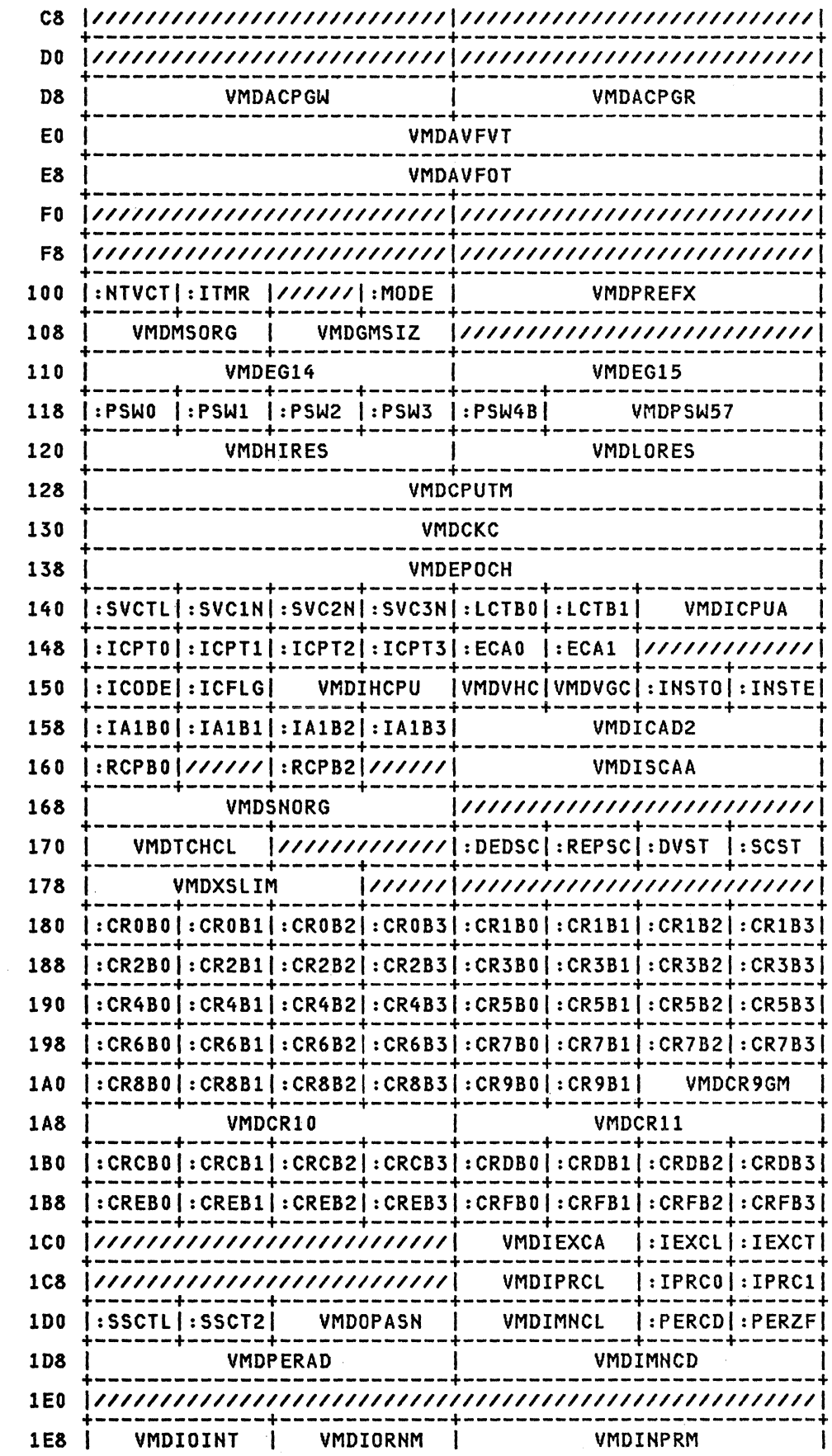
HCPBVM (WHEN A USER LOGS ON)

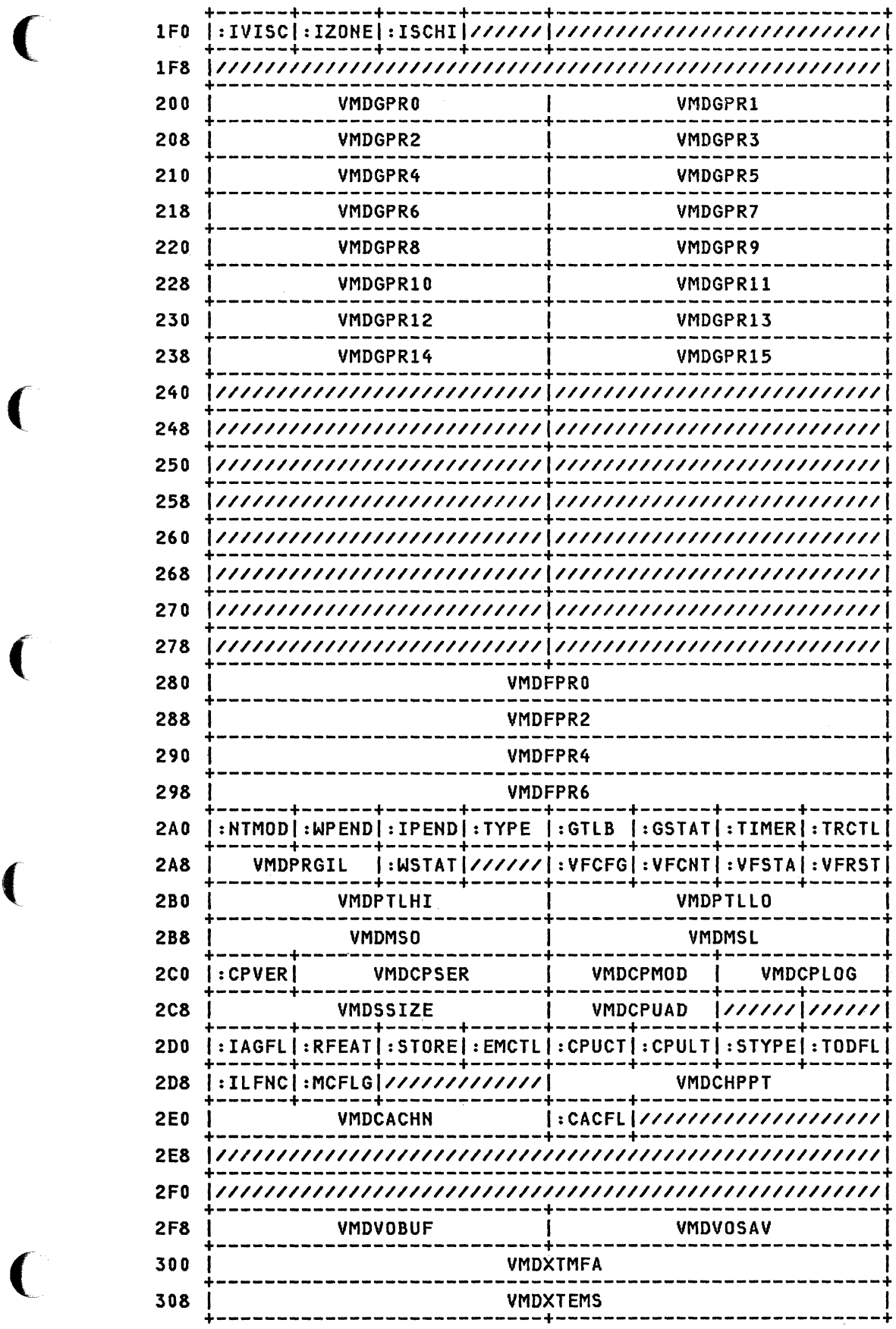
DELETED BY:

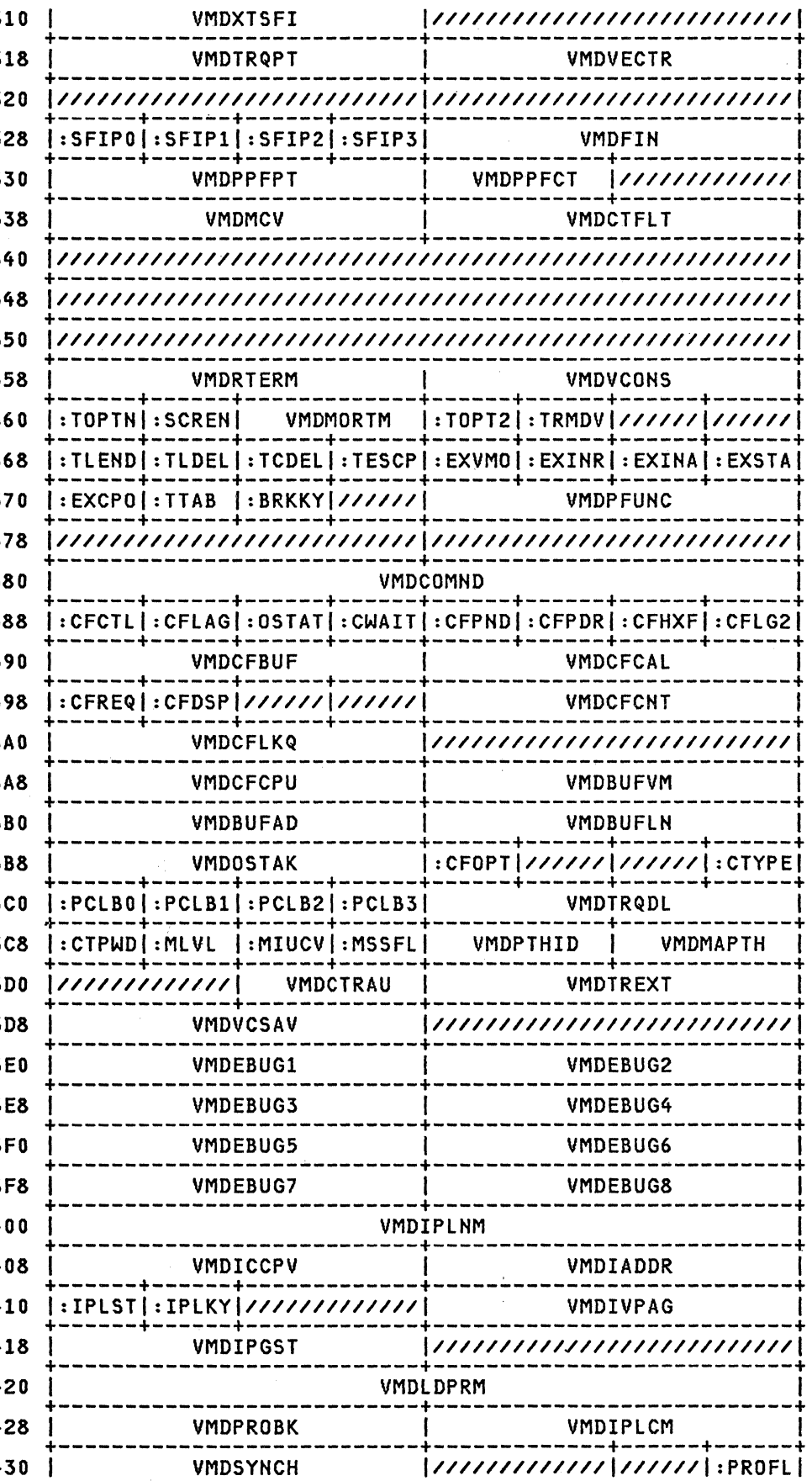
HCPUSO (WHEN A USER LOGS OFF, OR IS FORCED OFF)

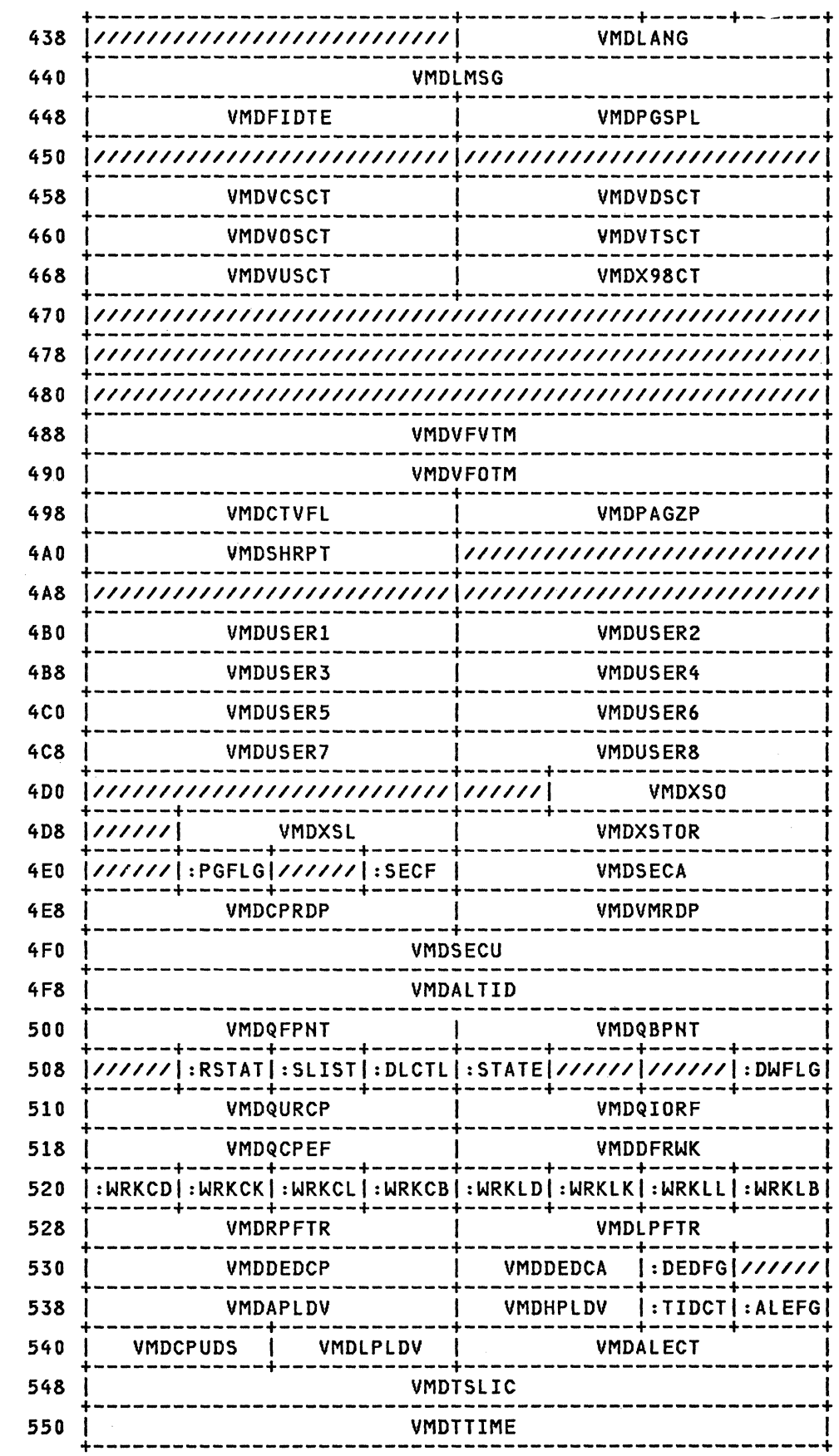
VMDBK - VIRTUAL MACHINE DEFINITION BLOCK

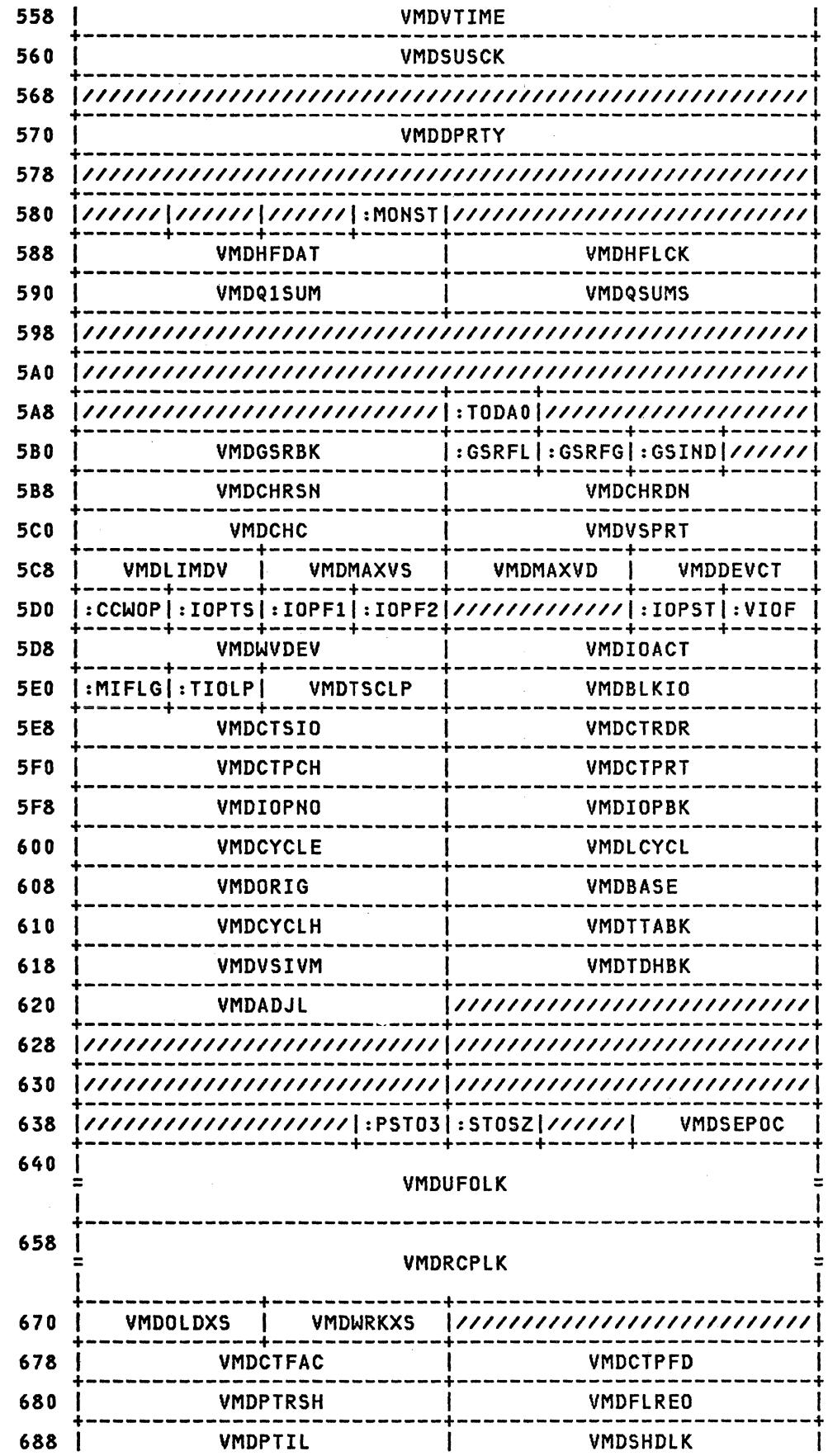


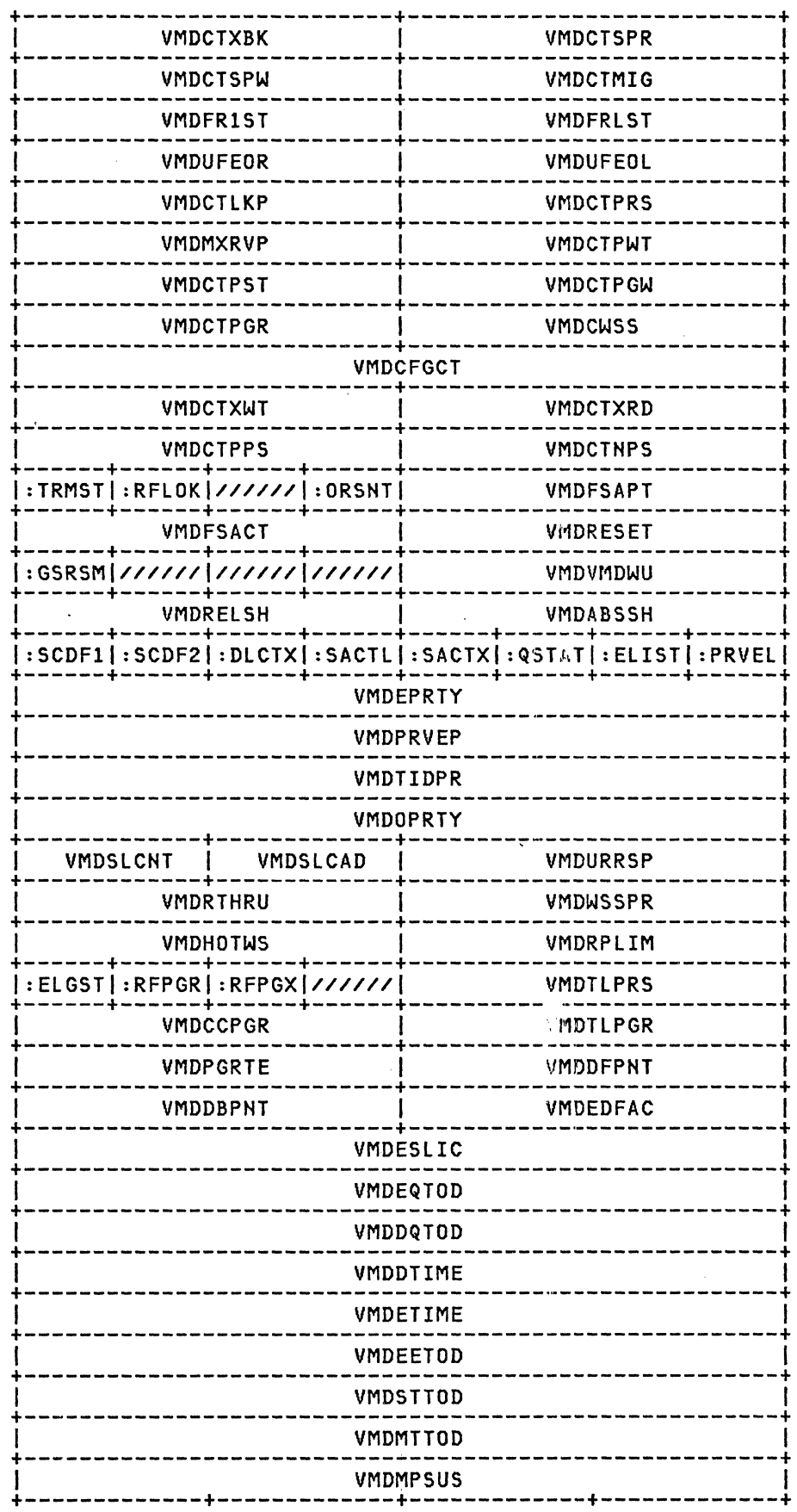


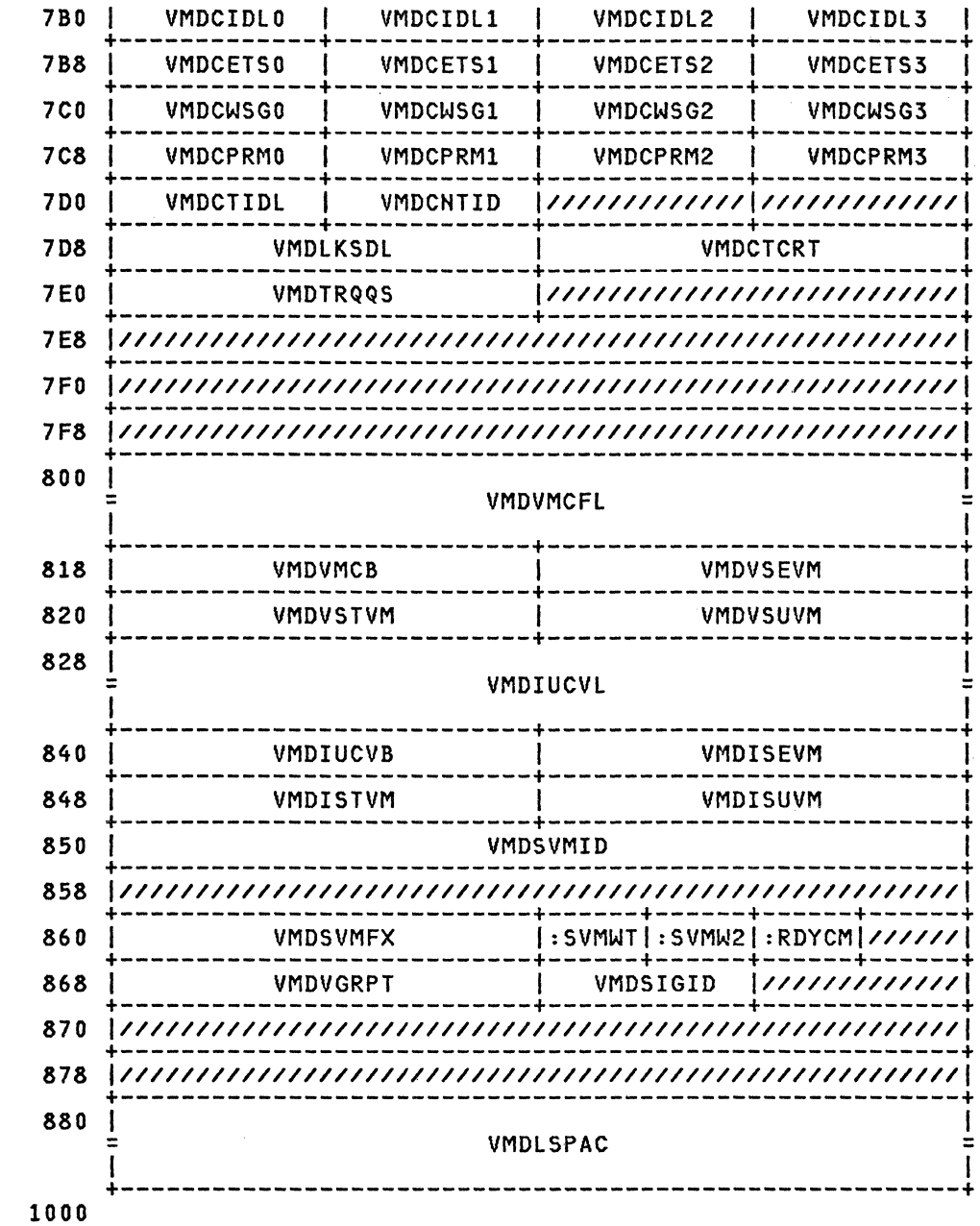

1F0 :IVISC :IZONE :ISCHI
1F8
200 VMDGPR0 VMDGPR1
208 VMDGPR2 VMDGPR3
210 VMDGPR4 VMDGPR5
218 VMDGPR6 VMDGPR7
220 VMDGPR8 VMDGPR9
228 VMDGPR10 VMDGPR11
230 VMDGPR12 VMDGPR13
238 VMDGPR14 VMDGPR15
240
248
250
258
260
268
270
278
280 VMDFPR0
288 VMDFPR2
290 VMDFPR4
298 VMDFPR6
2A0 :NTMOD :WPEND :IPEND :TYPE :GTLB :GSTAT :TIMER :TRCTL
2A8 VMDPRGIL :WSTAT :VFCFG :VFCNT :VFSTA :VFRST
2B0 VMDPTLHI VMDPTLLO
2B8 VMDMSO VMDMSL
2C0 :CPVER VMDCPSER VMDCPMOD VMDCPLOG
2C8 VMDSSIZE VMDCPUAD
2D0 :IAGFL :RFEAT :STORE :EMCTL :CPUCT :CPULT :STYPE :TODFL
2D8 :ILFNC :MCFLG VMDCHPPT
2E0 VMDCACHN :CACFL
2E8
2F0
2F8 VMDVOBUF VMDVOSAV
300 VMDXTMFA
308 VMDXTEMS


310 VMDXTSFI
318 VMDTRQPT VMDVECTR
320
328 :SFIP0 :SFIP1 :SFIP2 :SFIP3 VMDFIN
330 VMDPPFPT VMDPPFCT
338 VMDMCV VMDCTFLT
340
348
350
358 VMDRTERM VMDVCONS
360 :TOPTN :SCREN VMDMORTM :TOPT2 :TRMDV
368 :TLEND :TLDEL :TCDEL :TESCP :EXVMO :EXINR :EXINA :EXSTA
370 :EXCPO :TTAB :BRKKY VMDPFUNC
378
380 VMDCOMND
388 :CFCTL :CFLAG :OSTAT :CWAIT :CFPND :CFPDR :CFHXF :CFLG2
390 VMDCFBUF VMDCFCAL
398 :CFREQ :CFDSP VMDCFCNT
3A0 VMDCFLKQ
3A8 VMDCFCPU VMDBUFVM
3B0 VMDBUFAD VMDBUFLN
3B8 VMDOSTAK :CFOPT :CTYPE
3C0 :PCLB0 :PCLB1 :PCLB2 :PCLB3 VMDTRQDL
3C8 :CTPWD :MLVL :MIUCV :MSSFL VMDPTHID VMDMAPTH
3D0 VMDCTRAU VMDTREXT
3D8 VMDVCSAV
3E0 VMDEBUG1 VMDEBUG2
3E8 VMDEBUG3 VMDEBUG4
3F0 VMDEBUG5 VMDEBUG6
3F8 VMDEBUG7 VMDEBUG8
400 VMDIPLNM
408 VMDICCPV VMDIADDR
410 :IPLST :IPLKY VMDIVPAG
418 VMDIPGST
420 VMDLDPRM
428 VMDPROBK VMDIPLCM
430 VMDSYNCH :PROFL

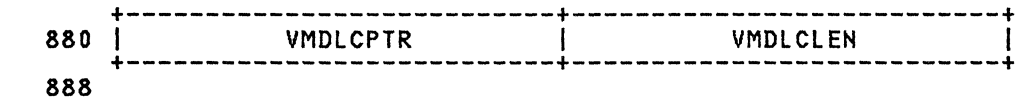

438 VMDLANG
440 VMDLMSG
448 VMDFIDTE VMDPGSPL
450
458 VMDVCSCT VMDVDSCT
460 VMDVOSCT VMDVTSCT
468 VMDVUSCT VMDX98CT
470
478
480
488 VMDVFVTM
490 VMDVFOTM
498 VMDCTVFL VMDPAGZP
4A0 VMDSHRPT
4A8
4B0 VMDUSER1 VMDUSER2
4B8 VMDUSER3 VMDUSER4
4C0 VMDUSER5 VMDUSER6
4C8 VMDUSER7 VMDUSER8
4D0 VMDXSO
4D8 VMDXSL VMDXSTOR
4E0 :PGFLG :SECF VMDSECA
4E8 VMDCPRDP VMDVMRDP
4F0 VMDSECU
4F8 VMDALTID
500 VMDQFPNT VMDQBPNT
508 :RSTAT :SLIST :DLCTL :STATE :DWFLG
510 VMDQURCP VMDQIORF
518 VMDQCPEF VMDDFRWK
520 :WRKCD :WRKCK :WRKCL :WRKCB :WRKLD :WRKLK :WRKLL :WRKLB
528 VMDRPFTR VMDLPFTR
530 VMDDEDCP VMDDEDCA :DEDFG
538 VMDAPLDV VMDHPLDV :TIDCT :ALEFG
540 VMDCPUDS VMDLPLDV VMDALECT
548 VMDTSLIC
550 VMDTTIME


558
VMDVTIME
560
VMDSUSCK
568
570
VMDDPRTY
578
580
:MONST
588
VMDHFDAT
VMDHFLCK
590
VMDQ1SUM
VMDQSUMS
598
5A0
5A8
:TODA0
5B0
VMDGSRBK
:GSRFL
:GSRFG
:GSIND
5B8
VMDCHRSN
VMDCHRDN
5C0
VMDCHC
VMDVSPRT
5C8
VMDLIMDV
VMDMAXVS
VMDMAXVD
VMDDEVCT
5D0
:CCWOP
:IOPTS
:IOPF1
:IOPF2
:IOPST
:VIOF
5D8
VMDWVDEV
VMDIOACT
5E0
:MIFLG
:TIOLP
VMDTSCLP
VMDBLKIO
5E8
VMDCTSIO
VMDCTRDR
5F0
VMDCTPCH
VMDCTPRT
5F8
VMDIOPNO
VMDIOPBK
600
VMDCYCLE
VMDLCYCL
608
VMDORIG
VMDBASE
610
VMDCYCLH
VMDTTABK
618
VMDVSIVM
VMDTDHBK
620
VMDADJL
628
630
638
:PST03
:STOSZ
VMDSEPOC
640
VMDUFOLK
658
VMDRCPLK
670
VMDOLDXS
VMDWRKXS
678
VMDCTFAC
VMDCTPFD
680
VMDPTRSH
VMDFLREO
688
VMDPTIL
VMDSHDLK

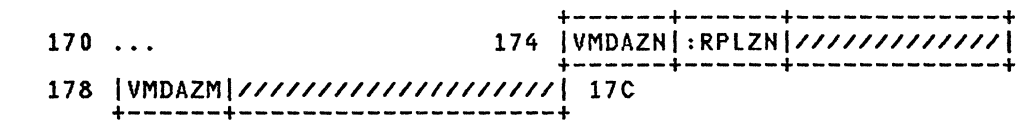

690 VMDCTXBK VMDCTSPR
698 VMDCTSPW VMDCTMIG
6A0 VMDFR1ST VMDFRLST
6A8 VMDUFEOR VMDUFEOL
6B0 VMDCTLKP VMDCTPRS
6B8 VMDMXRVP VMDCTPWT
6C0 VMDCTPST VMDCTPGW
6C8 VMDCTPGR VMDCWSS
6D0 VMDCFGCT
6D8 VMDCTXWT VMDCTXRD
6E0 VMDCTPPS VMDCTNPS
6E8 :TRMST :RFLOK ////// :ORSNT VMDFSAPT
6F0 VMDFSACT VMDRESET
6F8 :GSRSM ////// ////// ////// VMDVMDWU
700 VMDRELSH VMDABSSH
708 :SCDF1 :SCDF2 :DLCTX :SACTL :SACTX :QSTAT :ELIST :PRVEL
710 VMDEPRTY
718 VMDPRVEP
720 VMDTIDPR
728 VMDOPRTY
730 VMDSLCNT VMDSLCAD VMDURRSP
738 VMDRTHRU VMDWSSPR
740 VMDHOTWS VMDRPLIM
748 :ELGST :RFPGR :RFPGX ////// VMDTLPRS
750 VMDCCPGR VMDTLPGR
758 VMDPGRTE VMDDFPNT
760 VMDDBPNT VMDEDFAC
768 VMDESLIC
770 VMDEQTOD
778 VMDDQTOD
780 VMDDTIME
788 VMDETIME
790 VMDEETOD
798 VMDSTTOD
7A0 VMDMTTOD
7A8 VMDMPSUS



REDEFINITION - FREE STORAGE HEADER PROTOTYPE



REDEFINITION - I/O PASSTHROUGH CONTROL LEVEL 2



REDEFINITION - FOR V/SIE VMDBLOK ONLY

```
    +-------------------------+-------------------------+
200 |         VMDWRCPV        |         VMDWSHAD        |
    +-------------------------+-------------------------+
208 |         VMDWSDAD        |         VMDWSHC1        |
    +-------------------------+-------------------------+
210 |         VMDGPR4         |         VMDGPR5         |
    +------+------+------+------+------+------+---------+
218 |:WMODC|:WNTKY|:WFLAG|:WNTC3|:WNTVC|//////|  VMDWMSOR  |
    +------+------+------+------+------+------+---------+
220
```

REDEFINITION - FOR V/SIE VMDBLOK ONLY

```
    +-----------------------------------------------------+
280 |                      VMDWUTOD                       |
    +-----------------------------------------------------+
288 |                      VMDWRGVT                       |
    +-----------------------------------------------------+
290 |                      VMDWTIME                       |
    +-----------------------------------------------------+
298 |                      VMDWG145                       |
    +-----------------------------------------------------+
2A0
```

disp	name	length	description
000	VMDLSEG	004	HOST SEGMENT TABLE FOR USER STORAGE THIS IS THE HOST SEGMENT TABLE WHICH IS USED TO DESCRIBE GUEST REAL STORAGE, AND IS DESCRIBED BY THE 'HCPSEGTB' DSECT. IT MUST START ON A 4K PAGE BOUNDARY. THIS AREA IS USED WHENEVER GUEST STORAGE IS DEFINED AS 31 MEGABYTES OR LESS. IF GUEST STORAGE IS DEFINED AS MORE THAN 31 MEGABYTES, A SEPARATE PAGE (OR PAGES) IS ALLOCATED TO CONTAIN THE SEGMENT TABLE. FOR A GUEST SHARED-STORAGE MULTIPROCESSOR, ONLY THE BASE CPU STORAGE IS USED, AND DEFINED CPU'S REFER TO THE BASE CPU STORAGE.

EQUATES

80	VMDLSGLN	HOST SEGMENT TABLE LENGTH

080	VMDUSER	008	USER LOGON IDENTIFICATION
088	VMDACTID	008	ACCOUNTING USER IDENTIFICATION. THIS FIELD CONTAINS THE USERID TO BE PUT IN THE ACCOUNTING RECORDS GENERATED. IT IS GENERALLY THE SAME AS THE USERID, WHICH IS HOW IT IS SET WHEN A USER LOGS ON. IT IS COPIED WHEN A LOCAL VMDBK IS BUILT. IT CAN BE CHANGED BY AN AUTHORIZED USER ISSUING A DIAGNOSE X'4C'. THIS IS INTENDED FOR USE BY THE CMS BATCH MACHINE.
090	VMDALGID	008	USERID CAUSING THIS USER'S LOGON FOR NORMAL USERS, THIS FIELD CONTAINS THE USER LOGON IDENTIFICATION. FOR USERS AUTOLOGGED BY THE SYSTEM AT IPL TIME, THIS FIELD CONTAINS 'SYSTEM'. FOR USERS AUTOLOGGED BY OTHER USERS, THIS FIELD CONTAINS THE USERID ISSUING THE AUTOLOG. FOR VMDBLOKS CREATED AS ADJUNCT VIRTUAL MACHINES, THIS FIELD CONTAINS THE USER IDENTIFICATION OF

```
                        THE BASE VMDBLOK.
098   VMDACTNO   008    USER ACCOUNTING NUMBER
0A0   VMDDIST    008    USER DISTRIBUTION CODE.
                        THIS IS THE DEFAULT DISTRIBTUION CODE
                        OBTAINED FROM THE DIRECTORY FOR THIS USER.
                        IT IS USED IN SPOOL FILE COMMANDS TO ASSIGN
                        THE DEFAULT DISTRIBUTION CODE TO THE SPOOL
                        FILE.
0A8   VMDGRPN    008    RACF ACI GROUP NAME
0B0   VMDTODON   004    SESSION LOGON TOD, BITS 0-31
0B4   VMDATODN   004    VALUE OF VMDTODON AT LAST 'ACNT'
                        OR AT LOGON, WHICHEVER IS LATER.
                        THE FOLLOWING FIELDS CONTAIN THE VALUES OF THE
                        INDICATED ACCOUNTING FIELDS AT THE LAST 'ACNT'
                        COMMAND OR AT LOGON, WHICHEVER IS LATER.
                        SUBSEQUENT ACCOUNTING RECORDS ARE GENERATED USING
                        THE DIFFERENCE BETWEEN THE CURRENT VALUE AND THE
                        'LAST' VALUE.  THIS ALLOWS ACCOUNTING RECORDS TO
                        BE GENERATED DURING A SESSION WHILE ALSO MAINTAINING
                        SESSION TOTALS.
                        NOTE: THE ASSEMBLER CONSTRUCT 'FL8S12' IS USED TO
                        GENERATE A FIXED-POINT NUMBER WHICH REPRESENTS A
                        TIME VALUE (IN MICROSECONDS) IN TOD CLOCK FORMAT
                        OR CPU TIMER FORMAT.  USE OF 'FL8S12E6' IS USED
                        TO GENERATE A TIME VALUE IN SECONDS (RATHER THAN
                        MICROSECONDS).
0B8   VMDATTIM   008    VALUE OF VMDTTIME AT LAST 'ACNT'
0C0   VMDAVTIM   008    VALUE OF VMDVTIME AT LAST 'ACNT'
0C8               F     RESERVED
0CC               F     RESERVED
0D0               F     RESERVED
0D4               F     RESERVED
0D8   VMDACPGW   004    VALUE OF VMDCTPGW AT LAST 'ACNT'
0DC   VMDACPGR   004    VALUE OF VMDCTPGR AT LAST 'ACNT'
0E0   VMDAVFVT   008    VALUE OF VMDVFVTM AT LAST 'ACNT'
0E8   VMDAVFOT   008    VALUE OF VMDVFOTM AT LAST 'ACNT'
0F0               F     RESERVED FOR FUTURE IBM USE
0F4               F     RESERVED FOR FUTURE IBM USE
0F8               F     RESERVED FOR FUTURE IBM USE
0FC               F     RESERVED FOR FUTURE IBM USE
100   VMDSDSC    256    GUEST MACHINE STATE DESCRIPTOR
                        THIS AREA DESCRIBES THE GUEST MACHINE TO THE
                        EMULATION HARDWARE, AND IS ALSO USED BY SOFTWARE
                        TO CONTAIN GUEST MACHINE STATUS.
                        WARNING: THIS AREA IS DEFINED BY PROCESSOR ARCHITECTURE.
                        DO NOT MODIFY THIS AREA EXCEPT TO INSTALL
                        ARCHITECTED CHANGES.
100   VMDINTWD   004    SYMBOL ON WORD BOUNDARY FOR
                        ..COMPARE-AND-SWAP OPERATIONS.
100   VMDNTVCT   001    EMULATION INTERVENTION CONTROL
                        CHANGES TO THIS FIELD ARE SERIALIZED BY USING
                        COMPARE-AND-SWAP INSTRUCTIONS.
                        (COMPARE-DOUBLE-AND-SWAP NOT ALLOWED)

        BITS DEFINED FOR VMDNTVCT BY HCPSIEBK SIENTVCT

101   VMDITMR    001    INTERVAL TIMER INTERRUPT STATUS

        BITS DEFINED IN VMDITMR  (AT HEX DISPLACEMENT: 101)

        80    VMDITMRI  INTERVAL TIMER INTERRUPT PENDING.
                        THIS BIT IS SET WHEN THE INTERVAL TIMER
                        IS DECREMENTED FROM A POSITIVE OR ZERO
                        NUMBER TO A NEGATIVE NUMBER.

102               X     RESERVED FOR IBM HARDWARE USE
103   VMDMODE    001    DESCRIBES THE MACHINE MODE OF
                        THE GUEST.

        BITS DEFINED IN VMDMODE  (AT HEX DISPLACEMENT: 103)

        40    VMDVCCIN  VECTOR CHANGE CONTROL :
                        INTERCEPTION MODE.
```

```
         20     VMDXA        THIS BIT SIGNIFIES THAT THE
                             GUEST IS A SYSTEM/370 XA TYPE MACHINE.
         10     VMD370       THIS BIT SIGNIFIES THAT THE
                             GUEST IS A 370 TYPE MACHINE.
         08     VMDVR        THIS BIT SIGNIFIES THAT THE
                             GUEST IS A V=R GUEST.  THE STORAGE FOR THE
                             V=R GUEST IS MAPPED FROM THE HOST REAL STORAGE
                             V=R REGION AS DEFINED AT SYSTEM GENERATION.
         04     VMDITMOF     THIS BIT SIGNIFIES THAT THE
                             GUEST INTERVAL TIMER IS DISABLED.  (APPLIES ONLY
                             TO SYSTEM/370 MODE GUEST MACINES).  THE SET TIMER
                             COMMAND CONTROLS THE SETTING OF THIS BIT.

104    VMDPREFX    004       GUEST PREFIX REGISTER VALUE
108    VMDMSORG    002       GUEST REAL MAIN STORAGE ORIGIN
                             (ALWAYS ZERO)
10A    VMDGMSIZ    002       GUEST REAL MAIN STORAGE EXTENT
                             THIS FIELD DEFINES THE GUEST STORAGE SIZE TO THE
                             EMULATION HARDWARE.  THE FIELD CONTAINS BITS 1-15 OF
                             THE HIGHEST ADDRESS WHICH MAY BE USED BY THE GUEST.
                             EMULATION CONSIDERS STORAGE TO BE IN 64K INCREMENTS.
                             THIS IS THE NUMBER OF 64K BLOCKS LESS ONE OF
                             GUEST STORAGE.
10C                F        RESERVED FOR IBM HARDWARE USE
110    VMDEG145    008       GUEST GPR 14-15 FOR SIE USE ONLY
110    VMDEG14     004       GUEST GPR 14 FOR SIE USE ONLY
114    VMDEG15     004       GUEST GPR 15 FOR SIE USE ONLY
118    VMDPSW      008       GUEST PSW.
118    VMDPSW0F    004       GUEST PSW BITS 0-31
118    VMDPSW0     001       GUEST PSW BYTE ZERO, SYST. MASK

         BITS DEFINED FOR VMDPSW0 BY HCPEQUAT PSW0B

119    VMDPSW1     001       GUEST PSW BYTE ONE, KEY/EMWP

         BITS DEFINED FOR VMDPSW1 BY HCPEQUAT PSW1

11A    VMDPSW2H    002       GUEST BC PSW BYTE 2,3 IRPT CODE
11A    VMDPSW2     001       GUEST EC PSW BYTE TWO, EC MODE
                             SECONDARY/COND. CODE/PGM MASK

         BITS DEFINED FOR VMDPSW2 BY HCPEQUAT PSW2

11B    VMDPSW3     001       GUEST EC PSW BYTE THREE,
                             OR BC MODE INTERRUPT CODE 8-15
11C    VMDPSW4F    004       GUEST EC PSW INSTRUCTION ADDRESS
                             (S/370 BITS 32-39 ZERO)
11C    VMDPSW4     001       GUEST EC PSW BYTE FOUR, AMODE

         BITS DEFINED FOR VMDPSW4 BY HCPEQUAT PSW4

11C    VMDPSW4B    001       GUEST BC PSW BYTE FOUR,
                             ILC/CC/PROGRAM MASK

         BITS DEFINED FOR VMDPSW4B BY HCPEQUAT PSW4B

11D    VMDPSW57    003       GUEST PSW BYTE 5,6,7 BC INSTR.
                             ADDRESS (370 GUEST ONLY)
120    VMDHIRES    004       HI ORDER INTERVAL TIMER RESIDUE
                             COUNTER (USED BY SOFTWARE ONLY)
124    VMDLORES    004       LOW ORDER INTERVAL TIMER RESIDUE
                             COUNTER
                             THE INTERVAL TIMER RESIDUE COUNTER IS IN THE FORMAT
                             OF THE TOD CLOCK, AND CONTAINS GUEST CPU TIME
                             WHICH HAS NOT YET BEEN APPLIED TO THE GUEST INTERVAL
                             TIMER.  IT IS USED TO COLLECT SHORT INCREMENTS OF
                             CPU TIME UNTIL 3.333 MILLISECONDS HAS BEEN
                             ACCUMULATED, AT WHICH POINT THE GUEST INTERVAL TIMER
                             IS DECREMENTED AND THE RESIDUE COUNTER IS REDUCED
                             BY 3.333 MILLISECONDS.  SOFTWARE USES THE RESIDUE
                             COUNTER TO COLLECT ELAPSED TIME IN GUEST WAIT STATE
                             BEFORE APPLYING THE TIME TO THE INTERVAL TIMER.
128    VMDCPUT0    001       HIGH-ORDER BYTE OF CPU TIMER
```

BITS DEFINED IN VMDCPUT0 (AT HEX DISPLACEMENT: 128)

	80	VMDCPUTN	TIMER VALUE IS NEGATIVE
128	VMDCPUTM	008	GUEST CPU TIMER VALUE. THIS IS USUALLY MANAGED BY THE EMULATION FACILITY. CP UPDATES THIS VALUE FOR THE TIME A GUEST SPENDS IN A WAIT STATE.
130	VMDCKC	008	GUEST CLOCK COMPARATOR VALUE. THIS VALUE IS ESTABLISHED BY THE EMULATION HARDWARE WHEN THE GUEST EXECUTES A SCKC INSTRUCTION. CP USES THIS VALUE TO MAINTAIN GUEST TIMERS AND DETERMINE CLOCK COMPARATOR INTERRUPTS DURING SIMULATION.
138	VMDEPOCH	008	GUEST TIME-OF-DAY CLOCK EPOCH TO DEFINE DELTA BETWEEN HOST TOD CLOCK AND GUEST TOD CLOCK. EPOCH IS ADDED TO HOST TOD CLOCK VALUE TO OBTAIN GUEST TOD CLOCK VALUE.
140	VMDSVCTL	001	SVC INTERCEPTION CONTROLS

BITS DEFINED FOR VMDSVCTL BY HCPSIEBK SIESVCTL

141	VMDSVC1N	001	INTERCEPT SVC NUMBER FIRST ID
142	VMDSVC2N	001	INTERCEPT SVC NUMBER SECOND ID
143	VMDSVC3N	001	INTERCEPT SVC NUMBER THIRD ID
144	VMDLCTLS	002	LOAD CONTROL INTERCEPTION CTLS
144	VMDLCTB0	001	LCTL INTERCEPTION, CR0-CR7

BITS DEFINED FOR VMDLCTB0 BY HCPSIEBK SIELCTB0

145	VMDLCTB1	001	LCTL INTERCEPTION, CR8-CR15

BITS DEFINED FOR VMDLCTB1 BY HCPSIEBK SIELCTB1

146	VMDICPUA	002	VIRTUAL CPU ADDRESS FOR INTERPRETIVE EXECUTION (BITS 10-15); BITS 0-9 RESERVED FOR IBM HARDWARE USE
148	VMDICTLS	004	INTERCEPTION CONTROLS
148	VMDICPT0	001	INTERCEPTION CONTROLS, BYTE 0

BITS DEFINED FOR VMDICPT0 BY HCPSIEBK SIEICPT0

149	VMDICPT1	001	INTERCEPTION CONTROLS, BYTE 1

BITS DEFINED FOR VMDICPT1 BY HCPSIEBK SIEICPT1

14A	VMDICPT2	001	INTERCEPTION CONTROLS, BYTE 2

BITS DEFINED FOR VMDICPT2 BY HCPSIEBK SIEICPT2

14B	VMDICPT3	001	INTERCEPTION CONTROLS, BYTE 3

BITS DEFINED FOR VMDICPT3 BY HCPSIEBK SIEICPT3

14C	VMDECA	004	EXECUTION CONTROLS
14C	VMDECA0	001	EXECUTION CONTROLS, BYTE 0

BITS DEFINED FOR VMDECA0 BY HCPSIEBK SIEECA0

14D	VMDECA1	001	EXECUTION CONTROLS, BYTE 1

BITS DEFINED FOR VMDECA1 BY HCPSIEBK SIEECA1

14E		2X	RESERVED FOR IBM HARDWARE USE
150	VMDICODE	001	INTERCEPTION EVENT CODE. THIS FIELD DESCRIBES A GUEST CONDITION DETECTED BY THE EMULATION HARDWARE (USUALLY) WHICH REQUIRES SOFTWARE INTERVETION OR SIMULATION. IT IS ALSO USED BY SOFTWARE TO INDICATE THAT THERE

EXISTS A DESCRIPTION OF GUEST CONDITIONS BY SOFTWARE, IN VMDNTMOD, THAT REQUIRES SOFTWARE INTERVENTION FOR TRACING.

CODES DEFINED IN VMDICODE (AT HEX DISPLACEMENT: 150)

00	VMDENDOP	GUEST IS BETWEEN INSTRUCTIONS VMDENDOP IS USED BY SOFTWARE TO INDICATE THAT THE GUEST MACHINE IS BETWEEN INSTRUCTIONS, OR CURRENTLY EXECUTING IN EMULATION MODE.
24	VMDMISC	SOFTWARE EVENT, SEE VMDNTMOD SIEMISC IS USED BY SOFTWARE TO INDICATE THAT A SOFTWARE EVENT HAS OCCURRED WHICH IS NOT ONE OF THE OTHER CODES. THE CONDITION IS FURTHER DESCRIBED IN THE 'VMDNTMOD' FIELD.

151	VMDICFLG	001	INSTRUCTION INTERCEPT MODIFIER

BITS DEFINED FOR VMDICFLG BY HCPSIEBK SIEICFLG

152	VMDIHCPU	002	LAST HOST CPU ADDRESS
154	VMDVCP	002	VECTOR CHANGE PRESERVATION AREA
154	VMDVHC	001	VECTOR HOST CHANGE BIT PRESERVATION
155	VMDVGC	001	VECTOR GUEST CHANGE BIT PRESERVATION
156	VMDIPA	002	INTERCEPTION PARAMETER A
156	VMDIPA0	001	BYTE 0 OF IPA FOR INSTR INTERCEPT FORMAT 2:
156	VMDINSTR	006	ENTIRE INSTRUCTION TEXT FOR INSTR INTERCEPT FORMAT 1:
156	VMDINST	002	INTERCEPTED INSTRUCTION BIT 0-15
156	VMDINST0	001	INTERCEPTED INSTRUCTION BITS 0-7
157	VMDINSTE	001	INTERCEPTED INSTR. BITS 8-15 WHICH IS OP CODE BITS 8-15, OR R1R2 FIELD OR LENGTH FIELD
158	VMDIPB	004	INTERCEPTION PARAMETER B
158	VMDICAD1	004	INTERCEPTED INSTRUCTION OPERAND EFFECTIVE ADDRESS (RS, RX)
158	VMDIA1H0	002	HALFWORD 0 OF OPERAND 1 ADDRESS
158	VMDIA1B0	001	BYTE 0 OF OPERAND 1 ADDRESS
159	VMDIA1B1	001	BYTE 1 OF OPERAND 1 ADDRESS
15A	VMDIA1H1	002	HALFWORD 1 OF OPERAND 1 ADDRESS
15A	VMDIA1B2	001	BYTE 2 OF OPERAND 1 ADDRESS
15B	VMDIA1B3	001	BYTE 3 OF OPERAND 1 ADDRESS

EQUATES

5B	VMDICARR	OPERAND ADDRESS BYTE 3 (R1R2 FOR RRE FORMAT INST.)

15C	VMDIPC	004	INTERCEPTION PARAMETER C
15C	VMDICAD2	004	INTERCEPTED INSTR OPERAND ADDR. (SS FORMAT INSTRUCTIONS)
160	VMDRCP	004	RCP-AREA HOST VIRTUAL ADDRESS
160	VMDRCPB0	001	BYTE ZERO, FLAGS FOR ASSISTS

BITS DEFINED FOR VMDRCPB0 BY HCPSIEBK SIERCPB0

161		X	RESERVED WITH ASSISTS ENABLED
162	VMDRCPB2	001	BYTE TWO, FLAGS FOR ASSISTS

BITS DEFINED FOR VMDRCPB2 BY HCPSIEBK SIERCPB2

163		X	RESERVED WITH ASSISTS ENABLED
164	VMDISCAA	004	SYSTEM CONTROL AREA ADDRESS. CONTAINS A POINTER TO THE ARCHITECTED SCA (AT LABEL SCASTART IN THE SCABK) FOR THIS VIRTUAL CONFIGURATION, OR ZERO IF THERE IS NO SCABK.
168	VMDSNORG	004	SUBCHANNEL NUMBER TABLE ORIGIN
16C		F	RESERVED FOR IBM HARDWARE USE

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170   VMDTCHCL   002      TCH INTERCEPTION CONTROLS
172              H        RESERVED FOR IBM HARDWARE USE
174   VMDIOPCT   004      I/O PASSTHROUGH CONTROL
174   VMDDEDSC   001      DEDICATED SUBCLASS CONTROL

        BITS DEFINED FOR VMDDEDSC BY HCPEQUAT CR6B0

175   VMDREPSC   001      REPLACEMENT ISC NUMBER

        CODES DEFINED FOR VMDREPSC BY HCPEQUAT CSWIRCF

176   VMDDVSCS   002      IRB DEVICE & SUBCHAN STATUS MASK
176   VMDDVST    001      DEVICE STATUS BYTE OF THE IRB DS
                          MASK. THE CONTENTS OF THIS FIELD
                          ARE ANDED WITH THE DEVICE STATUS
                          BYTE OF THE IRB BY TSCH TO SEE
                          IF TYPE B INFORMATION IS PRESENT.

        BITS DEFINED FOR VMDDVST BY HCPEQUAT CSWDVST

177   VMDSCST    001      SUBCHANNEL STATUS BYTE OF THE
                          IRB DS MASK.  THE CONTENTS OF
                          THIS FIELD ARE ANDED WITH THE
                          SUBCHANNEL STATUS BYTE OF THE
                          IRB BY TSCH TO SEE IF TYPE B
                          INFORMATION IS PRESENT.

        BITS DEFINED FOR VMDSCST BY HCPEQUAT CSWSCST

178   VMDXSLIM   003      EXTENDED STORAGE UPPER LIMIT
                          BLOCK ADDRESS.
17B              X        RESERVED FOR IBM HARDWARE USE
17C              F        RESERVED FOR IBM HARDWARE USE
180   VMDCRS     064      GUEST CONTROL REGISTERS 0-15.
180   VMDCR0     004      GUEST CONTROL REGISTER 0
180   VMDCR0B0   001      GUEST CONTROL REGISTER 0, BYTE 0

        BITS DEFINED FOR VMDCR0B0 BY HCPEQUAT CR0B0

181   VMDCR0B1   001      GUEST CONTROL REGISTER 0, BYTE 1

        BITS DEFINED FOR VMDCR0B1 BY HCPEQUAT CR0B1

182   VMDCR0XM   002      GUEST CR 0 EXTERNAL IRPT MASK
182   VMDCR0B2   001      GUEST CONTROL REGISTER 0, BYTE 2

        BITS DEFINED FOR VMDCR0B2 BY HCPEQUAT CR0B2

183   VMDCR0B3   001      GUEST CONTROL REGISTER 0, BYTE 3

        BITS DEFINED FOR VMDCR0B3 BY HCPEQUAT CR0B3

184   VMDCR1     004      GUEST CONTROL REGISTER 1
                          XA GUEST STO VALUE
184   VMDCR1B0   001      GUEST CONTROL REGISTER 1, BYTE 0
                          370 GUEST SEGMENT TABLE LENGTH

        BITS DEFINED FOR VMDCR1B0 BY HCPEQUAT CR1B0

185   VMDCR1SO   003      370 GUEST STO VALUE
185   VMDCR1B1   001      GUEST CONTROL REGISTER 1, BYTE 1
186   VMDCR1B2   001      GUEST CONTROL REGISTER 1, BYTE 2
187   VMDCR1B3   001      GUEST CONTROL REGISTER 1, BYTE 3

        BITS DEFINED FOR VMDCR1B3 BY HCPEQUAT CR1B3

188   VMDCR2     004      GUEST CONTROL REGISTER 2
188   VMDCR2IM   002      370 GUEST CHANNEL MASK
188   VMDCR2B0   001      GUEST CONTROL REGISTER 2, BYTE 0
189   VMDCR2B1   001      GUEST CONTROL REGISTER 2, BYTE 1
18A   VMDCR2B2   001      GUEST CONTROL REGISTER 2, BYTE 2
18B   VMDCR2B3   001      GUEST CONTROL REGISTER 2, BYTE 3
18C   VMDCR3     004      GUEST CONTROL REGISTER 3
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18C   VMDCR3B0   001       GUEST CONTROL REGISTER 3, BYTE 0
18D   VMDCR3B1   001       GUEST CONTROL REGISTER 3, BYTE 1
18E   VMDCR3B2   001       GUEST CONTROL REGISTER 3, BYTE 2
18F   VMDCR3B3   001       GUEST CONTROL REGISTER 3, BYTE 3
190   VMDCR4     004       GUEST CONTROL REGISTER 4
190   VMDCR4B0   001       GUEST CONTROL REGISTER 4, BYTE 0
191   VMDCR4B1   001       GUEST CONTROL REGISTER 4, BYTE 1
192   VMDCR4B2   001       GUEST CONTROL REGISTER 4, BYTE 2
193   VMDCR4B3   001       GUEST CONTROL REGISTER 4, BYTE 3
194   VMDCR5     004       GUEST CONTROL REGISTER 5
194   VMDCR5B0   001       GUEST CONTROL REGISTER 5, BYTE 0
195   VMDCR5B1   001       GUEST CONTROL REGISTER 5, BYTE 1
196   VMDCR5B2   001       GUEST CONTROL REGISTER 5, BYTE 2
197   VMDCR5B3   001       GUEST CONTROL REGISTER 5, BYTE 3
198   VMDCR6     004       GUEST CONTROL REGISTER 6
198   VMDCR6B0   001       GUEST CONTROL REGISTER 6, BYTE 0

        BITS DEFINED FOR VMDCR6B0 BY HCPEQUAT CR6B0

199   VMDCR6B1   001       GUEST CONTROL REGISTER 6, BYTE 1
19A   VMDCR6B2   001       GUEST CONTROL REGISTER 6, BYTE 2
19B   VMDCR6B3   001       GUEST CONTROL REGISTER 6, BYTE 3
19C   VMDCR7     004       GUEST CONTROL REGISTER 7
19C   VMDCR7B0   001       GUEST CONTROL REGISTER 7, BYTE 0
19D   VMDCR7B1   001       GUEST CONTROL REGISTER 7, BYTE 1
19E   VMDCR7B2   001       GUEST CONTROL REGISTER 7, BYTE 2
19F   VMDCR7B3   001       GUEST CONTROL REGISTER 7, BYTE 3
1A0   VMDCR8     004       GUEST CONTROL REGISTER 8
1A0   VMDCR8B0   001       GUEST CONTROL REGISTER 8, BYTE 0
1A1   VMDCR8B1   001       GUEST CONTROL REGISTER 8, BYTE 1
1A2   VMDCR8MM   002       MONITOR CALL EVENT MASK
1A2   VMDCR8B2   001       GUEST CONTROL REGISTER 8, BYTE 2
1A3   VMDCR8B3   001       GUEST CONTROL REGISTER 8, BYTE 3

        BITS DEFINED IN VMDCR8B3 (AT HEX DISPLACEMENT: 1A3)

        20    VMDMCL10    MONITOR CALL CLASS 10 INDICATOR

1A4   VMDCR9     004       GUEST CONTROL REGISTER 9
1A4   VMDCR9B0   001       GUEST CONTROL REGISTER 9, BYTE 0

        BITS DEFINED FOR VMDCR9B0 BY HCPEQUAT CR9B0

1A5   VMDCR9B1   001       GUEST CONTROL REGISTER 9, BYTE 1
1A6   VMDCR9GM   001       PER GPR ALTERATION MASK
1A8   VMDCR10    004       GUEST CONTROL REGISTER 10
1AC   VMDCR11    004       GUEST CONTROL REGISTER 11
1B0   VMDCR12    004       GUEST CONTROL REGISTER 12
1B0   VMDCRCB0   001       GUEST CONTROL REGISTER 12,BYTE 0

        BITS DEFINED FOR VMDCRCB0 BY HCPEQUAT CRCB0

1B1   VMDCRCB1   001       GUEST CONTROL REGISTER 12,BYTE 1
1B2   VMDCRCB2   001       GUEST CONTROL REGISTER 12,BYTE 2
1B3   VMDCRCB3   001       GUEST CONTROL REGISTER 12,BYTE 3

        BITS DEFINED FOR VMDCRCB3 BY HCPEQUAT CRCB3

1B4   VMDCR13    004       GUEST CONTROL REGISTER 13
1B4   VMDCRDB0   001       GUEST CONTROL REGISTER 13,BYTE 0
1B5   VMDCRDB1   001       GUEST CONTROL REGISTER 13,BYTE 1
1B6   VMDCRDB2   001       GUEST CONTROL REGISTER 13,BYTE 2
1B7   VMDCRDB3   001       GUEST CONTROL REGISTER 13,BYTE 3
1B8   VMDCR14    004       GUEST CONTROL REGISTER 14
1B8   VMDCREB0   001       GUEST CONTROL REGISTER 14,BYTE 0

        BITS DEFINED FOR VMDCREB0 BY HCPEQUAT CREB0

1B9   VMDCREB1   001       GUEST CONTROL REGISTER 14,BYTE 1

        BITS DEFINED FOR VMDCREB1 BY HCPEQUAT CREB1
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1BA   VMDCREB2   001      GUEST CONTROL REGISTER 14,BYTE 2
1BB   VMDCREB3   001      GUEST CONTROL REGISTER 14,BYTE 3
1BC   VMDCR15    004      GUEST CONTROL REGISTER 15
                          MACHINE CHECK EXTENDED LOG ADDR
1BC   VMDCRFB0   001      GUEST CONTROL REGISTER 15,BYTE 0
1BD   VMDCRFB1   001      GUEST CONTROL REGISTER 15,BYTE 1
1BE   VMDCRFB2   001      GUEST CONTROL REGISTER 15,BYTE 2
1BF   VMDCRFB3   001      GUEST CONTROL REGISTER 15,BYTE 3
1C0              F        RESERVED FOR IBM HARDWARE USE
1C4   VMDIEXCF   004      EXTERNAL INTERRUPTION PARAMETERS
1C4   VMDIEXCA   002      EXTERNAL INTERRUPTION CPU ADDR
1C6   VMDIEXCD   002      EXTERNAL INTERRUPTION CODE, HW
1C6   VMDIEXCL   001      EXTERNAL INTERRUPTION CLASS CODE

        CODES DEFINED FOR VMDIEXCL BY HCPEQUAT EXTICLAS

1C7   VMDIEXCT   001      EXTERNAL INTERRUPTION TYPE CODE

        CODES DEFINED FOR VMDIEXCT BY HCPEQUAT EXTICODE

1C8              F        RESERVED FOR IBM HARDWARE USE
1CC   VMDIPRCD   004      PROGRAM INTERRUPT ILC AND CODE
1CC   VMDIPRCL   002      PROGRAM INTERRUPT ILC
1CE   VMDIPRCC   002      PROGRAM INTERRUPT CODE, HALFWORD
1CE   VMDIPRC0   001      PROGRAM INTERRUPT CODE, S/B 0
1CF   VMDIPRC1   001      PROGRAM INTERRUPT CODE, DETAIL

        CODES DEFINED FOR VMDIPRC1 BY HCPEQUAT PRGICODE

1D0   VMDITRAD   004      TRANSLATION EXCEPTION ADDRESS
                          THE FOLLOWING IS A REDEFINITION OF VMDITRAD
                          FOR SPACE SWITCH EVENT PROGRAM INTERRUPTS:
1D0   VMDSSCTL   001      SPACE SWITCH EVENT CONTROL

        BITS DEFINED IN VMDSSCTL (AT HEX DISPLACEMENT: 1D0)

1D1   VMDSSCT2   001      WHEN A SPACE SWITCH PROGRAM
                          INTERRUPT OCCURS, THE SPACE
                          SWITCH EVENT CONTROL BIT
                          IS SAVED IN THE HIGH ORBER BIT
                          OF VMDSSCTL.
                          THE REMAINING BITS OF VMDSSCTL
                          AND VMDSSCT2 ARE SET TO 0.
1D2   VMDOPASN   002      OLD PASN - SET FOR A SPACE
                          SWITCH EVENT PROGRAM INTERRUPT
1D4   VMDIMNCL   002      MONITOR CLASS CODE
1D6   VMDPERCL   002      PER CLASS CODE
1D6   VMDPERCD   001      PER EVENT CODE IDENTIFIER

        BITS DEFINED FOR VMDPERCD BY HCPEQUAT CR9B0

1D7   VMDPERZF   001      PER INTERRUPT CODE, RESERVED
                          ALSO USED BY SOFTWARE TO GENERATE GUEST PER EVENTS.
1D8   VMDPERAD   004      PER EVENT INSTRUCTION ADDRESS
                          ALSO USED BY SOFTWARE TO GENERATE GUEST PER EVENTS.
1DC   VMDIMNCD   004      MONITOR CODE
1E0              D        RESERVED FOR IBM HARDWARE USE

                          FOLLOWING INTERRUPTION INFORMATION STORED FOR SIE
                          INTERCEPTION CODES 60 AND 64. SAME INFORMATION AS
                          WOULD BE STORED IN GUEST STORAGE 184-105.

1E8   VMDIOSID   004      SUBCHANNEL IDENTIFICATION
1E8   VMDIOINT   002      I/O INTERRUPT CONSTANT - 0001
1EA   VMDIORNM   002      I/O INTERRUPT SUBCHANNEL NUMBER
1EC   VMDINPRM   004      I/O INTERRUPT PARAMETER
1F0   VMDIVISC   001      00VISC000
1F1   VMDIZONE   001      ZONE

                          DEFINITION OF VMDISCHI
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EQUATES


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          80     VMDSCHI1     INTERRUPT INTERLOCK IS ON

1F2     VMDISCHI    001       I0000000 INTERRUPT INTERLOCK CNTL
1F3                 X         RESERVED
1F4                 F         RESERVED FOR IBM HARDWARE USE
1F8                 D         RESERVED FOR IBM HARDWARE USE
200     VMDGPRS     064       GUEST GENERAL PURPOSE REGISTERS
                              0-15.

                       EQUATES

          03     VMDGPRLO     TO ACCESS LOW-ORDER BYTE OF A
                              GUEST GPR

200     VMDGPR0     004       GUEST GENERAL PURPOSE REGISTER 0
204     VMDGPR1     004       GUEST GENERAL PURPOSE REGISTER 1
208     VMDGPR2     004       GUEST GENERAL PURPOSE REGISTER 2
20C     VMDGPR3     004       GUEST GENERAL PURPOSE REGISTER 3
210     VMDGPR4     004       GUEST GENERAL PURPOSE REGISTER 4
214     VMDGPR5     004       GUEST GENERAL PURPOSE REGISTER 5
218     VMDGPR6     004       GUEST GENERAL PURPOSE REGISTER 6
21C     VMDGPR7     004       GUEST GENERAL PURPOSE REGISTER 7
220     VMDGPR8     004       GUEST GENERAL PURPOSE REGISTER 8
224     VMDGPR9     004       GUEST GENERAL PURPOSE REGISTER 9
228     VMDGPR10    004       GUEST GENERAL PURPOSE REGISTER 10
22C     VMDGPR11    004       GUEST GENERAL PURPOSE REGISTER 11
230     VMDGPR12    004       GUEST GENERAL PURPOSE REGISTER 12
234     VMDGPR13    004       GUEST GENERAL PURPOSE REGISTER 13
238     VMDGPE45    008       GUEST GPR 14-15 FOR SIE TRANSFER
238     VMDGPR14    004       GUEST GENERAL PURPOSE REGISTER 14
23C     VMDGPR15    004       GUEST GENERAL PURPOSE REGISTER 15
240                 0XL64
240                 F         RESERVED
244                 F         RESERVED
248                 F         RESERVED
24C                 F         RESERVED
250                 F         RESERVED
254                 F         RESERVED
258                 F         RESERVED
25C                 F         RESERVED
260                 F         RESERVED
264                 F         RESERVED
268                 F         RESERVED
26C                 F         RESERVED
270                 F         RESERVED
274                 F         RESERVED
278                 F         RESERVED
27C                 F         RESERVED
280     VMDFPRS     032       GUEST FLOATING POINT REGISTERS
280     VMDFPR0     008       GUEST FLOATING POINT REGISTER 0
288     VMDFPR2     008       GUEST FLOATING POINT REGISTER 2
290     VMDFPR4     008       GUEST FLOATING POINT REGISTER 4
298     VMDFPR6     008       GUEST FLOATING POINT REGISTER 6
2A0     VMDNTMOD    001       INTERCEPTION CODE 36 MODIFIER

          CODES DEFINED IN VMDNTMOD (AT HEX DISPLACEMENT: 2A0)

          04     VMDNTFIO     I/O INTERRUPTION
          08     VMDNTFRS     RESTART INTERRUPTION
          0C     VMDNTFMC     MACHINE CHECK INTERRUPTION
          10     VMDNTFEX     SIMULATED EXTERNAL INTERRUPTION
          14     VMDNTFPG     SIMULATED PROGRAM INTERRUPTION
                              EQU   24              RESERVED
          1C     VMDNTFPF     HOST PAGE FAULT ON USER PAGE
          20     VMDNTFGX     UNSTACKED GOTO/CPEX FOR ENDOP
          24     VMDNTFIS     INTERRUPT SCAN, I/O, EXTERNAL

2A1     VMDWPEND    001       WORK PENDING STATUS

          BITS DEFINED IN VMDWPEND (AT HEX DISPLACEMENT: 2A1)

          80     VMDPDPPF     REFLECT AN INITIAL PAGEX PROGRAM
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                              ..INTERRUPT TO THE GUEST.
        40      VMDCKPSW      CHECK THE FORMAT OF THE GUEST
                              PSW.  WHENEVER A NEW GUEST PSW IS ESTABLISHED
                              EITHER FROM STARTING THE GUEST RUNNING FOLLOWING
                              SOME STOPPED STATE OR WHEN SWAPPING PSWS TO REFLECT
                              AN INTERRUPT TO THE GUEST, THIS BIT IS SET
                              REQUESTING THE NEW GUEST PSW TO BE EXAMINED AND
                              VALIDATED.  WHEN SET, THE GUEST'S PSW IS VALIDATED
                              BEFORE ENTERING SIE FOR THE GUEST.
        20      VMDPDTMR      UPDATE THE GUEST INTERVAL TIMER
        10      VMDPDIRP      SCAN GUEST INTERRUPTION LISTS
        08      VMDPDCFM      PERFORM CONSOLE FUNCTION
        04      VMDPDSIE      FORCE AN ENTRY TO SIE
        02      VMDPDTRD      TRACE DISPLAY IS PENDING
        01      VMDPDXTN      VMDWPEND EXTENSION BIT.  WHEN
                              ..THIS BIT IS SET, VMDWPND2 MUST
                              ..BE CHECKED FOR MORE WORK BITS.

2A2   VMDIPEND   001          INTERRUPT PENDING STATUS

      BITS DEFINED IN VMDIPEND (AT HEX DISPLACEMENT: 2A2)

        80      VMDXTKEY      SIGNIFIES THAT AN EXTERNAL KEY
                              INTERRUPT IS PENDING FOR THE GUEST.
        20      VMDEXMCK      THIS BIT IS SET TO INDICATE
                              AN EXIGENT MACHINE CHECK HAS BEEN MADE PENDING
                              FOR THE GUEST AND A GOTO WAS STACKED TO ENTER
                              HCPENDOP TO BEGIN PROCESSING TO REFLECT THE
                              EXIGENT MACHINE CHECK.

2A3   VMDTYPE    001          IDENTIFIES THE VMDBK TYPE. MAY
                              ONLY BE ONE OF THE DEFINED TYPES.

      CODES DEFINED IN VMDTYPE  (AT HEX DISPLACEMENT: 2A3)

        00      VMDTYPPR      PROTOTYPE VMDBK
        58      VMDTYPSY      SYSTEM VMDBK
        15      VMDTYPUS      USER VMDBK
        1F      VMDTYPAD      USER ADJUNCT VMDBK
        17      VMDTYPMP      USER DEFINED CPU (GUEST MP)
        2C      VMDTYPSI      USER VIRTUAL SIE VMDBK

2A4   VMDGTLB    001          GUEST TLB STATUS

      BITS DEFINED IN VMDGTLB  (AT HEX DISPLACEMENT: 2A4)

        20      VMDGPTLB      GUEST PTLB WAS SIMULATED.
                              FOR SIMULATION OF THE PTLB INSTRUCTION AND FOR
                              SIMULATION OF OTHER INSTRUCTIONS THAT REQUIRE
                              CLEARING THE TLB, VMDGPTLB IS SET.
        10      VMDINVPG      A GUEST PAGE TABLE ENTRY HAS
                              BECOME INVALID, EITHER FROM THE STEAL TASK OR FROM
                              A GUEST IPTE INSTRUCTION.

2A5   VMDGSTAT   001          GUEST VIRTUAL RUNNING STATUS

      BITS DEFINED IN VMDGSTAT (AT HEX DISPLACEMENT: 2A5)

        80      VMDVSIE       GUEST IS IN V/SIE MODE.
                              THIS BIT IS SET WHEN SIMULATING A SIE INSTRUCTION,
                              AFTER A V/SIE VMDBK HAS BEEN BUILT, AND ALL SIE
                              ENTRY VALIDITY CHECKS ARE COMPLETE IN PREPARATION
                              FOR ENTERING EMULATION.  IT IS RESET AFTER AN
                              INTERRUPT OR INTERCEPT TAKES US OUT OF EMULATION
                              AND THE VGUEST STATE DESCRIPTOR IS MADE TO APPEAR
                              AS THOUGH SIE WERE JUST EXITED FOR THAT GUEST.
        40      VMDRGPER      PRESERVE A PENDING PER INTERRUPT
                              DURING THE SIMULATION OF A GUEST SIE INSTRUCTION.
                              THE PENDING PER INTERRUPT IS CLEARED DURING THE
                              SIMULATION OF SIE TO PREVENT IT FROM BEING REFLECTED
                              PREMATURELY IN THE EVENT OF A SUBSEQUENT INTERRUPT.
        20      VMDRGTRD      PRESERVE A PENDING TRACE DISPLAY
                              DURING THE SIMULATION OF A GUEST SIE INSTRUCTION.
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			THE PENDING TRACE DISPLAY IS CLEARED DURING THE SIMULATION OF SIE TO PREVENT THE DISPLAY FROM OCCURRING PREMATURELY IN THE EVENT OF A SUBSEQUENT INTERRUPT.
	10	VMDIPTLH	IPTE LOCK HELD FOR THIS VIRTUAL CPU. FOR VIRTUAL MP, THE IPTE LOCK (THE SYSTEM CONTROL AREA POINTED TO BY VMDISCAA) WILL BE OBTAINED SHARED FOR A PAGEABLE VGUEST. THIS IS DONE TO SYNCHRONIZE THE CASE WHERE ONE VGUEST IS IN SIE MODE, AND ANOTHER VGUEST ISSUES AN IPTE. THE SYNCHRONIZATION IS NEEDED TO KEEP THE SHADOW TABLES OF THE FIRST VGUEST UP TO DATE WITH THE PAGE TABLES AFFECTED BY THE IPTE.
	08	VMDSCALK	PAGE CONTAINING THE SYSTEM CONTROL AREA (SCA) IS LOCKED FOR A PAGEABLE RGUEST. THIS IS SET BY V/SIE SUPPORT IN PREPARATION FOR ISSUING SIE FOR THE V/SIE VMDBK. IT IS RESET WHEN THE RGUEST IS REMOVED FROM V/SIE MODE.
2A6	VMDTIMER	001	GUEST TIMER CONTROLS
	BITS DEFINED IN VMDTIMER (AT HEX DISPLACEMENT: 2A6)		
	80	VMDPTRQ	GUEST TIMERS ARE BEING TRACKED DURING GUEST PSW-WAIT STATE. (SEE ALSO VMDPTRQQ.)
	40	VMDITMRL	THIS BIT DESIGNATES THAT THE INTERVAL TIMER IS TO BE UPDATED DURING BOTH RUN AND WAIT TIME FOR THE USER. THE SET TIMER COMMAND CONTROLS THE SETTING OF THIS BIT.
	20	VMDVPTRK	GUEST CPU TIMER BEING TRACKED. BEFORE A V/SIE VMDBK IS RUN, THE CPU TIMER IS SET TO THE SMALLER OF EITHER THE CURRENT HOST CPU TIMER OR THE SMALLEST RGUEST TIMER VALUE (CPU TIMER OR CLOCK COMPARATOR INTERVAL). VMDVPTRK IS SET TO INDICATE WHEN THE RGUEST TIMER VALUE IS USED. (USED ONLY DURING THE SIMULATION OF A GUEST SIE INSTRUCTION).
	10	VMDTODAC	TOD CLOCK ACCOUNTING FLAG FLAG INDICATING THE TOD CLOCK ACCOUNTING INTERFACE IS ACTIVE (DIAGNOSE X'70'). SEE VMDTODAI.
	08	VMDPTRQQ	THE TRQBK (ANCHORED AT VMDTRQPT) FOR TRACKING TIMERS DURING GUEST WAIT STATE HAS BEEN ENQUEUED ON THE QUEUE OF ACTIVE (UN-EXPIRED) TRQBK'S. WHEN TRACKING TIMERS FOR GUEST WAIT STATE IT IS SOMETIMES NOT NECESSARY TO ENQUEUE THE TRQBK. THEREFORE WHEN VMDPTRQ IS SET, VMDPTRQQ MAY OR MAY NOT BE SET. WHEN VMDPTRQ IS ZERO, VMDPTRQQ WILL ALSO BE ZERO.
2A7	VMDTRCTL	001	GUEST MACHINE TRACING CONTROL
	BITS DEFINED IN VMDTRCTL (AT HEX DISPLACEMENT: 2A7)		
	80	VMDTRACT	TRACE ACTIVE BIT. THIS BIT IS SET WHEN THE GUEST IS USING THE TRACE FACILITY AND THERE IS AN ACTIVE TRACE SET WHICH CONTAINS ACTIVE TRACE TRAPS. WHEN THIS BIT IS SET, IT IS POSSIBLE THAT EXECUTION OF THE GUEST MACHINE MAY HALT BECAUSE A TRACE TRAP IS HIT.
	40	VMDTRALT	TRACE ALTERED BIT. THIS BIT IS SET WHEN THE GUEST IS USING THE TRACE FACILITY AND TRACE HAS DECIDED THAT THE GUEST'S PSW AND/OR CONTROL REGISTERS MUST BE ALTERED TO ACCOMPLISH THE REQUESTED TRACING FUNCTION.
	20	VMDTRCTR	CCW TRACING ACTIVE, TERMINAL
	10	VMDTRCPR	CCW TRACING ACTIVE, PRINTER
	30	VMDTRCCW	CCW TRACING ACTIVE
	08	VMDTRTRS	TRSOURCE TRACE. THIS BIT IS SET WHEN THE GUEST IS ENABLED FOR TRSOURCE TRACE.
	04	VMDTRTRA	TRSOURCE TRACE ALTER BIT. THIS BIT IS SET WHEN THE GUEST IS USING THE TRSOURCE TRACE FACILITY AND THE GUEST'S STATE DESCRIPTOR HAS BEEN ALTERED.
2A8	VMDPRGIL	002	THE VGUEST INSTRUCTION LENGTH

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                          CODE IS MAINTAINED IN THIS FIELD FOR INSTRUCTIONS
                          SIMULATED IN V/SIE.
2AA   VMDWSTAT   001      PSEUDO-WAIT CONDITIONS

        BITS DEFINED IN VMDWSTAT (AT HEX DISPLACEMENT: 2AA)

        80    VMDWTPAG    GUEST IS IN PAGE WAIT.  THIS IS
                          A SOFT (OR PSEUDO) WAIT STATE ENTERED FROM HANDLING
                          A HOST PAGE FAULT FOR A GUEST PAGE.  THE SOFT WAIT
                          STATE IS ENDED WHEN THE PAGING OPERATION COMPLETES
                          OR IF THE GUEST RECEIVES AN I/O, OR EXTERNAL
                          INTERRUPT, OR ENTERS A COMMAND.
        40    VMDWTTIO    GUEST IS IN TIO-BUSY  WAIT
        20    VMDWTTSC    GUEST IS IN TSCH-BUSY WAIT
        10    VMDWIUCV    INDICATE IUCV SOFT WAIT

2AB             X         RESERVED
2AC   VMDVFCFG   001      VIRTUAL VECTOR FACILITY
                          CONFIGURATION STATUS

        BITS DEFINED IN VMDVFCFG (AT HEX DISPLACEMENT: 2AC)

        80    VMDVFDEF    A VIRTUAL VECTOR FACILITY IS
                          DEFINED ON THIS VIRTUAL CPU
        40    VMDVFHAD    USER HAS, OR HAD SINCE LOGON, A
                          VIRTUAL VECTOR FACILITY DEFINED

2AD   VMDVFCNT   001      COUNT OF VIRTUAL VECTOR
                          FACILITIES DEFINED IN THIS
                          CONFIGURATION (VALID ONLY IN
                          BASE VMDBK)

        CODES DEFINED IN VMDVFCNT (AT HEX DISPLACEMENT: 2AD)

        00    VMDVFNON    VMDVFCNT VALUE FOR NON-VECTOR
                          CONFIGURATION

2AE   VMDVFSTA   001      VIRTUAL VECTOR FACILITY STATUS.
                          SERIALIZED BY THE SCHEDULER LOCK.

        BITS DEFINED IN VMDVFSTA (AT HEX DISPLACEMENT: 2AE)

        80    VMDVFCKS    THE VIRTUAL VECTOR FACILITY IS
                          IN CHECK-STOP STATE, I.E. A VFF
                          MACHINE-CHECK HAS BEEN REFLECTED
                          TO THE GUEST.
        40    VMDVFAVL    THE VIRTUAL VECTOR FACILITY WAS
                          REPORTED AVAILABLE BY THE MOST
                          RECENT SCLP - READ SCP INFO.
        20    VMDVFACT    INDICATE THAT THIS VMDBK IS
                          INCLUDED IN THE COUNT OF
                          RECENTLY-ACTIVE VECTOR USER.
                          VALID IN ALL VMDBKS.

2AF   VMDVFRST   001      VIRTUAL VECTOR FACILITY REGISTER
                          STATUS

        BITS DEFINED IN VMDVFRST (AT HEX DISPLACEMENT: 2AF)

        80    VMDVFLOD    THE VIRTUAL VECTOR FACILITY IS
                          LOADED INTO A REAL VECTOR
                          FACILITY.
        40    VMDVFSTL    GUEST VIRTUAL VECTOR STATE LOST:
                          CAUSES A VFS MACHINE-CHECK TO BE
                          REFLECTED TO THE GUEST DURING
                          THE NEXT ATTEMPT TO USE THE
                          VECTOR FACILITY.

2B0   VMDPTLBT   008      TOD CLOCK AT LAST HOST PTLB
                          REQUEST FOR THIS USER.
                          THIS FIELD IS COMPARED TO THE TOD VALUE AT THE LAST
                          PTLB ON THIS CPU TO DETERMINE WHETHER A FRESH PTLB
                          SHOULD BE PERFORMED BEFORE THE USER IS RUN IN
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                                EMULATION MODE ON A PARTICULAR HOST CPU.
2B0   VMDPTLHI    004           FIRST WORD OF VMDPTLBT
2B4   VMDPTLLO    004           SECOND WORD OF VMDPTLBT
2B8   VMDMSO      004           MAIN STORAGE ORIGIN FOR NON-
                                PAGEABLE GUEST
2BC   VMDMSL      004           MAIN STORAGE LIMIT FOR NON-
                                PAGEABLE GUEST
2C0   VMDCPUID    008           GUEST MACHINE CPU ID (FOR STIDP)
                                DEFAULTS TO CPUID OF HOST IPLED CPU, MODIFIED
                                TO SHOW VERSION CODE X'FF', AND ZERO LOGOUT LENGTH.
2C0   VMDCPVER    001           GUEST CPU ID VERSION CODE

        CODES DEFINED FOR VMDCPVER BY HCPEQUAT CPUID

2C1   VMDCPSER    003           GUEST CPU ID SERIAL NUMBER
2C4   VMDCPMOD    002           GUEST CPU ID MODEL NUMBER
2C6   VMDCPLOG    002           GUEST CPU ID EXTENDED LOG LENGTH
2C8   VMDSSIZE    004           CONTIGUOUS GUEST REAL STORAGE
                                SIZE IN BYTES
2CC   VMDCPUAD    002           CPU ADDRESS OF VIRTUAL CPU
2CE               X             RESERVED FOR FUTURE IBM USE
2CF               X             RESERVED FOR FUTURE IBM USE
2D0   VMDIAGFL    001           DIAGNOSE COMMAND GENERAL FLAGS

        BITS DEFINED IN VMDIAGFL (AT HEX DISPLACEMENT: 2D0)

        80     VMDIAG98       THIS VIRTUAL MACHINE AUTHORIZED
                              TO ISSUE DIAG X'98' REAL I/O
                              FACILITIES. SET AT LOGON FROM
                              THE DIRECTORY.

2D1   VMDRFEAT    001           GUEST MACHINE SIMULATION OPTIONS
                                SERIALIZATION - WRITE IS CFM. READ IS CFM OR
                                EXCLUSIVE-FROM-CFM

        BITS DEFINED IN VMDRFEAT (AT HEX DISPLACEMENT: 2D1)

        80     VMDNOVFA       NO VIRTUAL VECTOR FACILITY
                              .. ALLOWED FOR THIS USER. VALID
                              .. IN ALL VMDBKS.
        40     VMDSVMST       SVMSTAT SPECIFIED IN THE OPTION
                              DIRECTORY CARD FOR THIS USER.
        20     VMDVMCFA       VM COMMUNICATION FACILITY
                              ALLOWED.  IT IS USED TO DETERMINE IF THE GUEST IS
                              USING VMCF AND TO ENSURE THAT THE USER OF VMCF HAD
                              INVOKED THE VMCF AUTHORIZE FUNCTION PRIOR TO
                              ATTEMPTING SUBSEQUENT VMCF FUNCTIONS.
        10     VMDVERP        VIRTUAL ERROR RECORDING ACTIVE
                              VMDVERP = 0 (DEFAULT) - CP INTERCEPTS GUEST SVC76 AND
                              PERFORMS ERROR RECORDING ON BEHALF OF THE GUEST.
                              VMDVERP = 1 - SVC76 IS REFLECTED TO THE GUEST.
        02     VMDACTRC       GUEST MACHINE MAY CREATE ACCOUNT
                              RECORDS
        01     VMDVTOD        THE TODENABLE OPTION HAS BEEN
                              SPECIFIED IN THE OPTION STATEMENT IN THE DIRECTORY.
                              VALID IN ALL VMDBKS.

2D2   VMDSTORE    001           STORAGE OPTIONS
                                SERIALIZED BY CFM

        BITS DEFINED IN VMDSTORE (AT HEX DISPLACEMENT: 2D2)

        80     VMDPAGEX       PSEUDO PAGE FAULT OPTION ACTIVE

2D3   VMDEMCTL    001           EMULATION CONTROLS.
                                THIS FIELD IS SIGNIFICANT IN ALL VMDBKS, IS SERIALIZED BY
                                THE DISPATCH LOCK, AND IS UNTOUCHED OVER GUEST SURVIVAL.

        BITS DEFINED IN VMDEMCTL (AT HEX DISPLACEMENT: 2D3)

        80     VMDBYPEW       BYPASS ENABLED-WAIT PROCESSING.
                              ..THIS BIT IS USED TO FORCE AN
                              ..ENTRY INTO INTERPRETIVE
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                                ..EXECUTION MODE EVEN IF THE
                                ..GUEST HAS AN ENABLED-WAIT PSW.
        40      VMDALEDE        ALERTING DEACTIVATED.  SET WHEN
                                ..AN ALERT INTERCEPTION IS
                                ..RECEIVED TO INDICATE THAT
                                ..ALERTING HAS BEEN DEACTIVATED,
                                ..AND THEREFORE NEED NOT BE DONE
                                ..SO AS PART OF NORMAL WAKE-UP
                                ..PROCESSING.

2D4     VMDCPUCT    001         COUNT OF GUEST DEFINED CPUS.
                                VALUE IS ONE LESS THAN THE NUMBER OF VIRTUAL CPUS IN
                                THE CONFIGURATION.  (THE BASE CPU IS NOT COUNTED FOR
                                IT IS NOT GUEST DEFINED.)  KEEPS TRACE OF THE NUMBER
                                OF CPUS IN A GUEST VIRTUAL MP CONFIGURATION.  ALSO
                                USED AS AN INDICATION OF WHETHER THE GUEST IS A
                                VIRTUAL MP GUEST (A NON ZERO VALUE INDICATES GUEST
                                MP).
2D5     VMDCPULT    001         MAX MP GUEST CPU COUNT LESS ONE
                                WHICH MAY BE DEFINED, INCL BASE
2D6     VMDSTYPE    001         STORAGE TYPE

        BITS DEFINED IN VMDSTYPE (AT HEX DISPLACEMENT: 2D6)

        80      VMDVRDUP        GUEST IS A V=R GUEST. STORAGE
                                IS MAPPED FROM BEGINNNING OF V=R AREA.
        40      VMDVF           THIS BIT SIGNIFIES THAT THE
                                GUEST IS A V=F GUEST.  THE STORAGE FOR THE
                                V=F GUEST IS MAPPED FROM THE HOST REAL STORAGE
                                V=R REGION AS DEFINED AT SYSTEM GENERATION.

2D7     VMDTODFL    001         FLAG FOR TIME-OF-DAY CLOCK BUSY.
                                THIS IS MAINTAINED BY TEST-AND-
                                SET  TO  PREVENT  MORE THAN ONE
                                STACKED CALL-FROM-CFM  BECOMING
                                PENDING FOR SCK FUNCTIONS TO BE
                                EXECUTED WITH ALL VIRTUAL  CPUS
                                AT ENDOP.
2D8     VMDILFNC    001         INDICATOR OF WHAT CP FUNCTION(S)
                                REQUIRED NOTIFICATION OF GUEST
                                PSW CHANGES

        BITS DEFINED IN VMDILFNC (AT HEX DISPLACEMENT: 2D8)

        80      VMDILIOP        I/O PASS THROUGH

2D9     VMDMCFLG    001         MONITOR CALL INTERCEPT FLAGS

        BITS DEFINED IN VMDMCFLG (AT HEX DISPLACEMENT: 2D9)

        80      VMDMC10I        INTERCEPT MONITOR CALL CLASS 10
        40      VMDMCEGT        ENABLE AS PART OF GROUP TRACE
        20      VMDMCEUT        ENABLE AS PART OF USER TRACE
        08      VMDMCLC8        STATUS OF INTERCEPT LCTL CR8
                                FLAG IN SIEBK
        04      VMDMCSTC        STATUS OF INTERCEPT STCTL
                                FLAG IN SIEBK
        02      VMDMCPRG        STATUS OF INTERCEPT PROGRAM
                                INTERRUPTIONS FLAG IN SIEBK
        01      VMDMC10S        STATUS OF GUEST CR8 MONITOR CALL
                                10 BIT

2DA             H               RESERVED FOR FUTURE IBM USE
2DC     VMDCHPPT    004         POINTER TO INOP CHPID ARRAY
                                THE INOPERATIVE CHPID ARRAY IS A 256 BIT (32 BYTE)
                                ARRAY WHERE BITS 0 TO 255 REPRESENT CHPIDS 0 TO 255.
                                A BIT IS ON IF THE ASSOCIATED CHANNEL PATH IS NOT
                                OPERATIONAL (I.E. A CHANNEL PATH TERMINAL CRW HAS
                                BEEN RECEIVED FOR IT AND IT HAS NOT BEEN SUCCESSFULLY
                                RECOVERED).
2E0     VMDCACHN    004         NUMBER OF MINIDISK CACHE INSERTS
                                DURING INTERVAL.  NO SERIALI-
                                ZATION.  VALID IN BASE AND MP
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                                VMDBKS.
2E4   VMDCACFL    001           FLAG BYTE FOR MINIDISK CACHE
                                NO SERIALIZATION. VALID IN BASE
                                AND MP VMDBKS.
2E5               3X            RESERVED FOR FUTURE IBM USE
2E8               D             RESERVED FOR FUTURE IBM USE
2F0               D             RESERVED FOR FUTURE IBM USE
                                FIELDS FOR INSTRUCTION OPERAND PROCESSING

2F8   VMDVOBUF   004           THIS FIELD IS USED DURING
                                INSTRUCTION SIMULATION AND TRACE PROCESSING TO
                                FIND THE VIRTUAL OPERAND BUFFER.  THE VIRTUAL
                                OPERAND BUFFER IS USED TO PASS THE OPERANDS OF A
                                GUEST INSTRUCTION TO AND FROM MODULE HCPVOP.

                        EQUATES

        21    VMDVOSIZ        BUFFER LENGTH IN DOUBLEWORDS
                                32 DOUBLEWORDS ARE THE LARGEST OPERANDS POSSIBLE,
                                (EX: MVC INSTRUCTION.)  ONE EXTRA DOUBLEWORD IS
                                NEEDED FOR ALIGNMENT PURPOSES WHICH ALLOWS BLOCK
                                CONSISTENT ACCESS TO OPERANDS IN GUEST STORAGE.

2FC   VMDVOSAV   004           SIMULATION SAVBK STACK ANCHOR.
                                TO REDUCE THE PATH LENGTH IN A PERFORMANCE SENSITIVE
                                PATH, A STACK OF SAVBKS ARE ALLOCATED WHEN THE VMDBK
                                IS CREATED.  FREQUENTLY CALLED MODULE HCPVOP USES THE
                                SAVBK STACK RATHER THAN CALLING HCPFREE AND HCPFRET
                                TO OBTAIN AND RELEASE SAVBKS.

                        EQUATES

        03    VMDVODEP        DEPTH OF SIMULATION SAVBK STACK

300               0D
300   VMDXT       020           EXTERNAL INTERRUPT PENDING DATA.
300   VMDXTMFA    008           A BIT MASK FOR THE SOURCE
                                VIRTUAL CPUS WHICH HAVE MADE MALFUNCTION ALERTS
                                PENDING ON THIS VIRTUAL CPU.  THIS MASK IS USED
                                TO FIND ALL VIRTUAL CPUS WHICH HAVE MADE A
                                MALFUNCTION ALERT PENDING ON THIS VIRTUAL CPU.
308   VMDXTEMS    008           A BIT MASK OF THE SOURCE
                                VIRTUAL CPUS WHICH HAVE MADE EXTERNAL EMERGENCY
                                SIGNALS PENDING ON THIS VIRTUAL CPU.  THIS MASK IS
                                USED TO FIND ALL VIRTUAL CPUS WHICH HAVE MADE
                                EXTERNAL EMERGENCY SIGNALS TO THIS VIRTUAL CPU.
310   VMDXTSFI    004           ANCHOR OF PENDING SFXBK'S.
                                SFXBKS ARE USED TO MAINTAIN THE DATA REQUIRED FOR
                                GUEST SOFTWARE EXTERNAL INTERRUPTS WHILE THE
                                INTERRUPT IS PENDING.
314               F             RESERVED FOR FUTURE IBM USE
318   VMDTRQPT    004           ADDRESS OF TRQBK FOR GUEST
                                TIMERS WHILE THE GUEST IS IN A WAIT STATE.
31C   VMDVECTR    004           POINTER TO THE GUEST VECTOR
                                FACILITY CONTROL BLOCK (VECBK)
                                SOFTWARE-DEFINED-INTERRUPTION STATUS (VMC, PPF)
320               F             RESERVED FOR FUTURE IBM USE
324               F             RESERVED FOR FUTURE IBM USE
328   VMDSFIPM    004           SOFTWARE-GENERATED-INTERRUPT
                                ENABLEMENT MASK
328   VMDSFIP0    001           SOFTWARE INTERRUPT MASK BYTE 0

        BITS DEFINED FOR VMDSFIP0 BY HCPSFXBK SFXIMSK0

329   VMDSFIP1    001           SOFTWARE INTERRUPT MASK BYTE 1

        BITS DEFINED FOR VMDSFIP1 BY HCPSFXBK SFXIMSK1

32A   VMDSFIP2    001           SOFTWARE INTERRUPT MASK BYTE 2
32B   VMDSFIP3    001           SOFTWARE INTERRUPT MASK BYTE 3
                                FLOATING INTERRUPTION STATUS
32C   VMDFIN      004           POINTER TO FLOATING INTERRUPTION
                                QUEUE CONTROL (FINBK).  THE FINBK MAINTAINS A
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                        GUEST'S PENDING FLOATING EXTERNAL INTERRUPTS.
330   VMDPPFPT   004    LIST OF PSEUDO PAGE FAULT
                        PENDING INTERRUPTS (PPFBLCK)
334   VMDPPFCT   002    COUNT OF PSEUDO PAGE FAULTS FOR
                        ..PAGES NOT YET RESOLVED (THOSE
                        ..FOR WHICH AN INITIAL PAGEX
                        ..INTERRUPT HAS BEEN REFLECTED,
                        ..BUT NO COMPLETION INTERRUPT
                        ..HAS BEEN REFLECTED YET).
336               H    RESERVED FOR FUTURE IBM USE
                        VIRTUAL MACHINE CHECK SIMULATION FIELDS
338   VMDMCV     004    POINTER TO MCVBK, FOR GUEST
                        PENDING NON-FLOATING MACHINE CHECK INTERRUPTS.  A
                        SINGLE MCVBK IS ADDRESSED BY THIS FIELD THAT
                        CONTAINS ALL NON-FLOATING MACHINE CHECK CONDITIONS
                        THAT ARE PENDING AGAINST THIS VIRTUAL MACHINE.
33C   VMDCTFLT   004    COUNT OF HOST SEGMENT AND PAGE
                        FAULTS ON GUEST PAGES WHILE RUNNING THIS VIRTUAL CPU.
                        DOES NOT INCLUDE FAULTS ON RCP PAGES.
340               D    RESERVED FOR FUTURE IBM USE
348               D    RESERVED FOR FUTURE IBM USE
350               D    RESERVED FOR FUTURE IBM USE
358   VMDRTERM   004    USER DISPLAY STATION RDEVBK
                        ADDRESS.  THIS IS THE RDEV OF THE DISPLAY STATION
                        THE USER LOGGED ON TO.
35C   VMDVCONS   004    GUEST CONSOLE VDEVBLOK ADDRESS
360   VMDTOPTN   001    USER DEFINED DISPLAY STATION
                        OPTIONS

      BITS DEFINED IN VMDTOPTN (AT HEX DISPLACEMENT: 360)

      80    VMDCLEXT    AN EXTERNAL INTERRUPT IS TO BE
                        SIMULATED TO THE VIRTUAL MACHINE WHEN THE PA2 KEY IS
                        HIT.  (ONLY WHEN IN VM READ, MORE, OR HOLDING STATUS
                        AND THE TERMINAL APL ON COMMAND HAS BEEN ISSUED.)
      40    VMDEDIT     SPECIFIES THAT EDITING, USING
                        THE USER DEFINED EDITING CHARACTERS, IS TO BE DONE
                        ON CONSOLE INPUT.
      20    VMDATTCP    ONE OR MORE ATTENTIONS ON THE
                        CONSOLE WILL PUT THE CONSOLE INTO CP READ MODE.
      10    VMDTSTAM    REQUEST TIME STAMP ON CP OUTPUT
      08    VMDNOBKY    TERMINAL BREAK-KEY IS DISABLED
      04    VMDPFIKY    IMMEDIATE PF KEY REQUEST
      02    VMDGSTCL    BREAKIN IN GUESTCTL
      01    VMDHLITE    TERMINAL HILIGHT FLAG

361   VMDSCREN   001    MORE AND HOLDING STATUS FOR THE
                        DISPLAY SCREEN.

      BITS DEFINED IN VMDSCREN (AT HEX DISPLACEMENT: 361)

      80    VMDCRMOR    DISPLAY SCREEN AUTOMATICALLY
                        CLEARS AFTER 60 SECONDS WITH A 10 SECOND ALARM
                        WARNING.
      40    VMDCRHLD    SCREEN GOES TO 'HOLDING' STATUS
                        RATHER THAN 'MORE' IF ALARMED OUTPUT IS PRESENT
                        ON THE DISPLAY SCREEN.

362   VMDMORTM   002    CONTAINS THE TIME INTERVAL THAT
                        THE MORE STATUS WILL REMAIN ON THE DISPLAY SCREEN;
                        IS CURRENTLY 60 SECONDS FOR ALL VIRTUAL MACHINES.
                        A WARNING IS SOUNDED 10 SECONDS BEFORE THE MORE
                        STATUS WILL BE CLEARED AND THE WAITING OUTPUT IS
                        DISPLAYED.
364   VMDTOPT2   001    USER DEFINED DISPLAY STATION
                        OPTIONS BYTE 2

      BITS DEFINED IN VMDTOPT2 (AT HEX DISPLACEMENT: 364)

      80    VMDTLEOV    THE DEFAULT LINE-DELETE
                        CHARACTER HAS BEEN RESET FROM A CENT SIGN TO A LEFT
                        BRACKET AT LOGON FOR AN ASCII TERMINAL.
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365   VMDTRMDV   001      REAL DISPLAY DEVICE STATUS

        BITS DEFINED IN VMDTRMDV (AT HEX DISPLACEMENT: 365)

        80    VMDTRMIO    INDICATES TO I/O SUBSYSTEM THAT
                          THIS I/O HAS BEEN INITIATED TO A REAL DISPLAY DEVICE.

366             X         RESERVED FOR FUTURE IBM USE
367             X         RESERVED FOR FUTURE IBM USE
                          TERMINAL INPUT LINE EDITING CHARACTERS
368   VMDTEDIT  004       DISPLAY INPUT LINE EDITING
                          CHARACTERS
368   VMDTLEND  001       CONTAINS THE CHARACTER DEFINED
                          AS THE LINE END CHARACTER USED FOR EDITING CONSOLE
                          INPUT.
369   VMDTLDEL  001       CONTAINS THE CHARACTER DEFINED
                          AS THE LINE DELETE CHARACTER USED FOR EDITING CONSOLE
                          INPUT.
36A   VMDTCDEL  001       CONTAINS THE CHARACTER DEFINED
                          AS THE CHARACTER DELETE CHARACTER USED FOR EDITING
                          CONSOLE INPUT.
36B   VMDTESCP  001       CONTAINS THE CHARACTER DEFINED
                          AS THE ESCAPE CHARACTER USED FOR EDITING CONSOLE
                          INPUT.
                          EXTENDED COLOR AND EXTENDED HILIGHT FLAG BYTES
36C   VMDEXVMO  001       VM OUTPUT
                          THE FOLLOWING EQUATES APPLY TO THE EXTENDED COLOR AND
                          EXTENDED HILIGHT FLAG BYTES.

        CODES DEFINED IN VMDEXVMO (AT HEX DISPLACEMENT: 36C)

        00    VMDEXNON    NONE
        10    VMDEXBLI    BLINKING
        20    VMDEXREV    REVERSE VIDEO
        40    VMDEXUND    UNDERSCORE
        F0    VMDEXHGH    MASK TO ISOLATE EXTENDED
                          HILIGHTING.
        00    VMDEXDEF    DEFAULT
        01    VMDEXBLU    BLUE
        02    VMDEXRED    RED
        03    VMDEXPIN    PINK
        04    VMDEXGRE    GREEN
        05    VMDEXTUR    TURQUIOSE
        06    VMDEXYEL    YELLOW
        07    VMDEXWHI    WHITE
        0F    VMDEXCOL    MASK TO ISOLATE EXTENDED COLOR

36D   VMDEXINR  001       INPUT REDISPLAY

        CODES DEFINED FOR VMDEXINR BY HCPVMDBK VMDEXVMO

36E   VMDEXINA  001       INPUT AREA

        CODES DEFINED FOR VMDEXINA BY HCPVMDBK VMDEXVMO

36F   VMDEXSTA  001       STATUS AREA

        CODES DEFINED FOR VMDEXSTA BY HCPVMDBK VMDEXVMO

370   VMDEXCPO  001       CP OUTPUT

        CODES DEFINED FOR VMDEXCPO BY HCPVMDBK VMDEXVMO

371   VMDTTAB   001       TERMINAL TAB CHARACTER
372   VMDBRKKY  001       USER DEFINED BREAK-IN BY CP KEY
373             X         RESERVED FOR FUTURE IBM USE
374   VMDPFUNC  004       AN ANCHOR FOR A LIST OF 24 FULL
                          WORD POINTERS; ONE FOR EACH OF THE 24 PF KEYS.  THE
                          POINTER POINTS TO A GSDBK CONTAINING THE INPUT THAT
                          WAS USED TO SET THE FUNCTION OF THAT PARTICULAR PF
                          KEY.
378             F         RESERVED FOR FUTURE IBM USE
37C             F         RESERVED FOR FUTURE IBM USE
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380	VMDCOMND	008	LAST CP COMMAND EXECUTED
388		0D	
388	VMDCFCTL	001	CONSOLE FUNCTION CONTROL

BITS DEFINED IN VMDCFCTL (AT HEX DISPLACEMENT: 388)

80	VMDEXCF	INDICATES THAT CONSOLE FUNCTION EXECUTION IS IN PROGRESS. THAT IS, ONE OF THE FOLLOWING FUNCTIONS IS ACTIVE: THE STACK OF CONSOLE FUNCTION OUTPUT IS BEING DISPLAYED. THE CALL-FROM-CFM CPEBK STACK IS BEING UNSTACKED AND PROCESSED. THE COMMAND INPUT BUFFER IS BEING UNSTACKED AND COMMANDS ARE BEING PROCESSED. THIS BIT IS USED BY THE DISPATCHER TO PREVENT THE VMDBK FROM BEING DROPPED FROM THE DISPATCH LIST.
40	VMDDGCF	CONSOLE FUNCTION MODE ENTERED VIA DIAGNOSE INSTRUCTION
20	VMDCFRD	INDICATES WHEN A CONSOLE FUNCTION READ (CP READ APPEARS AT THE LOWER RIGHT HAND CORNER OF THE SCREEN) IS ACTIVE FOR A VIRTUAL CONFIGURATION. THIS IS USED TO AVOID ATTEMPTING A SUBSEQUENT CONSOLE FUNCTION READ BEFORE THE FIRST IS SATISFIED.
04	VMDSTOPD	INDICATES WHEN SET THAT A VIRTUAL CPU IS IN A HARD STOPPED STATE AS DEFINED BY 370 ARCHITECTURE. THAT IS, NO INSTRUCTIONS OR INTERRUPTIONS OTHER THAN THE RESTART INTERRUPTION MAY BE EXECUTED WHILE IN THIS STATE. THIS BIT IS USED BY CP TO DETERMINE WHICH VMDBKS MAY RUN. WHILE SET IN A VMDBK, THE VMDBK IS NOT ALLOWED TO RUN. IT IS SET WHEN HANDLING SOFT ABENDS AND PROGRAM INTERRUPT LOOPS, SYSTEM AND CPU RESETS, AND WHEN INITIALIZING VMDBKS. IT IS RESET WHEN PROCESSING THE BEGIN, IPL AND SYSTEM RESTART COMMANDS.
02	VMDCFIDL	INDICATES THAT THE GUEST CONFIGURATION IS IN CONSOLE FUNCTION WAIT AND IS IDLE. IT IS USED TO INDICATE THAT CONSOLE INPUT BE DIRECTED TO CP.
01	VMDCFACT	INDICATES THAT THE VIRTUAL MACHINE WAS ACTIVE SINCE THE LAST CP READ. IT IS USED TO CONTROL THE DISPLAY OF THE 'CP' PROMPT BEFORE ISSUING A CP READ. IF SET, NO PROMPT IS DISPLAYED. IF NOT SET FURTHER TESTS ARE MADE TO DETERMINE IF A PROMPT IS NECESSARY.

389	VMDCFLAG	001	CONSOLE FUNCTION STATUS FLAGS

BITS DEFINED IN VMDCFLAG (AT HEX DISPLACEMENT: 389)

80	VMDLOGON	USER NOT YET LOGGED ON
40	VMDLOGOF	USER IS LOGGING OFF. THIS BIT IS SET ONCE LOG OFF PROCESSING BEGINS FOLLOWING A COMMAND REQUESTING LOGOFF OF A USER OR CPU, OR A CP DETECTED PROBLEM REQUIRING A LOGOFF.
20	VMDREST	GUEST SYSTEM RESET IN PROGRESS. THIS BIT IS USED FOR TWO PURPOSES: TO FLAG SOFTWARE EXTERNAL INTERRUPT ROUTINES THAT THEY ARE BEING CALLED DUE TO A GUEST SYSTEM RESET; AND TO FLAG THE ROUTINE THAT RESTORES THE GUEST VIRTUAL PAGE USED BY THE IPL SIMULATOR THAT IT IS BEING CALLED DUE TO A SYSTEM RESET.
10	VMDUTERM	CONSOLE FUNCTION OUTPUT IS NOT TO BE DISPLAYED TO THE DISPLAY STATION, BUT IS WRITTEN TO AND CONTROLLED BY THE VIRTUAL CONSOLE. THIS IS USED FOR TRACE OUTPUT AND CP COMMANDS ISSUED VIA THE DIAGNOSE X'08' INSTRUCTION.
04	VMDBUFWT	VALID ONLY IN THE PRIMARY VMDBK: SET FOR CONSOLE FUNCTION OUTPUT TO A USER BUFFER ADDRESS FROM A DIAGNOSE CONSOLE FUNCTION COMMAND.

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                                WHEN SET, THE FOLLOWING FIELDS IN
                                THE PRIMARY VMDBK ARE ALSO VALID:

                                VMDBUFVM = ADDRESS OF VMDBK
                                VMDBUFAD = ADDRESS OF BUFFER
                                VMDBUFLN = REMAINING LENGTH
          02     VMDBUFIF       VMDBUFIF IS SET TO INDICATE THAT
                                A GUEST PSW SWAP OCCURRED IN THE SIMULATION OF A
                                DIAGNOSE X'08' INSTRUCTION THAT REQUESTED OUTPUT TO
                                A BUFFER.  THE PSW WAS SWAPPED TO REFLECT A PROGRAM
                                INTERRUPTION FOR AN INSTRUCTION FETCH PER EVENT.  IT
                                IS NECESSARY TO RECORD THIS INFORMATION IN VMDBUFIF
                                SINCE THE PROCESSING OF THE DIAGNOSE X'08' COMMANDS
                                OCCURS AFTER THE DIAGNOSE INSTRUCTION SIMULATION HAS
                                REACHED ENDOP AND THE PER EVENT PROGRAM INTERRUPTION
                                IS REFLECTED.  THE CONDITIN CODE FOR THE DIAGNOSE
                                INSTRUCTION MUST BE SET BASED ON THE SUCCESS OF
                                STORING THE COMMAND OUTPUT IN THE GUEST BUFFERS.
                                IF THE PER INSTRUCTION FETCH IS ACTIVE, THE
                                CONDITION CODE MUST BE SET IN THE GUEST'S PROGRAM
                                CHECK OLD PSW, OTHERWISE IT IS SET IN THE GUEST'S
                                CURRENT PSW.
          01     VMDCFNUL       INDICATES THAT NO DATA WAS INPUT
                                FROM THE LAST CONSOLE FUNCTION READ THAT HCPCFM
                                ISSUED.  IT IS USED TOGETHER WITH OTHER FLAGS TO
                                CONTROL THE DISPLAY OF THE 'CP' PROMPT BEFORE
                                ISSUING A CP READ.  IF SET, A PROMPT MAY BE REQUIRED.
                                IF NOT SET, NO PROMPT IS DISPLAYED.

38A   VMDOSTAT   001          VIRTUAL MACHINE OPERATING STATUS
                              SERIALIZED BY MASTER PROCESSOR

        BITS DEFINED IN VMDOSTAT (AT HEX DISPLACEMENT: 38A)

          80     VMDSYSOP       USER IS PRIMARY SYSTEM OPERATOR
          40     VMDUSRCT       USER INCLUDED IN SYSTEM USER CT
          10     VMDFORCE       USER IS TO BE LOGGED OFF.
                                THIS BIT IS SET WHENEVER CP DETERMINES THAT A VMDBK
                                MUST BE LOGGED OFF.  IT IS A CP REQUEST TO BEGIN
                                LOGOFF PROCESSING FOR A VMDBK.  THE REQUEST MAY BE
                                A FORCED LOGOFF OR AT THE USER'S REQUEST VIA THE
                                LOGOFF COMMAND.
          08     VMDUFORC       USER IS FORCED TO LOGOFF THE
                                SYSTEM.
          04     VMDDISC        USER IS RUNNING DISCONNECTED
          02     VMDAUTOL       AUTOLOGGED USER IN DISCONNECTED
                                MODE.  THIS BIT IS SET WHEN A USER IS AUTOLOGGED ON
                                AND REMAINS SET UNTIL THE USER ENTERS A LOGON COMMAND
                                FROM A DISPLAY STATION TO RECONNECT.
          01     VMDXAUTO       THE ORIGINAL COMMAND WAS
                                XAUTOLOG. VALID FOR THE BASE
                                VMDBK ONLY.

38B   VMDCWAIT   001          CF WAIT CONTROL

        BITS DEFINED IN VMDCWAIT (AT HEX DISPLACEMENT: 38B)

          80     VMDSTOP        VIRTUAL MACHINE IN STOP STATE
          40     VMDSLEEP       VIRTUAL MACHINE IS SLEEPING
          20     VMDCKST        VIRT CPU IN CHECK STOP STATE
          10     VMDDSCWT       USER IS IN 'DISCONNECTED WAIT'
                                MODE.  I/O WAS ATTEMPTED TO THE USER'S DISPLAY AND
                                THE USER WAS DISCONNECTED, SO A TIMER IS SET TO LOG
                                THE USER OFF IF NOT RECONNECTED WITHIN 15 MINUTES.

38C   VMDCFPND   001          CONSOLE FUNCTION IS PENDING.
                              THIS FIELD CONTROLS THE PROCESSING OF THE CONSOLE
                              FUNCTION TASK FOR A GUEST CONFIGURATION.  ONCE THE
                              C.F. TASK BEGINS, VMDCFPND IS SET TO ZERO TO KEEP
                              THE C.F. TASK ACTIVE AS LONG AS THERE ARE (POSSIBLY)
                              MORE CONSOLE FUNCTIONS TO HANDLE.
38D   VMDCFPDR   001          CONSOLE FUNCTION READ PENDING.
```

			USED IN HCPCFM TO INDICATE A CP READ REQUEST IS PENDING. A CP READ IS REQUESTED BY FIRST CALLING HCPCFMBK TO ASSIGN ZEROS TO VMDCFPDR, AND STACKING A GOTO TO HCPCFMRD TO HANDLE THE PENDING READ.
38E	VMDCFHXF	001	CONSOLE FUNCTION HALT FLAG. USED TO HALT LONG RUNNING CONSOLE FUNCTIONS (I.E. DISPLAY, DUMP) AND TO STOP ALL STACKED CONSOLE FUNCTION DISPLAY FROM BEING DISPLAYED. IT IS USED TO INTERRUPT CONSOLE FUNCTION OUTPUT WHEN THE USER ENTERS THE BRKKEY OR IS BEING FORCED TO LOGOFF.
38F	VMDCFLG2	001	CONSOLE FUNCTION STATUS FLAGS. THIS BYTE IS A LOGICAL EXTENSION OF VMDCFLAG.

BITS DEFINED IN VMDCFLG2 (AT HEX DISPLACEMENT: 38F)

80	VMDRSTLG	THE SYSTEM-RESET-CLEAR NEEDED FOR THE LOGOFF OF ONE OR MORE VMDBKS IN THIS CONFIGURATION HAS BEEN DONE. THIS BIT IS USED ONLY BY THE VMDBK LOGOFF PROCESSES AND MAY BE MISLEADING IF INSPECTED ELSEWHERE. THIS BIT IS ONLY VALID IN A BASE VMDBK.

390	VMDCFBUF	004	THIS IS THE ANCHOR TO A STACK OF INPUT BUFFERS (GSDBKS) CONTAINING CONSOLE COMMANDS TO BE PROCESSED. THE FIRST GSDBK ON THE STACK CONTAINS THE NEXT COMMAND TO BE PROCESSED.
394	VMDCFCAL	004	QUEUE OF CPEBKS TO BE SCHEDULED UPON ENTRY TO CONSOLE FUNCTION MODE. EXECUTE BLOCKS ARE STACKED ON THIS QUEUE WHEN A FUNCTION MUST EXECUTE WITH ALL VIRTUAL CPUS IN A VIRTUAL MP CONFIGURATION HELD AT ENDOP.
398	VMDCFREQ	001	CONSOLE FUNCTION ENTRY FLAG. INDICATES WHEN A VMDBK IN THE LOCAL CYCLIC LIST HAS BEEN REQUESTED TO ENTER HCPCFM TO SUPPORT CONSOLE FUNCTION ENTRY REQUIREMENTS. A VALUE OF X'FF' INDICATES A REQUEST HAS BEEN MADE. ZEROS INDICATE NO REQUEST HAS BEEN MADE. THIS FIELD IS USED TO ENSURE THAT ALL VMDBKS IN THE LOCAL CYCLIC LIST ENTER HCPCFM BEFORE ANY CONSOLE FUNCTIONS ARE PROCESSED. THIS IS PART OF THE TECHNIQUE TO REQUIRE ALL VMDBKS IN THE LOCAL CYCLIC LIST TO REACH ENDOP BEFORE PROCESSING CONSOLE FUNCTIONS.
399	VMDCFDSP	001	CONSOLE FUNCTION ENDOP FLAG. THIS FIELD INDICATES WHEN A VIRTUAL MACHINE IS BEING HELD AT ENDOP FOR CONSOLE FUNCTION MODE. A VALUE OF X'FF' INDICATES THE VMDBK WAS NOT RUNNING BUT WAS AT ENDOP. ZEROS INDICATE IT WAS RUNNING. HCPCFM SETS VMDCFDSP WHENEVER IT IS STOPPING A RUNNING VMDBK TO ENTER CONSOLE FUNCTION MODE. IT RESETS VMDCFDSP BEFORE EXITING TO HCPRUNU TO START A VMDBK RUNNING.
39A		X	RESERVED FOR FUTURE IBM USE
39B		X	RESERVED FOR FUTURE IBM USE
			THE FOLLOWING FIELDS ARE VALID ONLY IN THE PRIMARY VMDBK ADDRESSED BY VMDORIG IN EACH VMDBK WITHIN A LOCAL CYCLIC LIST
39C	VMDCFCNT	004	CONSOLE FUNCTION ENDOP COUNT. A POSITIVE VALUE IN THIS FIELD INDICATES A COUNT OF RUNNING VMDBKS IN A VIRTUAL CONFIGURATION. A ZERO VALUE INDICATES AN IDLE CONFIGURATION, ALL CPUS IN THE VIRTUAL CONFIGURATION ARE AT ENDOP. A VALUE OF MINUS ONE INDICATES THAT A CONSOLE FUNCTION IS RUNNING FOR THE CONFIGURATION. THIS FIELD IS THE CONSOLE FUNCTION LOCK, USED TO SERIALIZE THE PROCESSING OF CONSOLE FUNCTIONS. ONCE HELD EXCLUSIVELY (VMDCFCNT < 0), A CONSOLE FUNCTION TASK IS RUNNING AND NO SECOND CONSOLE FUNCTION TASK MAY BEGIN.
3A0	VMDCFLKQ	004	QUEUE OF CPEBKS THAT DEFERRED WAITING FOR CONSOLE FUNCTION LOCK. THIS FIELD ONLY HAS MEANING IN THE ORIGIN VMDBK.
3A4		F	RESERVED FOR FUTURE IBM USE
3A8	VMDCFCPU	004	ASYNCHRONOUS COMMAND AND

			CONSOLE FUNCTION READ TARGET. THIS FIELD CONTAINS THE ADDRESS OF THE VMDBK IN A VIRTUAL MP CONFIGURATION THAT IS TO RECEIVE ALL ' (ASYNCHRONOUS COMMANDS) AND INPUT FROM A CP READ. THE USER CHANGES THE VALUE IN THIS FIELD BY ISSUING THE 'CPU NNN' COMMAND. THE VMDBK ASSOCIATED WITH THE VIRTUAL CPU WITH CPU ADDRESS NNN WILL BE ASSIGNED TO VMDCFCPU.
3AC	VMDBUFVM	004	CONTAINS THE VMDBK ADDRESS OF THE VIRTUAL CPU THAT EXECUTED THE DIAGNOSE X'08' INSTRUCTION REQURING OUTPUT TO A BUFFER.
3B0	VMDBUFAD	004	THE GUEST REAL ADDRESS FOR A BUFFER TO RECEIVE THE NEXT CONSOLE FUNCTION OUTPUT FOR COMMANDS ISSUED VIA THE DIAGNOSE X'08' INSTRUCTION. THIS FIELD IS INITIALLY SET TO THE ADDRESS PROVIDED BY THE GUEST IN THE DIAGNOSE INSTRUCTION AND IS CONTINUALLY CHANGED AS OUTPUT IS MOVED TO THE BUFFER.
3B4	VMDBUFLN	004	CONTAINS THE LENGTH REMAINING IN THE DIAGNOSE X'08' CONSOLE FUNCTION BUFFER. IT IS INITIALLY SET TO THE LENGTH OF THE BUFFER AND IS CONTINUALLY CHANGED AS CONSOLE FUNCTION OUTPUT IS MOVED TO THE BUFFER.
			END OF PRIMARY-ONLY AREA FOR CONSOLE FUNCTION CONTROLS
3B8	VMDOSTAK	004	CONSOLE FUNCTION OUTPUT STACK. THIS IS AN ANCHOR OF A STACK OF GSDBKS CONTAINING OUTPUT FROM A CONSOLE FUNCTION THAT IS DEFERRED UNTIL THE CONSOLE FUNCTION COMPLETES.
3BC	VMDCFOPT	001	CONSOLE FUNCTION OPTIONS.
3BD		X	RESERVED FOR FUTURE IBM USE
3BE		X	RESERVED FOR FUTURE IBM USE
3BF	VMDCTYPE	001	COMMAND TYPE(S) THIS USER IS AUTHORIZED TO ISSUE.

BITS DEFINED FOR VMDCTYPE BY HCPCLASS USERCLS0

3C0	VMDPCL	004	AUTHORIZED PRIVILEGE CLASSES
3C0	VMDPCLB0	001	AUTHORIZED PRIV CLASSES - BYTE 0

BITS DEFINED FOR VMDPCLB0 BY HCPCLASS USERCLS0

3C1	VMDPCLB1	001	AUTHORIZED PRIV CLASSES - BYTE 1

BITS DEFINED FOR VMDPCLB1 BY HCPCLASS USERCLS1

3C2	VMDPCLB2	001	AUTHORIZED PRIV CLASSES - BYTE 2

BITS DEFINED FOR VMDPCLB2 BY HCPCLASS USERCLS2

3C3	VMDPCLB3	001	AUTHORIZED PRIV CLASSES - BYTE 3

BITS DEFINED FOR VMDPCLB3 BY HCPCLASS USERCLS3

3C4	VMDTRQDL	004	DELAYED SLEEP OR LOGOFF TRQBK POINTER. VMDTRQDL POINTS TO THE TRQBK THAT WAS SET TO EITHER TIME THE GUEST IN A SLEEP STATE FOR A LIMITED PERIOD OF TIME OR TO TIME FIFTEEN MINUTES BEFORE LOGGING OFF A DISCONNECTED GUEST FOLLOWING AN ATTEMPTED DISPLAY I/O (TIME BOMB LOGOFF).
3C8	VMDCTPWD	001	DIAGNOSE LINK PASSWORD COUNT
3C9	VMDMLVL	001	MESSAGE RECEIVING LEVEL

BITS DEFINED IN VMDMLVL (AT HEX DISPLACEMENT: 3C9)

80	VMDMSGON	CONTROLS WHETHER MESSAGES SENT BY OTHER USERS ARE DISPLAYED. (CONTROLLED BY THE SET MSG OR TERMINAL MSG COMMANDS)
40	VMDWNGON	CONTROLS WHETHER MESSAGES SENT USING THE WARNING COMMAND ARE DISPLAYED. (CONTROLLED BY THE SET WNG OR TERMINAL WNG COMMANDS)
20	VMDMCODE	CONTROLS ERROR MESSAGE DISPLAY OF THE ERROR MESSAGE CODE. (CONTROLLED BY THE SET EMSG OR TERMINAL EMSG COMMANDS)

	10	VMDMTEXT	CONTROLS ERROR MESSAGE DISPLAY OF THE ERROR MESSAGE TEXT. (CONTROLLED BY THE SET EMSG OR TERMINAL EMSG COMMANDS)
	08	VMDSPMSG	CONTROLS WHETHER SPECIAL MESSAGES SENT BY OTHER USERS CAN BE RECEIVED. (CONTROLLED BY THE SET SMSG COMMAND)
	04	VMDMIMSG	CONTROLS THE DISPLAY OF SELECTED CP COMMAND INFORMATIONAL RESPONSES. IF SET THE RESPONSES ARE DISPLAYED, IF NOT THE RESPONSES WILL NOT BE DISPLAYED. (CONTROLLED BY THE SET IMSG AND TERMINAL IMSG COMMANDS)
3CA	VMDMIUCV	001	'SET' COMMAND IUCV FLAGS

BITS DEFINED IN VMDMIUCV (AT HEX DISPLACEMENT: 3CA)

80	VMDMSGIU	INDICATES THAT MSG IS SET TO ..IUCV.
40	VMDWNGIU	INDICATES THAT WNG IS SET TO ..IUCV.
20	VMDEMSGI	INDICATES THAT EMSG IS SET TO ..IUCV.
08	VMDSMSGI	INDICATES THAT SMSG IS SET TO ..IUCV.
04	VMDIMSGI	INDICATES THAT IMSG IS SET TO ..IUCV.
02	VMDCPCOI	INDICATES THAT CPCONIO IS SET ..TO IUCV.
01	VMDVMCOI	INDICATES THAT VMCONIO IS SET ..TO IUCV.

3CB	VMDMSSFL	001	MESSAGE SYSTEM SERVICE FLAGS

BITS DEFINED IN VMDMSSFL (AT HEX DISPLACEMENT: 3CB)

80	VMDMSSVP	INDICATES THERE IS A VALID PATH ..TO THE MESSAGE SYSTEM SERVICE ..(AND THAT THE FIELD VMDPTHID ..IS THEREFORE VALID).
40	VMDMSSCS	INDICATES THAT AN IUCV "CONNECT" ..IS IN PROGRESS TO THE *MSG ..SYSTEM SERVICE.
20	VMDMSAVP	INDICATES THERE IS A VALID PATH ..TO THE *MSGALL SYSTEM SERVICE ..(AND THAT THE FIELD VMDMAPTH ..IS THEREFORE VALID).
10	VMDMSACS	INDICATES THAT CONNECTION ..PROCESSING HAS STARTED (AND ..POSSIBLY COMPLETED) FOR A ..PATH TO *MSGALL.

3CC	VMDPTHID	002	THE PATH ID FOR THE USERID'S ..CONNECTION TO THE MESSAGE ..SYSTEM SERVICE. THIS FIELD IS ..ONLY VALID WHEN THE FLAG ..VMDMSSVP IS SET.
3CE	VMDMAPTH	002	THE PATH ID FOR THE *MSGALL ..SYSTEM SERVICE'S CONNECTION ..TO THIS USERID. THIS FIELD ..IS ONLY VALID WHEN THE FLAG ..VMDMSAVP IS SET.
3D0		H	RESERVED FOR FUTURE IBM USE
3D2	VMDCTRAU	002	COUNT OF AUTOLOG COMMANDS THAT REJECT BECAUSE OF INCORRECT PASSWORDS. VALID ONLY IN ORIGIN VMDBK. SERIALIZATION: CONSOLE FUNCTION MODE. SHOULD NOT BE CHANGED OVER A SYSTEM INCIDENT.
3D4	VMDTREXT	004	ADDRESS OF EXTENDED TRACE BLOCK

EQUATES

D7	VMDTREX3	OVLY FOR TEST OF LOW-ORDER BYTE

3D8	VMDVCSAV	004	R13 AT LAST SAVEAREA CALL/RETURN
3DC		F	RESERVED FOR FUTURE IBM USE THIS AREA CAN BE USED TO SET A LOCAL TRAP WHICH IS ACTIVE ONLY FOR AN INDIVIDUAL USER. THE TRAP WOULD BE ACTIVATED BY 'BAL R14,VMDEBUG1'. USERS FOR WHICH THE TRAP DO NOT APPLY WOULD CONTAIN 'BR R14' IN THE DEBUG AREA. THE USER FOR WHICH THE TRAP IS TO BE EFFECTIVE WOULD HAVE A BRANCH INSTRUCTION REPLACING THE 'BR R14', WHICH WOULD BRANCH TO THE TRAP CODE. THE TRAP CODE WOULD LATER RETURN ON R14. THE FOLLOWING EIGHT HALFWORDS MUST EACH BE INITIALIZED TO BR R14
3E0	VMDEBUG1	002	RESERVED FOR PATCHING, DEBUGGING
3E4	VMDEBUG2	002	RESERVED FOR PATCHING, DEBUGGING
3E8	VMDEBUG3	002	RESERVED FOR PATCHING, DEBUGGING
3EC	VMDEBUG4	002	RESERVED FOR PATCHING, DEBUGGING THE ABOVE EIGHT HALFWORDS MUST EACH BE INITIALIZED TO BR R14
3F0	VMDEBUG5	004	RESERVED FOR PATCHING, DEBUGGING
3F4	VMDEBUG6	004	RESERVED FOR PATCHING, DEBUGGING
3F8	VMDEBUG7	004	RESERVED FOR PATCHING, DEBUGGING
3FC	VMDEBUG8	004	RESERVED FOR PATCHING, DEBUGGING
400	VMDIPLNM	008	DEVICE NUMBER IN EBCDIC OR NAMED SAVED SYSTEM (NSS) NAME FROM THE LAST IPL. IF VMDIPDEV IS SET THIS IS THE FOUR-DIGIT IPL DEVICE NUMBER LEFT JUSTIFIED; OTHERWISE, THIS IS THE NSS NAME LEFT JUSTIFIED AND PADDED WITH BLANKS.
408	VMDICCPV	004	DASD ADDRESS OF THE SAVED GUEST PAGE THAT IS BEING USED FOR THE IPL SIMULATOR FOR A PAGEABLE GUEST.
40C	VMDIADDR	004	GUEST REAL ADDRESS OF IPL SIMULATOR WITHIN GUEST STORAGE.
410	VMDIPLST	001	GUEST IPL FLAGS AND STATUS SERIALIZED BY THE MASTER PROCESSOR

BITS DEFINED IN VMDIPLST (AT HEX DISPLACEMENT: 410)

08	VMDFIPSV	INDICATES THAT THE IPL SIMULATOR CURRENTLY RESIDES IN A PAGE OF GUEST STORAGE. THE GUEST PAGE HAS BEEN SAVED BY CP DURING THE IPL.
04	VMDIPDEV	INDICATES THAT THE LAST IPL WAS DONE BY DEVICE NUMBER
02	VMDIPLOG	AN ASYNCHRONOUS XAUTOLOG COMMAND REQUIRES THAT THE IPL STATEMENT BE VERIFIED BY THE IPL PROCESSOR VALID FOR THE BASE VMDBK ONLY

411	VMDIPLKY	001	PRESERVES THE STORAGE KEY FROM THE GUEST PAGE USED FOR THE IPL SIMULATOR DURING A GUEST IPL.
412		H	RESERVED FOR FUTURE IBM USE
414	VMDIVPAG	004	IPL SIMULATOR HOST VIRTUAL ADDRESS OF V=R GUEST PAGE SAVED WHILE IPL IS IN PROGRESS
418	VMDIPGST	004	SAVED IPL PAGE STATUS INFO. SAVED IPL PAGE STATUS INFORMATION IS USED TO RESTORE THE GUEST SAVED IPL PAGE FOLLOWING THE COMPLETION OF THE IPL SIMULATOR. THE USE OF THE PAGE BY THE IPL SIMULATOR SHOULD NOT CHANGE ANY DATA IN THE PAGE OR THE STATUS OF THE PAGE UNLESS REQUESTED BY THE BY THE GUEST USING THE CLEAR OPTION ON THE IPL COMMAND.
41C		F	RESERVED FOR FUTURE IBM USE
420	VMDLDPRM	008	IPL LOAD PARAMETER. (THIS FIELD IS ONLY VALID IN A BASE VMDBK).
428	VMDPROBK	004	POINTER TO USER'S PROTECT BLOCK
42C	VMDIPLCM	004	POINTER TO LAST IPL COMMAND
430	VMDSYNCH	004	CPEBK POINTER INDICATING A SYNCHRONOUS AUTOLOG COMMAND IS WAITING FOR COMPLETION OF LOGON AND IPL PROCESSING ON THIS TARGET

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                              VMDBK.
434                 H         RESERVED FOR IBM USE
436                 X         RESERVED FOR IBM USE
437   VMDPROFL      001       PROTECTED APPLICATION FLAGS

        BITS DEFINED IN VMDPROFL (AT HEX DISPLACEMENT: 437)

        80      VMDPROAP      PROT. APPL. ENVIRONMENT ACTIVE

438                 F         RESERVED FOR FUTURE IBM USE
43C   VMDLANG       004       ADDRESS OF THE ACTIVE LANGBK
440   VMDLMSG       008       USERID FROM WHOM THE FORCED
                              LOGOFF WAS ISSUED, EITHER ANOTHER USER OR THE SYSTEM.
448   VMDFIDTE      004       FILEID TABLE ENTRY. RESIDES IN
                              SYSTEM VIRTUAL ADDRESS SPACE.
                              VALID ONLY IN BASE.
44C   VMDPGSPL      004       TOTAL NUMBER OF PAGES SPOOLED
                              FOR THIS USER. INCLUDES PAGES
                              SPOOLED FOR VIRTUAL RDR, PRT,
                              PUN, CONS, DUMP AND TRACE FILES.
450                 F         RESERVED FOR FUTURE IBM USE
454                 F         RESERVED FOR FUTURE IBM USE
458   VMDVSRCA      004       VIRTUAL START REQUEST COUNTER
                              ARRAY USED TO COUNT NUMBER OF VIRTUAL START REQUESTS
                              FOR A GIVEN DEVICE.

                        EQUATES

        00      VMDOFCON      OFFSET TO CONSOLE I/O COUNT

458   VMDVCSCT      004       COUNT OF START REQUESTS TO THE
                              VIRTUAL MACHINE CONSOLE.

                        EQUATES

        04      VMDOFDAS      OFFSET TO DASD I/O COUNT

45C   VMDVDSCT      004       COUNT OF VIRTUAL I/O REQUESTS
                              THE VIRTUAL MACHINE HAS ISSUED
                              TO DASD DEVICES.

                        EQUATES

        08      VMDOFOTH      OFFSET TO OTHER I/O COUNT

460   VMDVOSCT      004       COUNT OF START REQUESTS TO
                              DEVICES NOT DEFINED IN ARRAY.

                        EQUATES

        0C      VMDOFCTC      OFFSET TO CTCA I/O COUNT

464   VMDVTSCT      004       COUNT OF START REQUESTS TO
                              VIRTUAL CTCAS.

                        EQUATES

        10      VMDOFUR       OFFSET TO UNIT RECORD I/O COUNT

468   VMDVUSCT      004       COUNT OF START REQUESTS TO
                              VIRTUAL UNIT RECORD DEVICES.
46C   VMDX98CT      004       NUMBER OF TIMES DIAGNOSE X'98'
                              WAS ISSUED BY THIS VIRTUAL
                              MACHINE
470                 D         RESERVED FOR FUTURE IBM USE
478                 D         RESERVED FOR FUTURE IBM USE
480                 D         RESERVED FOR FUTURE IBM USE
488   VMDVFVTM      008       VECTOR FACILITY VIRTUAL TIME
490   VMDVFOTM      008       VECTOR FACILITY CP OVERHEAD TIME
498   VMDCTVFL      004       COUNT OF VECTOR FACILITY LOAD
                              OPERATIONS
49C   VMDPAGZP      004       GUEST PAGE ZERO HOST REAL ADDR,
                              IF THE FIELD IS NON-ZERO. THIS
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			FIELD IS NOT MAINTAINED FOR A VMDBK WHILE IN CONSOLE FUNCTION MODE.
4A0	VMDSHRPT	004	POINTER TO THE USER'S SHRBK CHAIN
4A4		F	RESERVED FOR FUTURE IBM USE
4A8		F	RESERVED FOR FUTURE IBM USE
4AC		F	RESERVED FOR FUTURE IBM USE
4B0	VMDUSER1	004	RESERVED FOR INSTALLATION USE
4B4	VMDUSER2	004	RESERVED FOR INSTALLATION USE
4B8	VMDUSER3	004	RESERVED FOR INSTALLATION USE
4BC	VMDUSER4	004	RESERVED FOR INSTALLATION USE
4C0	VMDUSER5	004	RESERVED FOR INSTALLATION USE
4C4	VMDUSER6	004	RESERVED FOR INSTALLATION USE
4C8	VMDUSER7	004	RESERVED FOR INSTALLATION USE
4CC	VMDUSER8	004	RESERVED FOR INSTALLATION USE
4D0		F	RESERVED FOR FUTURE IBM USE
4D4		X	RESERVED FOR FUTURE IBM USE
4D5	VMDXSO	003	EXPANDED STORAGE ORIGIN
4D8		X	RESERVED FOR FUTURE IBM USE
4D9	VMDXSL	003	EXPANDED STORAGE LIMIT
4DC	VMDXSTOR	004	THE NUMBER OF PAGES IN THE EXPANDED STORAGE FACILITY.
4E0		X	RESERVED FOR FUTURE IBM USE
4E1	VMDPGFLG	001	PAGING CONTROL FLAGS

BITS DEFINED IN VMDPGFLG (AT HEX DISPLACEMENT: 4E1)

10	VMDPWQD	TASKS WAITING FOR PAGE WAIT EXIT
01	VMDPZUNV	GUEST PAGE ZERO IS UNAVAILABLE

4E2		X	RESERVED FOR FUTURE IBM USE
4E3	VMDSECF	001	SECONDARY USER'S FUNCTIONALITY

BITS DEFINED IN VMDSECF (AT HEX DISPLACEMENT: 4E3)

02	VMDSECFP	USER WAS DEFINED AS A SECONDARY USER BY PRIMARY USER
01	VMDSECFY	USER'S FUNCTIONALITY AS A SECONDARY USER

4E4	VMDSECA	004	SECONDARY USER'S ADDRESS
4E8	VMDCPRDP	004	POINTER TO SCIF SECONDARY CP READ REQUEST AWAITING INPUT BY SECONDARY USER.
4EC	VMDVMRDP	004	POINTER TO SCIF SECONDARY VM READ REQUEST AWAITING INPUT BY SECONDARY USER.
4F0	VMDSECU	008	USERID OF THE SECONDARY USER. SCIF (SINGLE CONSOLE IMAGE FACILITY) ALLOWS A SECONDARY USER TO PROVIDE CONSOLE SERVICES FOR A DISCONNECTED USER.
4F8	VMDALTID	008	USERID OF AN END USER. ALL SPOOL FILES CREATE, WHILE THIS FILE IS NOT ZERO, WILL HAVE THIS USERID AS THE ORIGINATOR, RATHER THAN THE USERID IN VMDUSER. VALID ONLY IN BASE VMDBK. SERIALIZATION: STM AND LM TO SET AND TO READ.
500	VMDQFPNT	004	DISPATCH LIST FORWARD POINTER
504	VMDQBPNT	004	DISPATCH LIST BACKWARD POINTER THESE POINTERS ALSO USED IN ELIGIBLE, DORMANT LISTS
508		X	RESERVED FOR FUTURE IBM USE
509	VMDRSTAT	001	RUNNING BLOCKAGE STATUS. THIS FIELD CONTAINS FLAGS THAT PREVENT A DISPATCHED VMDBK FROM BEING RUN.

BITS DEFINED IN VMDRSTAT (AT HEX DISPLACEMENT: 509)

40	VMDCFWT	THE VMDBK IS IN CONSOLE FUNCTION WAIT. EITHER A CONSOLE FUNCTION IS ACTIVE, OR THE VIRTUAL MACHINE IS WAITING FOR THE REMAINING VMDBKS IN THE CONFIGURATION TO ENTER CONSOLE FUNCTION MODE. IN EITHER CASE, UNTIL ALL PENDING CONSOLE FUNCTIONS ARE SATISFIED FOR THE VIRTUAL CONFIGURATION, THIS BIT

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                        WILL REMAIN SET.  THE DISPATCHER ON FINDING THIS BIT
                        SET WILL NOT RUN A DISPATCHED VMDBK.
        20    VMDSIMWT  PERFORMING GUEST SIMULATION.
                        THIS BIT IS SET WHEN CP IS SIMULATING SOME HARDWARE
                        FUNCTION FOR THE GUEST (INSTRUCTIONS, INTERRUPTS,
                        TIMER UPDATES).  WHEN IN SIMULATION THE DISPATCHER
                        PREVENTS THE VIRTUAL MACHINE FROM RUNNING TO AVOID
                        POTENTIAL CONFLICTS WITH THE SIMULATION.
        10    VMDIOWT   INSTRUCTION WAITING FOR I/O
                        STATUS FOR COMPLETION.
                        (MAY BE CANCELLED WITHOUT
                        LOSS OF SYSTEM INTEGRITY.)

50A   VMDSLIST   001     SCHEDULING LIST DEFINITION

      CODES DEFINED IN VMDSLIST (AT HEX DISPLACEMENT: 50A)

        37    VMDDISPL  USER IS IN THE DISPATCH LIST
        21    VMDELIG   USER IS IN THE ELIGIBLE LIST
        0B    VMDDORM   USER IS IN THE DORMANT LIST
        00    VMDDNULL  VIRTUAL MACHINE IS NOT IN A LIST

50B   VMDDLCTL   001     DISPATCH LIST CONTROLS

      BITS DEFINED IN VMDDLCTL (AT HEX DISPLACEMENT: 50B)

        40    VMDDSEND  DISPATCH TIME SLICE EXCEEDED
        08    VMDIDROP  USER SHOULD BE DROPPED FROM
                        THE DISPATCH LIST IMMEDIATELY
        04    VMDLOVMP  VIRTUAL MP VOLUNTARY DROP
                        OF DISPATCH PRIORITY BEHIND
                        LOWEST VIRTUAL MP CPU IN THE
                        DISPATCH LIST
        02    VMDREORD  VMDBK IS TO BE REORDERED IN THE
                        DISPATCH LIST
        01    VMDRSCEL  VMDBK EXCEEDED LIMITS OF A
                        ..CONTROLLED RESOURCE.  VMDDLCTX
                        ..IDENTIFIES THE RESOURCE.
        FF    VMDSTKDL  ANY BIT REQUIRES HCPSTKDL CALL

50C   VMDSTATE   001     SCHEDULER/DISPATCHER STATE
                        IDENTIFICATION

      CODES DEFINED IN VMDSTATE (AT HEX DISPLACEMENT: 50C)

        63    VMDRVSPN  REVIEW SUSPENDED.  VMDBK SHOULD
                        BE CHANGED TO SUSPENDED STATE IF
                        THE C/S WORK BITS ARE ZERO,
                        ELSE BACK TO READY.
                        (CODE MUST BE MORE THAN VMDISPCH.)
                        (VMDISPCH IS ALSO IMPLIED.)
        58    VMDRVIDL  REVIEW IDLE.  VMDBK SHOULD BE
                        CHANGED TO TEST-IDLE STATE IF THE
                        C/S WORK BITS ARE ZERO,
                        ELSE BACK TO READY.
                        (CODE MUST BE MORE THAN VMDISPCH.)
                        (VMDISPCH IS ALSO IMPLIED.)
        4D    VMDISPCH  VMDBK HAS BEEN SELECTED BY THE
                        DISPATCHER.  THIS CODE IS ALSO
                        THE LOGICAL VMDBK DISPATCH LOCK.
        42    VMDREADY  VMDBK IS READY FOR SELECTION BY
                        THE DISPATCHER WHEN THE VMDBK
                        IS IN THE DISPATCH LIST
        37    VMDTIDLE  TEST-IDLE.
                        VMDBK IS READY FOR SELECTION BY
                        THE DISPATCHER BUT SHOULD BE
                        DROPPED FROM THE DISPATCH LIST
                        WHEN NEXT SELECTED.
        2C    VMDSUSPN  VMDBK IS SUSPENDED, WAITING FOR
                        A (PROBABLY) SHORT-TERM EVENT
                        TO OCCUR.
        00    VMDIDLE   VMDBK IS IDLE, NO WORK AVAILABLE
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50D                 X         RESERVED FOR FUTURE IBM USE
50E                 X         RESERVED FOR FUTURE IBM USE
50F   VMDDWFLG      001       WORK DISPATCHING CONTROL FLAGS

        BITS DEFINED IN VMDDWFLG (AT HEX DISPLACEMENT: 50F)

          08     VMDDWACO     VMDBK IS TO BE DISPATCHED ON
                              AFFINITY CPU ONLY
          04     VMDDWMCT     VMDBK NEEDS TO BE TRANSFERRED TO
                              THE MASTER CPU
          02     VMDDWMCO     VMDBK IS TO BE DISPATCHED ON
                              THE MASTER CPU ONLY

510   VMDQURCP    004         URGENT CPEBK PUSH-THRU STACK
514   VMDQIORF    004         IORBK/TRQBK PUSH-THRU STACK
518   VMDQCPEF    004         CPEBK PUSH-THRU STACK
51C   VMDDFRWK    004         DEFERED WORK COUNTER
520   VMDWRKCS    004         COMPARE-AND-SWAP WORK BITS FIELD
                              WHEN ACCESSED AS A FULL-WORD.
                              ALL CHANGES TO THIS WORD MUST
                              USE COMPARE-AND-SWAP LOGIC.
                              (FIELD USED BY DSP/STK/DSW ONLY)
                              (FOLLOWING 4 BYTES CONSTITUTE THE
                              CONTENTS OF THIS FULL-WORD)
520   VMDWRKCD    001         DISPATCHING/SCHEDULING WORK
                              (BITS USED BY DSP/STK/DSW ONLY)

        BITS DEFINED IN VMDWRKCD (AT HEX DISPLACEMENT: 520)

          80     VMDWKETS     ELAPSED TIME-SLICE END PENDING
          40     VMDWKHIP     HI-PRIORITY SCHEDULING REQUEST
          20     VMDWKMCO     MASTER CPU ONLY DISPATCH REQUIRED
          10     VMDWKGRL     VMDBK EXCEEDED WSS GROWTH LIMIT
          08     VMDWKPRM     VMDBK REQUIRES PRE-EMPTION FROM
                              ..DISPATCH LIST
          04     VMDWKCPX     VIRTUAL MP COMPLEX DROPPED. (USED
                              ..ONLY IN VIRTUAL MP ADJUNCTS)
          02     VMDWKLCK     A USER IN THE D-LIST VIA THE
                              "LOCKSHOT" MECHANISM (SEE
                              VMDLKSHT) SHOULD GO BACK TO THE
                              E-LIST FOR NORMAL SCHEDULING.

521   VMDWRKCK    001         EXECUTION-BLOCK STACK STATUS
                              (BITS USED BY DSP/STK/DSW ONLY)

        BITS DEFINED IN VMDWRKCK (AT HEX DISPLACEMENT: 521)

          80     VMDWKUCP     URGENT CPEBK STACKED
          40     VMDWKIOR     IORBK/TRQBK STACKED
          20     VMDWKCPE     CPEBK STACKED
          08     VMDWKCPF     CPEBK STACKED FOR CONSOLE FUNCTION

522   VMDWRKCL    001         RESERVED FOR FUTURE IBM USE
                              (CORRESPONDS TO LOCAL-ONLY WORK
                              BITS IN VMDWRKLC)
523   VMDWRKCB    001         STACKED WORK CONTROL BITS (USED
                              BY DSP/STK/DSW/PRG/TSA ONLY)

        BITS DEFINED IN VMDWRKCB (AT HEX DISPLACEMENT: 523)

          80     VMDWKCFM     ENTER HCPCFM FOR CONSOLE FUNCTION
          40     VMDWKTST     ENTER HCPTSMRG FOR TRACE TABLE
                              SAVE (SYSTEM VMDBK ONLY)
          20     VMDWKSIE     FORCE AN ENTRY INTO INTERPRETIVE
                              ..EXECUTION MODE.
          10     VMDWKALE     HANDLE AN ALERT CONDITION.  THIS
                              ..FORCES AN ENTRY INTO HCPALEWB.
          08     VMDWKMNI     MONITOR IUCV: INITIATE EVENT IUCV
                              SENDS FOR MONITOR DATA WHEN A
                              DIRECT CALL IS NOT POSSIBLE OR
                              WANTED.  (SYSTEM VMDBK ONLY)
          04     VMDWKMNX     MONITOR IUCV: INITIATE FRAME
                              REPLENISHMENT FOR THE MONITOR
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                                UNUSED FRAME LIST WHEN A DIRECT
                                CALL IS NOT POSSIBLE OR WANTED.
                                (SYSTEM VMDBK ONLY)
        02      VMDWKSCI        REQUEST XA SUBCHANNEL I/O
                                INTERRUPT SCAN AND RUN

524     VMDWRKLC    004         LOCAL WORK BITS
                                (FOLLOWING 4 BYTES CONSTITUTE THE
                                CONTENTS OF THIS FULL-WORD)
                                (NO COMPARE-AND-SWAP CAN BE USED.)
524     VMDWRKLD    001         DISPATCHING/SCHEDULING WORK
                                (BITS USED BY DSP/STK/DSW ONLY)

          BITS DEFINED FOR VMDWRKLD BY HCPVMDBK VMDWRKCD

525     VMDWRKLK    001         EXECUTION-BLOCK STACK STATUS

          BITS DEFINED FOR VMDWRKLK BY HCPVMDBK VMDWRKCK

526     VMDWRKLL    001         LOCAL-ONLY WORK BITS

          BITS DEFINED IN VMDWRKLL (AT HEX DISPLACEMENT: 526)

          80    VMDWKPIN        INDICATES A SIE INTERCEPTION WAS
                                PENDING WHEN SIE WAS INTERRUPTED.
          10    VMDWKRUN        INDICATES THAT WHEN DISPATCHED,
                                HCPRUNU MAY BE ENTERED FOR THIS VMDBK TO RUN THE
                                VIRTUAL MACHINE, TAKE A GUEST INTERRUPTION, ENTER
                                CONSOLE FUNCTION MODE, OR PERFORM OTHER GUEST CPU
                                ACTIVITY.

527     VMDWRKLB    001         STACKED WORK CONTROL BITS
                                FEATURE AFFINITY MASKS:

          BITS DEFINED FOR VMDWRKLB BY HCPVMDBK VMDWRKCB

528     VMDRPFTR    004         REQUIRED PROCESSOR FEATURE MASK
52C     VMDLPFTR    004         LOADED PROCESSOR FEATURE MASK
530     VMDDEDCP    004         DEDICATED HOST CPU LOGICAL CPU
                                IDENTIFIER MASK (NONE IF ZERO)
534     VMDDEDCA    002         CPU ADDRESS OF DEDICATED CPU
                                IF VMDDEDCP FIELD IS NON-ZERO
536     VMDDEDFG    001         DEDICATION FLAGS

          BITS DEFINED IN VMDDEDFG (AT HEX DISPLACEMENT: 536)

          80    VMDUNDED        AN EXPLICIT 'UNDEDICATE' COMMAND
                                ..HAS BEEN ISSUED FOR THIS
                                ..VMDBK.
          40    VMDAUDED        AUTOMATIC DEDICATION IS ENABLED
                                .. FOR THIS USER.

537               X             RESERVED FOR FUTURE IBM USE
538     VMDAPLDV    004         ACTUAL PROCESSOR LOCAL DISPATCH
                                ..VECTOR.
                                FOR EACH VMDBK IN A PROCESSOR LOCAL DISPATCH VECTOR,
                                INDICATES THE ADDRESS OF THE DISPATCH VECTOR THAT THE
                                VMDBK IS CURRENTLY IN.  FOR USERS WHO AREN'T CURRENTLY IN
                                A DISPATCH VECTOR, THE CONTENTS OF THIS FIELD ARE ZEROS.
                                THIS FIELD IS SERIALIZED BY THE SCHEDULER LOCK, AND SHOULD
                                BE SET TO ZERO OVER A SYSTEM TERMINATION FOR GUEST SURVIVAL.
53C     VMDHPLDV    002         HOME PROCESSOR LOCAL DISPATCH
                                ..VECTOR
                                FOR EACH VMDBK IN THE SYSTEM, INDICATES THE PFXINDEX*2**5
                                OF THE PROCESSOR TO WHICH THIS VMDBK CURRENTLY HAS SOFT
                                AFFINITY.  IT IS A DISPLACEMENT INTO THE LIST OF PROCESSOR
                                LOCAL DISPATCH VECTORS OF THE VECTOR THIS USER SHOULD BE
                                KEPT IN.  THIS FIELD IS MEANINGFUL EVEN FOR USERS WHO AREN'T
                                CURRENTLY ACTIVE OR IN THE DISPATCH LIST TO INDICATE WHAT
                                DISPATCH VECTOR THEY SHOULD BE PUT IN WHEN THEY BECOME
                                "READY", OR ARE ADDED TO THE DISPATCH LIST.  IT IS NOT
                                NECESSARILY THE DISPATCH VECTOR THE VMDBK IS CURRENTLY IN
                                (SEE THE VMDAPLDV FIELD), IT'S THE ONE IT WOULD PREFER TO
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BE IN. THIS FIELD IS SERIALIZED BY THE SCHEDULER LOCK, AND DOES NOT NEED TO BE CHANGED OVER A SYSTEM TERMINATION FOR GUEST SURVIVAL.

EQUATES

	05	VMDHDVSH	NUMBER OF BITS A PFXINDEX VALUE ..MUST BE SHIFTED LEFT TO BECOME ..A VMDHPLDV VALUE.
53E	VMDTIDCT	001	CURRENT VALUE OF TEST-IDLE ..TOLERANCE OR ZERO IF TEST-IDLE ..PROCESSING IS NOT TO BE USED ..FOR THIS VMDBK. THIS FIELD IS USED BY TEST-IDLE PROCESSING. IT IS SERIALIZED BY THE SCHEDULER LOCK, AND DOES NOT NEED TO BE CHANGED OVER A SYSTEM TERMINATION FOR GUEST SURVIVAL.
53F	VMDALEFG	001	ALERTING FLAGS. THIS BYTE CONTAINS REASONS WHY A VMDBK IS UNABLE TO FIELD "PASSTHROUGH" INTERRUPTIONS. WHEN THIS BYTE IS NON-ZERO, THE VMDBK IS CONSIDERED "INTERRUPTION INELIGIBLE". THIS FIELD IS SIGNIFICANT IN ALL V=R AND V=F VMDBKS, IS SERIALIZED BY THE DISPATCH LOCK, AND IS UNTOUCHED OVER GUEST SURVIVAL.

BITS DEFINED IN VMDALEFG (AT HEX DISPLACEMENT: 53F)

80	VMDALEW	VIRTUAL CPU IS IN ENABLED WAIT
40	VMDALVSI	VMDBK IS IN V/SIE MODE
20	VMDALUDI	VIRTUAL CPU IS EITHER NOT I/O ..INTERRUPTION CAPABLE (370 AP) ..OR IS "USUALLY DISABLED" FOR ..I/O INTERRUPTIONS IN CR6.

540	VMDCPUDS	002	HOST CPU ADDRESS ON WHICH USER WAS LAST DISPATCHED
542	VMDLPLDV	002	LOADED PROCESSOR LOCAL DISPATCH ..VECTOR FOR EACH VMDBK IN THE SYSTEM, VMDLPLDV IS THE PFXINDEX*2**5 (LIKE VMDHPLDV) OF THE PROCESSOR ON WHICH THIS VMDBK CURRENTLY HAS FEATURES LOADED. IT IS MEANINGFUL ONLY WHEN VMDLPFTR IS NON-ZERO. WHENEVER THE GUEST REQUIRES AFFINITY TO ANY LOADED FEATURE (I.E. (VMDRPFTR & VMDLPFTR) ¬= 0), IT MUST BE RUN ON THIS PROCESSOR.
544	VMDALECT	004	ALERTING COUNTER. THIS IS THE NUMBER OF VMDBKS IN THE VIRTUAL CONFIGURATION WHICH ARE ABLE TO FIELD "PASSTHROUGH" INTERRUPTIONS (ALSO CALLED "I/O INTERRUPTION ELIGIBLE"). THIS CORRESPONDS TO THE NUMBER OF VIRTUAL CPUS WHICH HAVE ZERO VALUES IN VMDALEFG. A -1 IN THIS FIELD MEANS THAT ALERTING IS BEING ENABLED OR DISABLED FOR THE ZONE. THIS FIELD IS SIGNIFICANT ONLY IN A BASE V=R OR V=F VMDBK, IS SERIALIZED BY COMPARE-AND-SWAP, AND IS UNCHANGED OVER GUEST SURVIVAL.
548	VMDTSLIC	008	DISPATCH (MINOR) TIME SLICE
550	VMDTTIME	008	SESSION TOTAL CPU TIME USED
558	VMDVTIME	008	SESSION VIRTUAL CPU TIME USED
560	VMDSUSCK	008	TOD CLOCK WHEN USER WAS MARKED SUSPENDED
568		FL8S12	RESERVED FOR FUTURE IBM USE
570	VMDDPRTY	008	DISPATCH LIST SORTING PRIORITY
578		D	RESERVED FOR FUTURE IBM USE
580	VMDMONDA	004	MONITOR STATUS FIELDS. CS LOGIC WILL BE USED ON THIS FULLWORD.
580		X	RESERVED FOR FUTURE IBM USE
581		X	RESERVED FOR FUTURE IBM USE
582		X	RESERVED FOR FUTURE IBM USE
583	VMDMONST	001	MONITORING STATUS

BITS DEFINED IN VMDMONST (AT HEX DISPLACEMENT: 583)

80	VMDMONEU	USER MONITORED FOR EVENTS
40	VMDMONSD	USER NOT BEING MONITORED FOR SAMPLE COLLECTION

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         20     VMDMONEC    USER MONITORED FOR SCHEDULER
                            EVENTS
         10     VMDMONTV    LAST TRANSACTION BY THIS USER
                            WAS TRIVIAL

584                 F      RESERVED FOR FUTURE IBM USE
588      VMDHFDAT   004     POINTER TO HIGH FREQUENCY DATA -
                            HCPHFUBK. SERIALIZED BY VMDHFLCK
58C      VMDHFLCK   004     LOCK FOR VMDHFDAT
590      VMDQ1SUM   004     MONITOR TRANSACTION-END DATA:
                            SUM OF Q1 EVENTS
594      VMDQSUMS   004     MONITOR TRANSACTION-END DATA:
                            SUM OF Q0, Q2, AND Q3 EVENTS
598                 D      RESERVED FOR FUTURE IBM USE
5A0                 D      RESERVED FOR FUTURE IBM USE
5A8                 F      RESERVED FOR FUTURE IBM USE
5AC      VMDTODAI   004     ADDRESS OF TOD ACCOUNTING
                            INFORMATION AREA IN A LOCKED GUEST PAGE.
5AC      VMDTODA0   001     INDICATES TYPE OF ADDRESS
5AD                 XL3     AND THE REST OF THE ADDRESS
5B0      VMDGSRBK   004     POINTER TO GUEST SURVIVAL
                            RECOVERY CONTROL BLOCK
5B4      VMDGSRST   004     GUEST SURVIVAL STATUS INFORMATION
5B4      VMDGSRFL   001     FLAGS FOR GUEST SURVIVAL STATUS

         BITS DEFINED IN VMDGSRFL (AT HEX DISPLACEMENT: 5B4)

         40     VMDGSBNC    GUEST SURVIVAL WHILE THE SYSTEM
                            IS BOUNCING. SET WHEN WE BEGIN
                            TERMINATING AND RESET AT EITHER
                            SUCCESSFUL RESTART OR ABANDONMENT
                            OF THE ATTEMPT TO RECOVER THE GUE
         20     VMDGSQWK    AT THE TIME OF A SYSTEM INCIDENT
                            THERE WAS QUEUED OR DEFERRED
                            WORK FOR THE V=R GUEST. THE WORK
                            IS LOST.
         01     VMDGSMSG    FREE STORAGE EXHAUSTED MESSAGE
                            HAS BEEN ISSUED BY HCPVRRFX

5B5      VMDGSRFG   001     FLAGS FOR GUEST SURVIVAL IPL AND
                            RESET STATUS

         BITS DEFINED IN VMDGSRFG (AT HEX DISPLACEMENT: 5B5)

         80     VMDGSIPL    GUEST IPL IN PROGRESS
         40     VMDGSRES    GUEST VIRTUAL SYSTEM RESET IN
                            PROGRESS

5B6      VMDGSIND   001     INDICATES GUEST SURVIVAL STATUS

         BITS DEFINED IN VMDGSIND (AT HEX DISPLACEMENT: 5B6)

         80     VMDGSURV    GUEST SURVIVAL IS POSSIBLE

5B7                 X      RESERVED FOR FUTURE IBM USE
5B8      VMDCHRSN   004     ANCHOR FOR RADIX TREE TO VIRTUAL
                            DEVICE BLOCKS BY SUBCHANNEL NO.
5BC      VMDCHRDN   004     ANCHOR FOR RADIX TREE TO VIRTUAL
                            DEVICE BLOCKS BY DEVICE NUMBER
5C0      VMDCHC     004     POINTER TO HCPCHCBK
5C4      VMDVSPRT   004     ADDRESS OF PRINTER VDEVBK FOR
                            USE BY DUMP, TRACE COMMANDS
                            VIRTUAL DEVICE COUNTS
5C8      VMDLIMDV   002     MAX NUMBER OF VIRTUAL DEVICES
                            WHICH CAN BE DEFINED BY THE USER
5CA      VMDMAXVS   002     HIGHEST VIRTUAL SUBCHANNEL
5CC      VMDMAXVD   002     HIGHEST VIRTUAL DEVICE NUMBER
5CE      VMDDEVCT   002     COUNT OF DEFINED DEVICES
5D0      VMDCCWOP   001     GUEST CCW TRANSLATION OPTIONS

         BITS DEFINED IN VMDCCWOP (AT HEX DISPLACEMENT: 5D0)

         80     VMDBPCCW    BYPASS CCW TRANSLATION
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			(CAN BE USED BY THE V=R USER ONLY) ('SET CCWTRAN OFF')
	40	VMDFAUTO	AUTOPOLL CCW HANDSHAKE ACTIVE
	20	VMDNOP	TRANSFER DATA FOR NOP CCW'S
5D1	VMDIOPTS	001	GUEST I/O SIMULATION OPTIONS GUEST I/O PASS THROUGH FIELDS
5D2	VMDIOPF1	001	REASONS FOR I/O PASS THROUGH BEING INACTIVE. VALID ONLY IN THE BASE VMDBK.

BITS DEFINED IN VMDIOPF1 (AT HEX DISPLACEMENT: 5D2)

80	VMDIOPBC	I/O PASS THROUGH IS INACTIVE BECAUSE GUEST USED A BC MODE PSW
40	VMDIOPCD	I/O PASS THROUGH IS INACTIVE BECAUSE IOASSIST IS SET OFF
20	VMDIOPDG	I/O PASS THROUGH IS INACTIVE BECAUSE GUEST ISSUED DIAG
10	VMDIOPIS	I/O PASS THROUGH IS INACTIVE BECAUSE GUEST DISABLED A VIRTUAL ISC THAT WAS GROUPED INTO A REAL DEDICATED ISC
08	VMDIOPVP	I/O ASSIST IS INACTIVE BECAUSE ONE OR MORE CHANNEL PATHS ARE IN THE PROCESS OF BEING VARIED OFFLINE
04	VMDIOPAL	I/O PASS THROUGH IS INACTIVE BECAUSE VIRTUAL MACHINE IS USING ADDRESS LIMIT CHECKING
02	VMDIOPMB	I/O PASS THROUGH IS INACTIVE BECAUSE GUEST MEASUREMENT BLOCK AREA EXCEEDS VIRTUAL MACHINE STORAGE SIZE
01	VMDIOPDS	I/O PASS THROUGH IS INACTIVE BECAUSE THE GUEST IS IN DCCF

5D3	VMDIOPF2	001	I/O PASS THROUGH FLAGS. VALID ONLY IN THE BASE VMDBK

BITS DEFINED IN VMDIOPF2 (AT HEX DISPLACEMENT: 5D3)

80	VMDIOPOP	THE SYSTEM IS CURRENTLY BEING REMOVED FROM I/O PASS THROUGH BUT CONDITIONS CAUSING THE REMOVAL HAVE CHANGED. THE SYSTEM CAN BE PUT BACK INTO PASS THROUGH, BUT ALL THE DEVICES ARE NOT YET OUT OF PASS THROUGH. WHEN ALL THE DEVICES ARE TAKEN OUT (COUNT IN VMDIOPNO GOES TO ZERO), PUT THE SYSTEM BACK INTO PASS THROUGH.
40	VMDIOP1T	THE SYSTEM WAS IN I/O PASS THROUGH AT ONE TIME, ALTHOUGH IT MAY OR MAY NOT BE CURRENTLY IN I/O PASS THROUGH.
20	VMDIOPM6	MONITOR THE GUEST'S USE OF CR 6 TO ENSURE THE GUEST DOES NOT SELECTIVELY ENABLE - DISABLE AN ISC WHICH CP DID NOT DEDICATE TO THE GUEST.
08	VMDIOPEW	I/O PASS THROUGH GUEST HAS ENTERED AN ENABLED WAIT STATE
04	VMDIOPIP	INITIAL IPL PSW FOR A 370 GUEST IS BC MODE.

5D4		H	RESERVED FOR FUTURE IBM USE
5D6	VMDIOPST	001	I/O PASS THROUGH STATE. VALID ONLY IN THE BASE VMDBK.

CODES DEFINED IN VMDIOPST (AT HEX DISPLACEMENT: 5D6)

	00	VMDIOPSN	I/O PASS THROUGH NOT ACTIVE
	80	VMDIOPSI	I/O PASS THROUGH BEING INITIALIZED
	C0	VMDIOPSA	I/O PASS THROUGH ACTIVE
	40	VMDIOPSR	I/O PASS THROUGH BEING REMOVED
5D7	VMDVIOF	001	VIRTUAL I/O FLAGS
	BITS DEFINED IN VMDVIOF (AT HEX DISPLACEMENT: 5D7)		
	80	VMDRVRIO	V=R GUEST IN I/O SYSTEM RESET PROCESSING GUEST I/O SIMULATION STATUS
5D8	VMDWVDEV	004	ADDRESS OF VDEVBK FOR STATUS RESPONSE
5DC	VMDIOACT	004	NUMBER OF I/O'S OUTSTANDING
5E0	VMDMIFLG	001	FLAG USED BY MISSING INT HANDLER
	BITS DEFINED IN VMDMIFLG (AT HEX DISPLACEMENT: 5E0)		
	80	VMDMIHON	MISSING INTERRUPTS ARE TO BE HANDLED BY CP FOR THIS GUEST
	01	VMDDPS	DYNAMIC PATH SELECTION CAPABLE (VALID ONLY IN BASE VMDBK AND VALID ONLY FOR XA MODE GUEST)
5E1	VMDTIOLP	001	TIO LOOP DETECTION FIELD
	BITS DEFINED IN VMDTIOLP (AT HEX DISPLACEMENT: 5E1)		
	80	VMDTIOBZ	GUEST IS APPARENTLY IN TIO BUSY OR TSCH BUSY ENDLESS LOOP UNTIL I/O COMPLETES
	60	VMDTSCBZ	TWO BIT COUNT OF TSCH BUSY
	20	VMDTSCX1	TSCH BUSY INITIAL COUNT VALUE
5E2	VMDTSCLP	002	TSCH LOOPING TEST DEVICE ADDRESS
5E4	VMDBLKIO	004	BLOCK I/O CHAIN POINTER
5E8	VMDCTSIO	004	COUNT OF VIRTUAL SIO'S, TO REAL DEVICES OR MINIDISKS
5EC	VMDCTRDR	004	COUNT IS MAINTAINED BY SPOOLING FOR EACH CARD READ. ACCOUNTING CALCULATES THE NUMBER OF CARDS READ BY COMPARING IT TO VMDACRDR, THE VALUE AT THE PREVIOUS ACCOUNTING. THE INDICATE USER COMMAND DISPLAYS THE FIELD. (NOTE: THIS COUNT PERTAINS TO SPOOLED INPUT ONLY. IT DOES NOT COUNT CARDS READ FROM DEDICATED DEVICES.)
5F0	VMDCTPCH	004	COUNT OF CARDS OUTPUTTED TO VIRTUAL SPOOLED PUNCHES. COUNT IS MAINTAINED BY SPOOLING FOR EACH CARD PUNCHED. ACCOUNTING CALCULATES THE NUMBER OF CARDS PUNCHED BY COMPARING IT TO VMDACPCH, THE VALUE AT THE PREVIOUS ACCOUNTING. THE INDICATE USER COMMAND DISPLAYS THE FIELD. (NOTE: THIS COUNT PERTAINS TO SPOOLED OUTPUT ONLY. IT DOES NOT COUNT CARDS PUNCHED ON DEDICATED DEVICES.)
5F4	VMDCTPRT	004	COUNT OF LINES SPOOLED TO VIRTUAL PRINTERS. COUNT IS MAINTAINED BY SPOOLING FOR EACH DATA RECORD PRINTED. CONTROL OPERATIONS SUCH AS EJECTS OR SKIPS ARE NOT COUNTED. ACCOUNTING CALCULATES THE NUMBER OF RECORDS PRINTED BY COMPARING IT TO VMDACPRT, THE VALUE AT THE PREVIOUS ACCOUNTING. THE INDICATE USER COMMAND DISPLAYS THE FIELD. (NOTE: THIS COUNT PERTAINS TO SPOOLED OUTPUT ONLY. IT DOES NOT COUNT LINES PRINTED ON DEDICATED DEVICES.)
5F8	VMDIOPNO	004	COUNT OF DEVICES TO BE TAKEN OUT OF I/O PASS THROUGH. VALID ONLY IN THE BASE VMDBK.
5FC	VMDIOPBK	004	ADDRESS OF IOPBK. USED ONLY IN ..A BASE V=R OR V=F VMDBK.

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                              ..SERIALIZED BY CONSOLE FUNCTION
                              ..MODE.  SHOULD NOT BE TOUCHED
                              ..OVER A SYSTEM INCIDENT.
600    VMDCYCLE    004        CYCLIC LIST OF LOGGED ON USERS
604    VMDLCYCL    004        USER-LOCAL CYCLIC LIST
608    VMDORIG     004        THE ORIGINATING VMDBK.  THIS IS
                              THE ADDRESS OF THE SINGLE VMDBK ESTABLISHED AT LOGON.
                              VIRTUAL MP VMDBKS ARE DEFINED FROM THE ORIGINATING
                              VMDBK.  ALL VMDBKS IN THE LOCAL CYCLIC LIST WILL USE
                              THIS FIELD TO ADDRESS THE ORIGINATING VMDBK OF THE
                              LOCAL CONFIGURATION.
60C    VMDBASE     004        THE ADDRESS OF THE VMDBK OWNING
                              THE STORAGE AND I/O CONFIGURATION FOR THE VIRTUAL MP
                              CONFIGURATION.  VMDBASE IS EQUAL TO THIS VMDBK
                              ADDRESS EXCEPT WHEN THE VMDTYPE OF THIS VMDBK IS
                              VMDTYPMP.
610    VMDCYCLH    004        VMDBK CYCLIC LIST HOLD STATE:
                              LOCK VALUE IS THE NUMBER OF
                              REQUESTS FOR THIS PROTOTYPE
                              VMDBK TO REMAIN IN THE GLOBAL
                              CYCLIC LIST (SHARED HOLDS),
                              OR NEGATIVE ONE (EXCLUSIVE
                              HOLD).  THE VMDBK MAY NOT
                              BE RELEASED FROM THE GLOBAL
                              CYCLIC LIST UNTIL THIS FIELD IS
                              ZERO.
614    VMDTTABK    004        POINTER TO TTABK (TRACE INSTR.
                              CODES IN EFFECT FOR THIS VMDBK)
618    VMDVSIVM    004        POINTER BETWEEN RGUEST AND V/SIE
                              VMDBK (BIDIRECTIONAL).
61C    VMDTDHBK    004        POINTER TO TDHBK ( TRACE SERVICE
                              TOOL DIAGNOSE HEADER BLOCK)
620    VMDADJL     004        LINKED LIST OF ADJUNCT VMDBKS
                              BASED OFF OF SRMADJL, AND
                              SERIALIZED WITH HCPLKADJ, THE
                              ADJUNCT LIST LOCK.
624                F          RESERVED FOR FUTURE IBM USE
628                F          RESERVED FOR FUTURE IBM USE
62C                F          RESERVED FOR FUTURE IBM USE
630                F          RESERVED FOR FUTURE IBM USE
634                F          RESERVED FOR FUTURE IBM USE
638    VMDRVMBK    008        RSM VMDBK/SNTBK MAP
638    VMDPSTO     004        SEGMENT TABLE ORIGIN
638                3X
63B    VMDPSTO3    001        RIGHTMOST 7 BITS ARE THE SEGMENT
                              TABLE LENGTH (IN UNITS OF 64
                              BYTE BLOCKS, MINUS 1)

       BITS DEFINED IN VMDPSTO3 (AT HEX DISPLACEMENT: 63B)

       01     VMDSTO01     2 64-BYTE BLOCKS (TO ADDRESS 32M)
       3F     VMDSTO3F     64 64-BYTE BLOCKS (TO ADDRESS
                           1024M (VM ONLY USES 999M))

63C    VMDSTOSZ    001        SEGMENT TABLE SIZE INDEX

       CODES DEFINED IN VMDSTOSZ (AT HEX DISPLACEMENT: 63C)

       00     VMDSTO32     SEGMENT TABLE SIZE = 32MEG
                           IF STORAGE KEY ASSIST IS AVAILABLE,
                           MAXIMUM GUEST ADDRESS = 32 MEG
                           IF STORAGE KEY ASSIST IS NOT AVAILABLE,
                           MAXIMUM GUEST ADDRESS = 31 MEG
       04     VMDSTO1G     SEGMENT TABLE SIZE = 1GIG
                           MAXIMUM GUEST ADDRESS = 999 MEG
       08     VMDSTO2G     SEGMENT TABLE SIZE = 2GIG
                           MAXIMUM GUEST ADDRESS = 1999 MEG

63D                X          RESERVED FOR FUTURE IBM USE
63E    VMDSEPOC    002        STEAL TIMER IN USE BY THIS VM
                              SERIALIZED BY STEAL TS LOCK
                              VALID ONLY IN BASE.
640    VMDUFOLK    008        USER FRAME OWNED LIST SPIN LOCK
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			ALL DATA ASSOCIATED WITH THE USER FRAME OWNED LIST CAN ONLY BE UPDATED BY HOLDING THIS LOCK. VMDCTFAC IS PART OF THAT DATA.
658	VMDRCPLK	008	RCP PRESERVATION DATA LOCK
670	VMDOLDXS	002	TIME STAMP OF THE OLDEST EXPANDED STORAGE BLOCK ASSIGNED BY CP TO THIS VMDBK. IDENTIFIES VIRTUAL MACHINES WITH RECLAIMABLE EXPANDED STORAGE BLOCKS.
672	VMDWRKXS	002	OLDEST XSTORE BLOCK ENCOUNTERED BY AN ACTIVE MIGRATE TASK.
674		F	RESERVED FOR FUTURE IBM USE
678	VMDCTFAC	004	CUMULATIVE COUNT OF FRAMES ..ACQUIRED. (DEFINED IN THE ..BASE VMDBK ONLY.) ..UPDATING IS SERIALIZED BY THE ..USER-FRAME-OWNED-LIST LOCK ..(VMDUFOLK). FETCHING IS VIA ..ATOMIC INSTRUCTIONS.
67C	VMDCTPFD	004	CUMULATIVE COUNT OF PAGE FAULTS WHICH RESULT IN A READ FROM DASD, EITHER MULTI-PAGE OR SINGLE-PAGE READ. VALID IN BASE VMDBK.
680	VMDPTRSH	004	CUMULATIVE COUNT OF PAGE TRANSLATIONS FOR SHARED PAGES.
684	VMDFLREO	004	CUMULATIVE COUNT OF FRAME LIST REORDERS FOR THIS VIRTUAL SYSTEM OR SHARED LIST OF FRAMES.
688	VMDPTIL	004	PAGE TABLE INVALIDATION LOCK THIS WORD IS USED IN THE BASE VMDBK TO SERIALIZE PAGE TABLE INVALIDATION. IT INDICATES TO THE ALR TASKS WHETHER AN IPTE INSTRUCTION IS NECESSARY TO INVALIDATE A PAGE TABLE ENTRY. IT INDICATES TO THE DISPATCHER NOT TO RUN A VIRTUAL MACHINE WHILE THE ALR FUNCTION IS STEALING PAGES FROM THIS VIRTUAL MACHINE.
68C	VMDSHDLK	004	V/SIE SHADOW TABLE LOCK THIS WORD IS USED TO SERIALIZE PAGE TABLE INVALIDATION IN THE SPECIAL CASE WHERE THE VMDBK BEING STOLEN FROM MAY ENTER VSIE. IT INDICATES TO THE AVAILABLE LIST REPLENISHMENT TASKS THAT PAGES CANNOT BE STOLEN FROM THIS VMDBK. IT INDICATES TO SIE SIMULATION ROUTINES THAT SHADOW TABLES MAY NOT BE MANIPULATED THE ALR FUNCTION IS STEALING PAGES FROM THIS VIRTUAL MACHINE

CODES DEFINED IN VMDSHDLK (AT HEX DISPLACEMENT: 68C)

FF	VMDSHALD	INDICATE THE LOCK IS OWNED BY THE DEMAND SCAN

690	VMDCTXBK	004	COUNT OF XSTORE BLOCKS USED FOR HOST PAGING FOR THIS GUES . THE XSTSTATL LOCK IS REQUIRED TO SERIALIZE UPDATES TO THIS FIELD. VALID IN BASE VMDBK.
694	VMDCTSPR	004	COUNT OF SPOOLING PAGE READS
698	VMDCTSPW	004	COUNT OF SPOOLING PAGE WRITES
69C	VMDCTMIG	004	COUNT OF VIRTUAL MACHINE PAGES MIGRATED BY CP FROM XSTORE TO DASD SINCE LOGON
6A0	VMDFR1ST	004	1ST USER OWNED LIST FRAME ENTRY (INITIALIZED AS POINTING TO ITSELF)
6A4	VMDFRLST	004	LAST USER OWNED LIST FRAME ENTRY (INITIALIZED AS POINTING TO ITSELF)
6A8	VMDUFEOR	004	UFO LIST LAST REFERENCED FRMTE THIS WORD IN THE BASE VMDBK WILL BE USED AS A POINTER TO THE LAST FRAME ON A USER FRAME OWNED LIST THAT HAS BEEN REFERENCED SINCE THE LAST REORDERING. THIS POINTER IS SET BY THE PREPARATION FOR REPLENISHMENT FUNCTION WHEN THIS LIST OF FRAMES HAS BEEN REORDERED, AND REFERENCE BITS RESET. IT IS USED BY THE ALR DEMAND SCAN. (INITIALIZED TO POINT TO VMDFR1ST)
6AC	VMDUFEOL	004	UFO LIST LAST ORDERED FRMTE THIS WORD IN THE BASE VMDBK WILL BE USED AS A POINTER TO THE LAST FRAME ON A USER FRAME OWNED LIST THAT HAS BEEN ORDERED. THIS POINTER IS SET BY THE PREPARATION FOR

			REPLENISHMENT FUNCTION WHEN THIS LIST OF FRAMES HAS BEEN REORDERED, AND REFERENCE BITS RESET. IT IS USED BY THE ALR DEMAND SCAN (INITIALIZED TO POINT TO VMDFR1ST)
6B0	VMDCTLKP	004	COUNT OF LOCKED USER PAGES
6B4	VMDCTPRS	004	RESIDENT PAGE COUNT
6B8	VMDMXRVP	004	MAXIMUM RESERVED PAGE COUNT
6BC	VMDCTPWT	004	PAGE WAIT COUNT
6C0	VMDCTPST	004	COUNT OF PAGES STOLEN FROM USER
6C4	VMDCTPGW	004	NUMBER OF PAGE WRITES
6C8	VMDCTPGR	004	NUMBER OF PAGE READS
6CC	VMDCWSS	004	ESTIMATED CORE WORKING SET SIZE ESTIMATED CORE WORKING SET SIZE IN THE BASE VMDBK IS THE NUMBER OF REAL FRAMES A VIRTUAL MACHINE SHOULD BE ALLOWED TO RETAIN. THIS VALUE IS DETERMINED BY THE SCHEDULER AND USED BY THE ALR TO DETERMINE THE NUMBER OF FRAMES TO TAKE FROM EACH VIRTUAL MACHINE
6D0		0D	DOUBLEWORD ALIGNMENT
6D0	VMDCFGCT	008	VIRT CONFIG. TOTAL CPU TIME THIS FIELD IS USED TO ACCUMULATE THE TOTAL TIME A VIRTUAL CONFIGURATION SPENDS IN EMULATION AND CP OVERHEAD. A COMPARE AND SWAP INSTRUCTION WILL BE USED ON THIS VALUE TO GUARANTEE THAT AN UPDATE FOR ANOTHER VMDBK IN THE VIRTUAL CONFIGURATION DOES NOT OCCUR ON A DIFFERENT CPU AT THE SAME TIME. THIS CALCULATION WILL BE USED TO DETERMINE WHEN A VMDBK'S FRAMES SHOULD BE REORDERED AND RESET BY AN AVAILABLE LIST REPLENISHMENT FUNCTION.
6D8	VMDCTXWT	004	COUNT OF VIRTUAL MACHINE PAGES PAGED OUT (WRITE) FROM MAIN STORAGE TO XSTORE SINCE LOGON.
6DC	VMDCTXRD	004	COUNT OF VIRTUAL MACHINE PAGES PAGED IN (READ) FROM XSTORE TO MAIN STORAGE SINCE LOGON.
6E0	VMDCTPPS	004	COUNT OF PREFERRED PAGING SLOTS
6E4	VMDCTNPS	004	COUNT OF SPOOLING AND NON-PREFERRED PAGING SLOTS
6E8	VMDTRMST	001	TRIM FUNCTION STATUS THIS BYTE WILL BE USED TO INDICATE WHEN A TRIM FUNCTION SHOULD BE PERFORMED FOR A PARTICULAR VMDBK. THIS FIELD IS SET BY THE PREPARATION FOR REPLENISHMENT FUNC. WHEN THIS LIST OF FRAMES HAS BEEN REORDERED, AND REFERENCE BITS RESET. IT IS USED BY THE DISPATCHER TO DETERMINE WHEN TO CALL THE TRIM FUNCTION. THE TRIM FUNCTION RESETS THIS FIELD WHEN A VMDBK HAS BEEN COMPLETELY TRIMMED.

BITS DEFINED IN VMDTRMST (AT HEX DISPLACEMENT: 6E8)

01	VMDTRMEN	TRIM FUNCTION ENABLED

6E9	VMDRFLOK	001	REORDER FUNCTION LOCK THIS BYTE WILL BE USED BY THE AVAILABLE LIST REPLENISHMENT REORDER FUNCTION AS A LOCK TO GUARANTEE THAT A REORDER IS DONE ONLY ONCE PER RESET INTERVAL FOR A VIRTUAL CONFIGURATION. TEST AND SET LOGIC WILL BE USED TO MANIPULATE THIS LOCK
6EA		X	RESERVED FOR FUTURE IBM USE
6EB	VMDORSNT	001	IDENTIFY VMDBK OR SNTBK

CODES DEFINED IN VMDORSNT (AT HEX DISPLACEMENT: 6EB)

00	VMDVMDBK	THIS BLOCK IS A VMDBK
80	VMDSNTBK	THIS BLOCK IS AN SNTBK

6EC	VMDFSAPT	004	VMDBK FREE STORAGE CHAIN POINTER
6F0	VMDFSACT	004	COUNT OF BLOCKS ON FREE STORAGE CHAIN
6F4	VMDRESET	004	CUMULATIVE COUNT OF REFERENCED FRAMES RESIDENT WHEN RESET WAS DONE FOR THIS VIRTUAL SYSTEM OR SHARED FRAME LIST.

EQUATES

C0	VMDRVMSZ	SIZE OF THE RSM SECTION

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6F8   VMDCSGS     004
6F8   VMDGSRSM    001       INDICATES FREE STORAGE STATUS
                            FOR GUEST SURVIVAL

        BITS DEFINED IN VMDGSRSM (AT HEX DISPLACEMENT: 6F8)

        80     VMDGSEXH     GUEST FREE STORAGE EXHAUSTED
        40     VMDGSFRE     GUEST VMDBK RESIDES IN STATIC
                            SYSGENED MEGABYTE AND SO FREE
                            STORAGE COMES FROM THAT REGION
        20     VMDGSCHN     V=R FREE STORAGE CHAIN IS BEING
                            UPDATED. THIS BIT ON AT INCIDENT
                            TIME PROHIBITS GUEST SURVIVAL.

6F9               X         RESERVED FOR FUTURE IBM USE
6FA               X         RESERVED FOR FUTURE IBM USE
6FB               X         RESERVED FOR FUTURE IBM USE
6FC   VMDVMDWU    004       COUNT OF DOUBLEWORDS OF
                            VMDBK FREE STORAGE IN USE.
700               0D
700   VMDSHARS    004       A SYMBOL USED AS A BASE FOR
                            INDEXING THE FOLLOWING TWO FIELDS, VMDRELSH AND
                            VMDABSSH.  CODE DEPENDS ON THESE FIELDS EACH BEING
                            FULLWORDS AND CONSECUTIVE IN THE FOLLOWING ORDER.
700   VMDRELSH    004       THIS USER'S RELATIVE SHARE OF
                            THE SYSTEM.  CODE SHOULD BE ABLE TO HANDLE A RANGE OF
                            1-32767, ALTHOUGH CURRENTLY, ONLY 1-10000 IS VALID.
704   VMDABSSH    004       THIS USER'S ABSOLUTE SHARE OF
                            THE SYSTEM (ALL CPUS).  THE RANGE IS 0.01-1.00.
708   VMDSCDF1    001       SCHEDULER FLAGS

        BITS DEFINED IN VMDSCDF1 (AT HEX DISPLACEMENT: 708)

        80     VMDTTIED     TOD-TIED ATTRIBUTE
        40     VMDLDGDL     USER REMAINED LOADING  DURING
                            ..ENTIRE DISPATCH LIST STAY
        10     VMDTREND     'REPORT TRANSACTION END'.  ALL
                            VMDBKS IN A USER'S VIRTUAL MP COMPLEX ARE IDLE
                            WHICH MEANS THAT THE NEXT TIME THE COMPLEX IS MOVED
                            TO THE ELIGIBLE LIST, TRANSACTION END SHOULD BE
                            CHECKED.
        08     VMDQDSPU     QUICKDISP USER DESIGNATION

709   VMDSCDF2    001       SCHEDULING FLAGS BYTE 2

        BITS DEFINED IN VMDSCDF2 (AT HEX DISPLACEMENT: 709)

        80     VMDCONTR     THIS IS A CONTINUING TRANSACTION
        40     VMDFRDSP     USER IS COMING FROM DISPATCH LIST
        20     VMDFRELG     USER IS COMING FROM ELIGIBLE LIST
        10     VMDFRDRM     USER IS COMING FROM DORMANT LIST
        08     VMDLRGST     USER WAS PRE-EMPTED DUE TO ITS
                            ..LARGE STORAGE REQUIREMENT
        04     VMDELTOD     USER ENTERED ELIGIBLE LIST PRIOR
                            ..TO TOD CLOCK BEING INITIALIZED
        02     VMDCKVMP     USER IS A BASE VMDBK COMING INTO
                            ..THE ELIGIBLE LIST FROM THE
                            ..DORMANT LIST. FOR ANY NON-BASE
                            ..VIRTUAL MP VMDBKS ALREADY IN
                            ..THE ELIGIBLE LIST, SET ITS
                            ..E-LIST CLASS TO THAT OF THE
                            ..BASE AND ADD THAT NON-BASE
                            ..INTO THE E-LIST CLASS COUNTS

70A   VMDDLCTX    001       EXTENSION FOR VMDDLCTL -
                            IDENTIFIES A CONTROLLED RESOURCE WHICH WAS EXCEEDED.

        BITS DEFINED IN VMDDLCTX (AT HEX DISPLACEMENT: 70A)

        80     VMDWSSGR     WSS GROWTH LIMIT EXCEEDED
        40     VMDPRMPT     USER IS TO BE PRE-EMPTED
        20     VMDCPLXD     COMPLEX DROPPED (VALID ONLY
                            ..FOR VIRTUAL MP ADJUNCT)
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	10	VMDESEND	ELAPSED TIMESLICE END EXCEEDED
	08	VMDVSEND	VOLUNTARY TIMESLICE END
	04	VMDCANLK	CANCEL "LOCKSHOT" FOR THIS USER AND SEND IT BACK TO THE E-LIST FOR ITS REGULARLY SCHEDULED STAY.

70B	VMDSACTL	001	SAVED COPY OF VMDDLCTL FOR LATER ..EXAMINATION OF WHY USER DROPPED ..FROM THE DISPATCH LIST

BITS DEFINED FOR VMDSACTL BY HCPVMDBK VMDDLCTL

70C	VMDSACTX	001	SAVED COPY OF VMDDLCTX. USED ..IN THE SAME WAY AS VMDSACTL.

BITS DEFINED FOR VMDSACTX BY HCPVMDBK VMDDLCTX

70D	VMDQSTAT	001	USER SCHEDULING STATUS

BITS DEFINED IN VMDQSTAT (AT HEX DISPLACEMENT: 70D)

80	VMDHOTRQ	HOT SHOT SCHEDULING REQUESTED
40	VMDHOTST	HOT SHOT USER SCHEDULING GRANTED
20	VMDLOADU	LOADING USER DESIGNATION
10	VMDIABIA	INTERACTIVE BIAS IS IN EFFECT
08	VMDPGBIA	PAGING BIAS IS IN EFFECT
04	VMDLKSHT	"LOCKSHOT" SCHEDULING IN EFFECT FOR THIS USER. USER SHOULD GO BACK FOR AN E-LIST STAY ONCE CRITICAL-PROCESS COUNT (VMDCTCRT) DROPS TO 0. SET ONLY IN A BASE VMDBK.
01	VMDNULL	VMDBK SHOULD BE DESTROYED BY THE SCHEDULER.

70E	VMDELIST	001	ELIGIBLE LIST CLASS FOR CURRENT TRANSACTION
70F	VMDPRVEL	001	PREV E-LIST CLASS (BEFORE HOTSHOT
710	VMDEPRTY	008	ELIGIBLE LIST PRIORITY VALUE
718	VMDPRVEP	008	PREV E-LIST PRIORITY (B4 HOTSHOT
720	VMDTIDPR	008	TEST-IDLE STATE SAVEAREA FOR PRIOR D-LIST PRIORITY VALUE
728	VMDOPRTY	008	A VERSION OF VMDDPRTY COMPUTED WITHOUT CONSIDERING THE PRESENCE OF INTERACTIVE BIAS.
730	VMDSLCNT	002	COUNT OF MINOR TIMESLICES COMPLETED SO FAR DURING THIS TRANSACTION. THIS FIELD IS PROTECTED BY THE SCHEDULER LOCK.
732	VMDSLCAD	002	VMDSLCNT SAVED AT D-LIST ADD
734	VMDURRSP	004	USER'S RESOURCE REQUIREMENT FOR ..STORAGE AND PAGING.
738	VMDRTHRU	004	REQUIRED THROUGHPUT WHILE USER ..IS IN THE DISPATCH LIST
73C	VMDWSSPR	004	WORKING SET SIZE PROJECTION
740	VMDHOTWS	004	ALTERNATE WSS FOR HOTSHOT
744	VMDRPLIM	004	WORKING SET GROWTH LIMIT. ..WHEN THE COUNT OF FRAMES ..ACQUIRED REACHES THIS VALUE, ..IT IS TIME TO CHECK IN WITH ..THE SCHEDULER BY CALLING ..HCPSTKGL.
748	VMDELGST	001	A FLAG BYTE MANIPULATED BY TEST-AND-SET INDICATING WHETHER OR NOT PAGES WERE STOLEN FROM A VMDBK WHILE IT WAS IN THE ELIGIBLE LIST. THE BYTE IS INITIALIZED TO X'FF' AND SET TO X'00' VIA A MVI WHEN PAGES ARE TAKEN FROM THE VMDBK. THE SCHEDULER WILL THEN TS THIS BYTE WHEN IT NEXT DETERMINES THE VMDBK'S PRIORITY.
749	VMDRFPGR	001	A FLAG BYTE INDICATING WHETHER OR NOT ANY OF A VMDBK'S REFERENCED PAGES WERE TAKEN FROM REAL STORAGE.

CODES DEFINED IN VMDRFPGR (AT HEX DISPLACEMENT: 749)

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        FF    VMDSTLPG    REFERENCED PAGE TAKEN

74A   VMDRFPGX   001       A FLAG BYTE INDICATING WHETHER
                            OR NOT ANY OF A VMDBK'S REFERENCED PAGES WERE TAKEN
                            FROM XSTORE.

        CODES DEFINED FOR VMDRFPGX BY HCPVMDBK VMDRFPGR

74B               X         RESERVED FOR FUTURE IBM USE
74C   VMDTLPRS    004       THE LAST RESIDENT PAGE COUNT
                            WHEN THE VMDBK WAS DROPPED FROM THE D-LIST.  IT IS
                            USED TO CALCULATE A USER'S WORKING SET FACTOR TO
                            RE-CALCULATE THE INITIAL D-LIST PRIORITY.
750   VMDCCPGR    004       COUNT OF CUMULATIVE PG READS (AT
                            ..START OF MINOR TIME SLICE)
754   VMDTLPGR    004       COUNT OF CUMULATIVE PAGE READS
                            (CCPGR) AT ENTRY TO D-LIST
758   VMDPGRTE    004       PAGING RATE DURING LAST D-LIST
                            ..STAY

                            POINTERS:

75C   VMDDFPNT    004       FORWARD DISPATCH PAGE STEAL LIST
                            ..POINTER
760   VMDDBPNT    004       BACKWARD DPS-LIST POINTER
764   VMDEDFAC    004       ELIGIBLE LIST DELAY FACTOR. THIS
                            ..IS THE ACTUAL TIME THE USER
                            ..SPENT IN THE ELIGIBLE LIST
                            ..DURING ITS LAST STAY,
                            ..EXPRESSED AS A MULTIPLE OF
                            ..ITS CURRENT ELAPSED TIME SLICE.
                            ..THIS FIELD IS VALID ONLY WHILE
                            ..THE USER IS IN THE DISPATCH
                            ..LIST.

                            MISCELLANEOUS TOD AND ELAPSED TIME RECORDINGS

768   VMDESLIC    008       ELAPSED TIME SLICE FOR D-LIST
770   VMDEQTOD    008       TOD AT LAST D-LIST ENTRY
778   VMDDQTOD    008       TOD AT LAST DROP FROM THE D-LIST
780   VMDDTIME    008       ACTUAL TIME IN D-LIST (LAST STAY)
                            ..USED TO GET EXPANSION FACTOR
788   VMDETIME    008       ACTUAL TIME IN E-LIST (LAST STAY)
                            ..USED TO GET EXPANSION FACTOR
790   VMDEETOD    008       TOD AT LAST E-LIST ENTRY
798   VMDSTTOD    008       TOD AT LAST STARTED TRANSACTION
7A0   VMDMTTOD    008       TOD AT LAST STARTED TRANSACTION
                            ..FOR MONITOR
7A8   VMDMPSUS    008       MOST-RECENT VMDSUSCK TIME IN
                            ..THE MP COMPLEX

                            EVENT COUNTS MAINTAINED FOR THE MONITOR FACILITY:

7B0   VMDCIDLD    002       COUNT OF USER WENT IDLE   DROPS
7B0   VMDCIDL0    002       ... FOR Q0 USER DROPS
7B2   VMDCIDL1    002       ... FOR Q1 USER DROPS
7B4   VMDCIDL2    002       ... FOR Q2 USER DROPS
7B6   VMDCIDL3    002       ... FOR Q3 USER DROPS
7B8   VMDCETSD    002       COUNT OF E-SLICE END      DROPS
7B8   VMDCETS0    002       ... FOR Q0 USER DROPS
7BA   VMDCETS1    002       ... FOR Q1 USER DROPS
7BC   VMDCETS2    002       ... FOR Q2 USER DROPS
7BE   VMDCETS3    002       ... FOR Q3 USER DROPS
7C0   VMDCWSGD    002       COUNT OF WSS GROWTH LIMIT DROPS
7C0   VMDCWSG0    002       ... FOR Q0 USER DROPS
7C2   VMDCWSG1    002       ... FOR Q1 USER DROPS
7C4   VMDCWSG2    002       ... FOR Q2 USER DROPS
7C6   VMDCWSG3    002       ... FOR Q3 USER DROPS
7C8   VMDCPRMD    002       COUNT OF PRE-EMPTION      DROPS
7C8   VMDCPRM0    002       ... FOR Q0 USER DROPS
7CA   VMDCPRM1    002       ... FOR Q1 USER DROPS
7CC   VMDCPRM2    002       ... FOR Q2 USER DROPS
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7CE	VMDCPRM3	002	... FOR Q3 USER DROPS
7D0	VMDCTIDL	002	COUNT OF TEST IDLE GRANTED.
7D2	VMDCNTID	002	COUNT OF NO TEST IDL GRANTED DROP
7D4		H	RESERVED FOR FUTURE IBM USE
7D6		H	RESERVED FOR FUTURE IBM USE
7D8	VMDLKSDL	004	TOTAL TIME THIS USER HAS BEEN IN THE DISPATCH LIST UNDER LOCKSHOT SCHEDULING. RESET TO 0 WHEN LOCK SHOT ENDS (TOD BITS 0-31 ONLY)
7DC	VMDCTCRT	004	COUNTER OF CRITICAL-PROCESSES THIS VMDBK IS RESPONSIBLE FOR. VMDBK MUST NOT WAIT IN THE ELIGIBLE LIST WHILE THIS COUNT IS GREATER THAN 0. SET ONLY IN THE BASE VMDBK. SERIALIZED BY COMPARE-AND-SWAP.
7E0	VMDTRQQS	004	POINTER TO SCHEDULING TRQBLOK
7E4		F	RESERVED FOR FUTURE IBM USE
7E8		D	RESERVED FOR FUTURE IBM USE
7F0		D	RESERVED FOR FUTURE IBM USE
7F8		D	RESERVED FOR FUTURE IBM USE
800	VMDVMCFL	008	VMCF LOCKWORD SEMAPHORE
818	VMDVMCB	004	POINTER TO CHAIN OF VMCBLOKS. EACH VMCBLOK CONTAINS DATA TRANSFER AND STATUS INFORMATION USED BY THE VIRTUAL MACHINE CONFIGURATION FACILITY (VMCF).
81C	VMDVSEVM	004	NUMBER OF TIMES VMCF DATA WAS SUCCESSFULLY TRANSFERRED BY THIS VIRTUAL MACHINE.
820	VMDVSTVM	004	NUMBER OF TIMES VMCF DATA WAS SUCCESSFULLY TRANSFERRED TO THIS VIRTUAL MACHINE.
824	VMDVSUVM	004	NUMBER OF TIMES VMCF DATA WAS NOT SUCCESSFULLY TRANSFERRED BY THIS VIRTUAL MACHINE.
828	VMDIUCVL	008	IUCV LOCKWORD SEMAPHORE
840	VMDIUCVB	004	POINTER TO IUCV BLOCK
844	VMDISEVM	004	NUMBER OF TIMES IUCV DATA WAS SUCCESSFULLY TRANSFERRED BY THIS VIRTUAL MACHINE.
848	VMDISTVM	004	NUMBER OF TIMES IUCV DATA WAS SUCCESSFULLY TRANSFERRED TO THIS VIRTUAL MACHINE.
84C	VMDISUVM	004	NUMBER OF TIMES IUCV DATA WAS NOT SUCCESSFULLY TRANSFERRED BY THIS VIRTUAL MACHINE.
850	VMDSVMID	008	USERID OR CP SYSTEM SERVICE NAME FOR THE LAST SUCCESSFUL IUCV OR VMCF SEND FOR THIS VIRTUAL MACHINE.
858		D	RESERVED FOR FUTURE IBM USE
860	VMDSVMFX	004	COUNT OF TIMES SVM-WAIT FLAG WAS LEFT ON AT TRANSACTION END AND WAS RESET BY THE SCHEDULER.
864	VMDSVMWT	001	SERVICE VIRTUAL MACHINE WAIT FLAG.

BITS DEFINED IN VMDSVMWT (AT HEX DISPLACEMENT: 864)

80	VMDSVMWF	VMDBK IS WAITING FOR A RESPONSE FROM IUCV OR VMCF.

865	VMDSVMW2	001	BACK-UP BYTE FOR VMDSVMWT.

BITS DEFINED FOR VMDSVMW2 BY HCPVMDBK VMDSVMWT

866	VMDRDYCM	001	READIED-BY/RECEIVED-INTERRUPT-FROM COMMUNICATIONS FLAG.

BITS DEFINED FOR VMDRDYCM BY HCPVMDBK VMDSVMWT

867		X	RESERVED FOR FUTURE IBM USE
868	VMDVGRPT	004	VM GROUP BLOCK POINTER USED BY

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                                THE GROUP CONTROL SYSTEM (GCS).
86C   VMDSIGID    002           SIGINAL ID OF THIS VM GROUP
                                MEMBER.
86E               H             RESERVED FOR FUTURE IBM USE
870               D             RESERVED FOR FUTURE IBM USE
878               D             RESERVED FOR FUTURE IBM USE
880   VMDLSPAC    008           USER-LOCAL FREE STORAGE AREA
                                THIS AREA IS MANAGED BY HCPFRE AS FREE STORAGE
                                WHICH IS LOCAL TO THE VMDBLOK.  FREE STORAGE BLOCKS
                                ALLOCATED FROM THIS AREA ARE LONG-TERM BLOCKS WHICH
                                ARE ASSOCIATED ONLY WITH THIS VMDBLOK.

                        EQUATES

          F0    VMDLSPSZ      LOCAL SPACE SIZE, DOUBLE WORDS
          80    VMDLSLEN      LOCAL SPACE BYTE LENGTH
          00    VMDBKSIZ      SIZE OF VMD BLOCK IN DOUBLEWORDS
                              S/B 512 DOUBLE WORDS (X'200')
          FF    VMDKKLT1      LENGTH CHECK
          FF    VMDKKLT2      LENGTH CHECK
                              (GIVES OVERFLOW ERROR IF NOT A FULL-PAGE LENGTH)


          REDEFINITION - FREE STORAGE HEADER PROTOTYPE

880   VMDLCPTR    004           POINTER TO NEXT CHUNK
884   VMDLCLEN    004           LENGTH OF THIS CHUNK IN BYTES

          REDEFINITION - I/O PASSTHROUGH CONTROL LEVEL 2


          NOTE: THIS REDEFINITION INVOLVES FIELDS IN THE STATE ****


          REDEFINITION - FOR V/SIE VMDBLOK ONLY

280   VMDWUTOD    008           TOD CLOCK AT LAST USE OF THIS
                                V/SIE VMDBK.  THIS TIME STAMP IS USED BY HCPSTP TO
                                RELEASE V/SIE VMDBKS THAT HAVE NOT BEEN USED FOR
                                APPROXIMATELY 2 MINUTES.
288   VMDWRGVT    008           THE RGUEST VMDVTIME, AT THE TIME
                                THE VGUEST IS RUN, IS SAVED HERE FOR USE IN ADJUSTING
                                RGUEST TIMERS AFTER AN EXIT FROM SIE.
290   VMDWTIME    008           ACCUMULATED CPU TIME IN HOST
                                EMULATION MODE FOR V/SIE.
298   VMDWG145    008           RGUEST R14,R15 WHILE IN V/SIE
                                MODE.  R14 AND R15 ARE THE ONLY REGISTERS PRESERVED
                                AND RESTORE BY THE EMULATION FACILITY.  FOR V/SIE
                                THEY MUST BE PRESERVED FOR THE RGUEST.

                        MORE EQUATES

          03    VMDIMLT4      TO ENSURE FIELD IS MULTIPLE OF 4
          80    VMDSSON       SPACE SWITCH CONTROL BIT IS ON
          80    VMDCEIOW      IN CACHE-ELIGIBLE I/O WAIT
          40    VMDSPPGW      IN SPOOL OR OTHER NON-FAULT WAIT
          10    VMDCFRUN      GUEST MACHINE CAN RUN FOLLOWING
                              A CONSOLE FUNCTION OPERATION WITHOUT REQUIRING THE
                              USER TO ENTER A 'BEGIN' COMMAND OR A COMMAND WITH
                              AN IMPLIED BEGIN.  THIS BIT IS SET AND RESET BY THE
                              'SET RUN' COMMAND.
          80    VMDTODGA      ADDRESS IS A V=R GUEST ABSOLUTE
                              IF ON AND HOST REAL IF OFF
                              GUEST SURVIVAL FIELDS
          80    VMDWUSHD      USE SHADOW TRANSLATE TABLES
                              (USED WHEN RUNNING A PAGEABLE
                              VGUEST)
          40    VMDWUNRQ      VGUEST UN-RUN IS REQUIRED
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CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VMDABSSH	004	704	VMDCFPDR	001	38D	VMDCR0B1	001	181
VMDACPGR	004	0DC	VMDCFPND	001	38C	VMDCR0B2	001	182
VMDACPGW	004	0D8	VMDCFRD	001	020	VMDCR0B3	001	183
VMDACTID	008	088	VMDCFREQ	001	398	VMDCR0XM	002	182
VMDACTNO	008	098	VMDCFRUN	001	010	VMDCR1	004	184
VMDACTRC	001	002	VMDCFWT	001	040	VMDCR1B0	001	184
VMDADJL	004	620	VMDCHC	004	5C0	VMDCR1B1	001	185
VMDALECT	004	544	VMDCHPPT	004	2DC	VMDCR1B2	001	186
VMDALEDE	001	040	VMDCHRDN	004	5BC	VMDCR1B3	001	187
VMDALEFG	001	53F	VMDCHRSN	004	5B8	VMDCR1SO	003	185
VMDALEW	001	080	VMDCIDLD	002	7B0	VMDCR10	004	1A8
VMDALGID	008	090	VMDCIDL0	002	7B0	VMDCR11	004	1AC
VMDALTID	008	4F8	VMDCIDL1	002	7B2	VMDCR12	004	1B0
VMDALUDI	001	020	VMDCIDL2	002	7B4	VMDCR13	004	1B4
VMDALVSI	001	040	VMDCIDL3	002	7B6	VMDCR14	004	1B8
VMDAPLDV	004	538	VMDCKC	008	130	VMDCR15	004	1BC
VMDATODN	004	0B4	VMDCKPSW	001	040	VMDCR2	004	188
VMDATTCP	001	020	VMDCKST	001	020	VMDCR2B0	001	188
VMDATTIM	008	0B8	VMDCKVMP	001	002	VMDCR2B1	001	189
VMDAUDED	001	040	VMDCLEXT	001	080	VMDCR2B2	001	18A
VMDAUTOL	001	002	VMDCNTID	002	7D2	VMDCR2B3	001	18B
VMDAVFOT	008	0E8	VMDCOMND	008	380	VMDCR2IM	002	188
VMDAVFVT	008	0E0	VMDCONTR	001	080	VMDCR3	004	18C
VMDAVTIM	008	0C0	VMDCPCOI	001	002	VMDCR3B0	001	18C
VMDAZM	001	178	VMDCPLOG	002	2C8	VMDCR3B1	001	18D
VMDAZN	001	174	VMDCPLXD	001	020	VMDCR3B2	001	18E
VMDBASE	004	60C	VMDCPMOD	002	2C4	VMDCR3B3	001	18F
VMDBK	001	000	VMDCPRDP	004	4E8	VMDCR4	004	190
VMDBKSIZ	001	200	VMDCPRMD	002	7C8	VMDCR4B0	001	190
VMDBLKIO	004	5E4	VMDCPRM0	002	7C8	VMDCR4B1	001	191
VMDBPCCW	001	080	VMDCPRM1	002	7CA	VMDCR4B2	001	192
VMDBRKKY	001	372	VMDCPRM2	002	7CC	VMDCR4B3	001	193
VMDBUFAD	004	3B0	VMDCPRM3	002	7CE	VMDCR5	004	194
VMDBUFIF	001	002	VMDCPSER	003	2C1	VMDCR5B0	001	194
VMDBUFLN	004	3B4	VMDCPUAD	002	2CC	VMDCR5B1	001	195
VMDBUFVM	004	3AC	VMDCPUCT	001	2D4	VMDCR5B2	001	196
VMDBUFWT	001	004	VMDCPUDS	002	540	VMDCR5B3	001	197
VMDBYPEW	001	080	VMDCPUID	008	2C0	VMDCR6	004	198
VMDCACFL	001	2E4	VMDCPULT	001	2D5	VMDCR6B0	001	198
VMDCACHN	004	2E0	VMDCPUTM	008	128	VMDCR6B1	001	199
VMDCANLK	001	004	VMDCPUTN	001	080	VMDCR6B2	001	19A
VMDCCPGR	004	750	VMDCPUTO	001	1[illegible]3	VMDCR6B3	001	19B
VMDCCWOP	001	5D0	VMDCPVER	001	2[illegible]0	VMDCR7	004	19C
VMDCEIOW	001	080	VMDCRCB0	001	1B0	VMDCR7B0	001	19C
VMDCETSD	002	7B8	VMDCRCB1	001	1B1	VMDCR7B1	001	19D
VMDCETS0	002	7B8	VMDCRCB2	001	1B2	VMDCR7B2	001	19E
VMDCETS1	002	7BA	VMDCRCB3	001	1B3	VMDCR7B3	001	19F
VMDCETS2	002	7BC	VMDCRDB0	001	1B4	VMDCR8	004	1A0
VMDCETS3	002	7BE	VMDCRDB1	001	1B5	VMDCR8B0	001	1A0
VMDCFACT	001	001	VMDCRDB2	001	1B6	VMDCR8B1	001	1A1
VMDCFBUF	004	390	VMDCRDB3	001	1B7	VMDCR8B2	001	1A2
VMDCFCAL	004	394	VMDCREB0	001	1B8	VMDCR8B3	001	1A3
VMDCFCNT	004	39C	VMDCREB1	001	1B9	VMDCR8MM	002	1A2
VMDCFCPU	004	3A8	VMDCREB2	001	1BA	VMDCR9	004	1A4
VMDCFCTL	001	388	VMDCREB3	001	1BB	VMDCR9B0	001	1A4
VMDCFDSP	001	399	VMDCRFB0	001	1BC	VMDCR9B1	001	1A5
VMDCFGCT	008	6D0	VMDCRFB1	001	1BD	VMDCR9GM	001	1A6
VMDCFHXF	001	38E	VMDCRFB2	001	1BE	VMDCSGS	004	6F8
VMDCFIDL	001	002	VMDCRFB3	001	1BF	VMDCTCRT	004	7DC
VMDCFLAG	001	389	VMDCRHLD	001	040	VMDCTFAC	004	678
VMDCFLG2	001	38F	VMDCRMOR	001	080	VMDCTFLT	004	33C
VMDCFLKQ	004	3A0	VMDCRS	064	180	VMDCTIDL	002	7D0
VMDCFNUL	001	001	VMDCR0	004	180	VMDCTLKP	004	6B0
VMDCFOPT	001	3BC	VMDCR0B0	001	180	VMDCTMIG	004	69C

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VMDCTNPS	004	6E4	VMDEDFAC	004	764	VMDGPR15	004	23C
VMDCTPCH	004	5F0	VMDEDIT	001	040	VMDGPR2	004	208
VMDCTPFD	004	67C	VMDEETOD	008	790	VMDGPR3	004	20C
VMDCTPGR	004	6C8	VMDEG14	004	110	VMDGPR4	004	210
VMDCTPGW	004	6C4	VMDEG145	008	110	VMDGPR5	004	214
VMDCTPPS	004	6E0	VMDEG15	004	114	VMDGPR6	004	218
VMDCTPRS	004	6B4	VMDELGST	001	748	VMDGPR7	004	21C
VMDCTPRT	004	5F4	VMDELIG	001	021	VMDGPR8	004	220
VMDCTPST	004	6C0	VMDELIST	001	70E	VMDGPR9	004	224
VMDCTPWD	001	3C8	VMDELTOD	001	004	VMDGPTLB	001	020
VMDCTPWT	004	6BC	VMDEMCTL	001	2D3	VMDGRPN	008	0A8
VMDCTRAU	002	3D2	VMDEMSGI	001	020	VMDGSBNC	001	040
VMDCTRDR	004	5EC	VMDENDOP	001	000	VMDGSCHN	001	020
VMDCTSIO	004	5E8	VMDEPOCH	008	138	VMDGSEXH	001	080
VMDCTSPR	004	694	VMDEPRTY	008	710	VMDGSFRE	001	040
VMDCTSPW	004	698	VMDEQTOD	008	770	VMDGSIND	001	5B6
VMDCTVFL	004	498	VMDESEND	001	010	VMDGSIPL	001	080
VMDCTXBK	004	690	VMDESLIC	008	768	VMDGSMSG	001	001
VMDCTXRD	004	6DC	VMDETIME	008	788	VMDGSQWK	001	020
VMDCTXWT	004	6D8	VMDEXBLI	001	010	VMDGSRBK	004	5B0
VMDCTYPE	001	3BF	VMDEXBLU	001	001	VMDGSRES	001	040
VMDCWAIT	001	38B	VMDEXCF	001	080	VMDGSRFG	001	5B5
VMDCWSGD	002	7C0	VMDEXCOL	001	00F	VMDGSRFL	001	5B4
VMDCWSG0	002	7C0	VMDEXCPO	001	370	VMDGSRSM	001	6F8
VMDCWSG1	002	7C2	VMDEXDEF	001	000	VMDGSRST	004	5B4
VMDCWSG2	002	7C4	VMDEXGRE	001	004	VMDGSTAT	001	2A5
VMDCWSG3	002	7C6	VMDEXHGH	001	0F0	VMDGSTCL	001	002
VMDCWSS	004	6CC	VMDEXINA	001	36E	VMDGSURV	001	080
VMDCYCLE	004	600	VMDEXINR	001	36D	VMDGTLB	001	2A4
VMDCYCLH	004	610	VMDEXMCK	001	020	VMDHDVSH	001	005
VMDDBPNT	004	760	VMDEXNON	001	000	VMDHFDAT	004	588
VMDDEDCA	002	534	VMDEXPIN	001	003	VMDHFLCK	004	58C
VMDDEDCP	004	530	VMDEXRED	001	002	VMDHIRES	004	120
VMDDEDFG	001	536	VMDEXREV	001	020	VMDHLITE	001	001
VMDDEDSC	001	174	VMDEXSTA	001	36F	VMDHOTRQ	001	080
VMDDEVCT	002	5CE	VMDEXTUR	001	005	VMDHOTST	001	040
VMDDFPNT	004	75C	VMDEXUND	001	040	VMDHOTWS	004	740
VMDDFRWK	004	51C	VMDEXVMO	001	36C	VMDHPLDV	002	53C
VMDDGCF	001	040	VMDEXWHI	001	007	VMDIABIA	001	010
VMDDISC	001	004	VMDEXYEL	001	006	VMDIADDR	004	40C
VMDDISPL	001	037	VMDFAUTO	001	040	VMDIAGFL	001	2D0
VMDDIST	008	0A0	VMDFIDTE	004	448	VMDIAG98	001	080
VMDDLCTL	001	50B	VMDFIN	004	32C	VMDIA1B0	001	158
VMDDLCTX	001	70A	VMDFIPSV	001	008	VMDIA1B1	001	159
VMDDNULL	001	000	VMDFLREO	004	684	VMDIA1B2	001	15A
VMDDORM	001	00B	VMDFORCE	001	010	VMDIA1B3	001	15B
VMDDPRTY	008	570	VMDFPRS	032	280	VMDIA1H0	002	158
VMDDPS	001	001	VMDFPR0	008	280	VMDIA1H1	002	15A
VMDDQTOD	008	778	VMDFPR2	008	288	VMDICAD1	004	158
VMDDSCWT	001	010	VMDFPR4	008	290	VMDICAD2	004	15C
VMDDSEND	001	040	VMDFPR6	008	298	VMDICARR	001	15B
VMDDTIME	008	780	VMDFRDRM	001	010	VMDICCPV	004	408
VMDDVSCS	002	176	VMDFRDSP	001	040	VMDICFLG	001	151
VMDDVST	001	176	VMDFRELG	001	020	VMDICODE	001	150
VMDDWACO	001	008	VMDFRLST	004	6A4	VMDICPT0	001	148
VMDDWFLG	001	50F	VMDFR1ST	004	6A0	VMDICPT1	001	149
VMDDWMCO	001	002	VMDFSACT	004	6F0	VMDICPT2	001	14A
VMDDWMCT	001	004	VMDFSAPT	004	6EC	VMDICPT3	001	14B
VMDEBUG1	002	3E0	VMDGMSIZ	002	10A	VMDICPUA	002	146
VMDEBUG2	002	3E4	VMDGPE45	008	238	VMDICTLS	004	148
VMDEBUG3	002	3E8	VMDGPRLO	001	203	VMDIDLE	001	000
VMDEBUG4	002	3EC	VMDGPRS	064	200	VMDIDROP	001	008
VMDEBUG5	004	3F0	VMDGPR0	004	200	VMDIEXCA	002	1C4
VMDEBUG6	004	3F4	VMDGPR1	004	204	VMDIEXCD	002	1C6
VMDEBUG7	004	3F8	VMDGPR10	004	228	VMDIEXCF	004	1C4
VMDEBUG8	004	3FC	VMDGPR11	004	22C	VMDIEXCL	001	1C6
VMDECA	004	14C	VMDGPR12	004	230	VMDIEXCT	001	1C7
VMDECA0	001	14C	VMDGPR13	004	234	VMDIHCPU	002	152
VMDECA1	001	14D	VMDGPR14	004	238	VMDILFNC	001	2D8

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VMDILIOP	001	080	VMDITRAD	004	1D0	VMDMSORG	002	108
VMDIMLT4	001	003	VMDIUCVB	004	840	VMDMSSCS	001	040
VMDIMNCD	004	1DC	VMDIUCVL	008	828	VMDMSSFL	001	3CB
VMDIMNCL	002	1D4	VMDIVISC	001	1F0	VMDMSSVP	001	080
VMDIMSGI	001	004	VMDIVPAG	004	414	VMDMTEXT	001	010
VMDINPRM	004	1EC	VMDIZONE	001	1F1	VMDMTTOD	008	7A0
VMDINST	002	156	VMDKKLT1	001	FFF	VMDMXRVP	004	6B8
VMDINSTE	001	157	VMDKKLT2	001	FFF	VMDNOBKY	001	008
VMDINSTO	001	156	VMDLANG	004	43C	VMDNOP	001	020
VMDINSTR	006	156	VMDLCLEN	004	884	VMDNOVFA	001	080
VMDINTWD	004	100	VMDLCPTR	004	880	VMDNTFEX	001	010
VMDINVPG	001	010	VMDLCTB0	001	144	VMDNTFGX	001	020
VMDIOACT	004	5DC	VMDLCTB1	001	145	VMDNTFIO	001	004
VMDIOINT	002	1E8	VMDLCTLS	002	144	VMDNTFIS	001	024
VMDIOPAL	001	004	VMDLCYCL	004	604	VMDNTFMC	001	00C
VMDIOPBC	001	080	VMDLDGDL	001	040	VMDNTFPF	001	01C
VMDIOPBK	004	5FC	VMDLDPRM	008	420	VMDNTFPG	001	014
VMDIOPCD	001	040	VMDLIMDV	002	5C8	VMDNTFRS	001	008
VMDIOPCT	004	174	VMDLKSDL	004	7D8	VMDNTMOD	001	2A0
VMDIOPDG	001	020	VMDLKSHT	001	004	VMDNTVCT	001	100
VMDIOPDS	001	001	VMDLMSG	008	440	VMDNULL	001	001
VMDIOPEW	001	008	VMDLOADU	001	020	VMDOFCON	001	000
VMDIOPF1	001	5D2	VMDLOGOF	001	040	VMDOFCTC	001	00C
VMDIOPF2	001	5D3	VMDLOGON	001	080	VMDOFDAS	001	004
VMDIOPIP	001	004	VMDLORES	004	124	VMDOFOTH	001	008
VMDIOPIS	001	010	VMDLOVMP	001	004	VMDOFUR	001	010
VMDIOPMB	001	002	VMDLPFTR	004	52C	VMDOLDXS	002	670
VMDIOPM6	001	020	VMDLPLDV	002	542	VMDOPASN	002	1D2
VMDIOPNO	004	5F8	VMDLRGST	001	008	VMDOPRTY	008	728
VMDIOPOP	001	080	VMDLSEG	004	000	VMDORIG	004	608
VMDIOPSA	001	0C0	VMDLSGLN	001	080	VMDORSNT	001	6EB
VMDIOPSI	001	080	VMDLSLEN	001	780	VMDOSTAK	004	3B8
VMDIOPSN	001	000	VMDLSPAC	008	880	VMDOSTAT	001	38A
VMDIOPSR	001	040	VMDLSPSZ	001	0F0	VMDPAGEX	001	080
VMDIOPST	001	5D6	VMDMAPTH	002	3CE	VMDPAGZP	004	49C
VMDIOPTS	001	5D1	VMDMAXVD	002	5CC	VMDPCL	004	3C0
VMDIOPVP	001	008	VMDMAXVS	002	5CA	VMDPCLB0	001	3C0
VMDIOP1T	001	040	VMDMCEGT	001	040	VMDPCLB1	001	3C1
VMDIORNM	002	1EA	VMDMCEUT	001	020	VMDPCLB2	001	3C2
VMDIOSID	004	1E8	VMDMCFLG	001	2D9	VMDPCLB3	001	3C3
VMDIOWT	001	010	VMDMCLC8	001	008	VMDPDCFM	001	008
VMDIPA	002	156	VMDMCL10	001	020	VMDPDIRP	001	010
VMDIPA0	001	156	VMDMCODE	001	020	VMDPDPPF	001	080
VMDIPB	004	158	VMDMCPRG	001	002	VMDPDSIE	001	004
VMDIPC	004	15C	VMDMCSTC	001	004	VMDPDTMR	001	020
VMDIPDEV	001	004	VMDMCV	004	338	VMDPDTRD	001	002
VMDIPEND	001	2A2	VMDMC10I	001	080	VMDPDXTN	001	001
VMDIPGST	004	418	VMDMC10S	001	001	VMDPERAD	004	1D8
VMDIPLCM	004	42C	VMDMIFLG	001	5E0	VMDPERCD	001	1D6
VMDIPLKY	001	411	VMDMIHON	001	080	VMDPERCL	002	1D6
VMDIPLNM	008	400	VMDMIMSG	001	004	VMDPERZF	001	1D7
VMDIPLOG	001	002	VMDMISC	001	024	VMDPFIKY	001	004
VMDIPLST	001	410	VMDMIUCV	001	3CA	VMDPFUNC	004	374
VMDIPRCC	002	1CE	VMDMLVL	001	3C9	VMDPGBIA	001	008
VMDIPRCD	004	1CC	VMDMODE	001	103	VMDPGFLG	001	4E1
VMDIPRCL	002	1CC	VMDMONDA	004	580	VMDPGRTE	004	758
VMDIPRC0	001	1CE	VMDMONEC	001	020	VMDPGSPL	004	44C
VMDIPRC1	001	1CF	VMDMONEU	001	080	VMDPPFCT	002	334
VMDIPTLH	001	010	VMDMONSD	001	040	VMDPPFPT	004	330
VMDISCAA	004	164	VMDMONST	001	583	VMDPREFX	004	104
VMDISCHI	001	1F2	VMDMONTV	001	010	VMDPRGIL	002	2A8
VMDISEVM	004	844	VMDMORTM	002	362	VMDPRMPT	001	040
VMDISPCH	001	04D	VMDMPSUS	008	7A8	VMDPROAP	001	080
VMDISTVM	004	848	VMDMSACS	001	010	VMDPROBK	004	428
VMDISUVM	004	84C	VMDMSAVP	001	020	VMDPROFL	001	437
VMDITMOF	001	004	VMDMSGIU	001	080	VMDPRVEL	001	70F
VMDITMR	001	101	VMDMSGON	001	080	VMDPRVEP	008	718
VMDITMRI	001	080	VMDMSL	004	2BC	VMDPSTO	004	638
VMDITMRL	001	040	VMDMSO	004	2B8	VMDPSTO3	001	63B

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VMDPSW	008	118	VMDSECA	004	4E4	VMDTLDEL	001	369
VMDPSW0	001	118	VMDSECF	001	4E3	VMDTLEND	001	368
VMDPSW0F	004	118	VMDSECFP	001	002	VMDTLEOV	001	080
VMDPSW1	001	119	VMDSECFY	001	001	VMDTLPGR	004	754
VMDPSW2	001	11A	VMDSECU	008	4F0	VMDTLPRS	004	74C
VMDPSW2H	002	11A	VMDSEPOC	002	63E	VMDTODAC	001	010
VMDPSW3	001	11B	VMDSFIPM	004	328	VMDTODAI	004	5AC
VMDPSW4	001	11C	VMDSFIP0	001	328	VMDTODA0	001	5AC
VMDPSW4B	001	11C	VMDSFIP1	001	329	VMDTODFL	001	2D7
VMDPSW4F	004	11C	VMDSFIP2	001	32A	VMDTODGA	001	080
VMDPSW57	003	11D	VMDSFIP3	001	32B	VMDTODON	004	0B0
VMDPTHID	002	3CC	VMDSHALD	001	FFF	VMDTOPTN	001	360
VMDPTIL	004	688	VMDSHARS	004	700	VMDTOPT2	001	364
VMDPTLBT	008	2B0	VMDSHDLK	004	68C	VMDTRACT	001	080
VMDPTLHI	004	2B0	VMDSHRPT	004	4A0	VMDTRALT	001	040
VMDPTLLO	004	2B4	VMDSIGID	002	86C	VMDTRCCW	001	030
VMDPTRQ	001	080	VMDSIMWT	001	020	VMDTRCPR	001	010
VMDPTRQQ	001	008	VMDSLCAD	002	732	VMDTRCTL	001	2A7
VMDPTRSH	004	680	VMDSLCNT	002	730	VMDTRCTR	001	020
VMDPWQD	001	010	VMDSLEEP	001	040	VMDTREND	001	010
VMDPZUNV	001	001	VMDSLIST	001	50A	VMDTREXT	004	3D4
VMDQBPNT	004	504	VMDSMSGI	001	008	VMDTREX3	001	3D7
VMDQCPEF	004	518	VMDSNORG	004	168	VMDTRMDV	001	365
VMDQDSPU	001	008	VMDSNTBK	001	080	VMDTRMEN	001	001
VMDQFPNT	004	500	VMDSPMSG	001	008	VMDTRMIO	001	080
VMDQIORF	004	514	VMDSPPGW	001	040	VMDTRMST	001	6E8
VMDQSTAT	001	70D	VMDSSCTL	001	1D0	VMDTRQDL	004	3C4
VMDQSUMS	004	594	VMDSSCT2	001	1D1	VMDTRQPT	004	318
VMDQURCP	004	510	VMDSSIZE	004	2C8	VMDTRQQS	004	7E0
VMDQ1SUM	004	590	VMDSSON	001	080	VMDTRTRA	001	004
VMDRCP	004	160	VMDSTATE	001	50C	VMDTRTRS	001	008
VMDRCPB0	001	160	VMDSTKDL	001	0FF	VMDTSCBZ	001	060
VMDRCPB2	001	162	VMDSTLPG	001	0FF	VMDTSCLP	002	5E2
VMDRCPLK	008	658	VMDSTOP	001	080	VMDTSCX1	001	020
VMDRDYCM	001	866	VMDSTOPD	001	004	VMDTSLIC	008	548
VMDREADY	001	042	VMDSTORE	001	2D2	VMDTSTAM	001	010
VMDRELSH	004	700	VMDSTOSZ	001	63C	VMDTTAB	001	371
VMDREORD	001	002	VMDSTO01	001	001	VMDTTABK	004	614
VMDREPSC	001	175	VMDSTO1G	001	004	VMDTTIED	001	080
VMDRESET	004	6F4	VMDSTO2G	001	008	VMDTTIME	008	550
VMDREST	001	020	VMDSTO3F	001	03F	VMDTYPAD	001	01F
VMDRFEAT	001	2D1	VMDSTO32	001	000	VMDTYPE	001	2A3
VMDRFLOK	001	6E9	VMDSTTOD	008	798	VMDTYPMP	001	017
VMDRFPGR	001	749	VMDSTYPE	001	2D6	VMDTYPPR	001	000
VMDRFPGX	001	74A	VMDSUSCK	008	560	VMDTYPSI	001	02C
VMDRGPER	001	040	VMDSUSPN	001	02C	VMDTYPSY	001	058
VMDRGTRD	001	020	VMDSVCTL	001	140	VMDTYPUS	001	015
VMDRPFTR	004	528	VMDSVC1N	001	141	VMDUFEOL	004	6AC
VMDRPLIM	004	744	VMDSVC2N	001	142	VMDUFEOR	004	6A8
VMDRPLZN	001	175	VMDSVC3N	001	143	VMDUFOLK	008	640
VMDRSCEL	001	001	VMDSVMFX	004	860	VMDUFORC	001	008
VMDRSTAT	001	509	VMDSVMID	008	850	VMDUNDED	001	080
VMDRSTLG	001	080	VMDSVMST	001	040	VMDURRSP	004	734
VMDRTERM	004	358	VMDSVMWF	001	080	VMDUSER	008	080
VMDRTHRU	004	738	VMDSVMWT	001	864	VMDUSER1	004	4B0
VMDRVIDL	001	058	VMDSVMW2	001	865	VMDUSER2	004	4B4
VMDRVMBK	008	638	VMDSYNCH	004	430	VMDUSER3	004	4B8
VMDRVMSZ	001	0C0	VMDSYSOP	001	080	VMDUSER4	004	4BC
VMDRVRIO	001	080	VMDTCDEL	001	36A	VMDUSER5	004	4C0
VMDRVSPN	001	063	VMDTCHCL	002	170	VMDUSER6	004	4C4
VMDSACTL	001	70B	VMDTDHBK	004	61C	VMDUSER7	004	4C8
VMDSACTX	001	70C	VMDTEDIT	004	368	VMDUSER8	004	4CC
VMDSCALK	001	008	VMDTESCP	001	36B	VMDUSRCT	001	040
VMDSCDF1	001	708	VMDTIDCT	001	53E	VMDUTERM	001	010
VMDSCDF2	001	709	VMDTIDLE	001	037	VMDVCCIN	001	040
VMDSCHI1	001	080	VMDTIDPR	008	720	VMDVCONS	004	35C
VMDSCREN	001	361	VMDTIMER	001	2A6	VMDVCP	002	154
VMDSCST	001	177	VMDTIOBZ	001	080	VMDVCSAV	004	3D8
VMDSDSC	256	100	VMDTIOLP	001	5E1	VMDVCSCT	004	458

Name	Len	Val/Disp
VMDVDSCT	004	45C
VMDVECTR	004	31C
VMDVERP	001	010
VMDVF	001	040
VMDVFACT	001	020
VMDVFAVL	001	040
VMDVFCFG	001	2AC
VMDVFCKS	001	080
VMDVFCNT	001	2AD
VMDVFDEF	001	080
VMDVFHAD	001	040
VMDVFLOD	001	080
VMDVFNON	001	000
VMDVFOTM	008	490
VMDVFRST	001	2AF
VMDVFSTA	001	2AE
VMDVFSTL	001	040
VMDVFVTM	008	488
VMDVGC	001	155
VMDVGRPT	004	868
VMDVHC	001	154
VMDVIOF	001	5D7
VMDVMCB	004	818
VMDVMCFA	001	020
VMDVMCFL	008	800
VMDVMCOI	001	001
VMDVMDBK	001	000
VMDVMDWU	004	6FC
VMDVMRDP	004	4EC
VMDVOBUF	004	2F8
VMDVODEP	001	003
VMDVOSAV	004	2FC
VMDVOSCT	004	460
VMDVOSIZ	001	021
VMDVPTRK	001	020
VMDVR	001	008
VMDVRDUP	001	080
VMDVSEND	001	008
VMDVSEVM	004	81C
VMDVSIE	001	080
VMDVSIVM	004	618
VMDVSPRT	004	5C4
VMDVSRCA	004	458
VMDVSTVM	004	820
VMDVSUVM	004	824
VMDVTIME	008	558
VMDVTOD	001	001
VMDVTSCT	004	464
VMDVUSCT	004	468
VMDWFLAG	001	21A
VMDWG145	008	298
VMDWIUCV	001	010
VMDWKALE	001	010
VMDWKCFM	001	080
VMDWKCPE	001	020
VMDWKCPF	001	008
VMDWKCPX	001	004
VMDWKETS	001	080
VMDWKGRL	001	010
VMDWKHIP	001	040
VMDWKIOR	001	040
VMDWKLCK	001	002
VMDWKMCO	001	020
VMDWKMNI	001	008
VMDWKMNX	001	004
VMDWKPIN	001	080
VMDWKPRM	001	008
VMDWKRUN	001	010
VMDWKSCI	001	002
VMDWKSIE	001	020
VMDWKTST	001	040
VMDWKUCP	001	080
VMDWMODC	001	218
VMDWMSOR	002	21E
VMDWNGIU	001	040
VMDWNGON	001	040
VMDWNTC3	001	21B
VMDWNTKY	001	219
VMDWNTVC	001	21C
VMDWPEND	001	2A1
VMDWRCPV	004	200
VMDWRGVT	008	288
VMDWRKCB	001	523
VMDWRKCD	001	520
VMDWRKCK	001	521
VMDWRKCL	001	522
VMDWRKCS	004	520
VMDWRKLB	001	527
VMDWRKLC	004	524
VMDWRKLD	001	524
VMDWRKLK	001	525
VMDWRKLL	001	526
VMDWRKXS	002	672
VMDWSDAD	004	208
VMDWSHAD	004	204
VMDWSHC1	004	20C
VMDWSSGR	001	080
VMDWSSPR	004	73C
VMDWSTAT	001	2AA
VMDWTIME	008	290
VMDWTPAG	001	080
VMDWTTIO	001	040
VMDWTTSC	001	020
VMDWUNRQ	001	040
VMDWUSHD	001	080
VMDWUTOD	008	280
VMDWVDEV	004	5D8
VMDXA	001	020
VMDXAUTO	001	001
VMDXSL	003	4D9
VMDXSLIM	003	178
VMDXSO	003	4D5
VMDXSTOR	004	4DC
VMDXT	020	300
VMDXTEMS	008	308
VMDXTKEY	001	080
VMDXTMFA	008	300
VMDXTSFI	004	310
VMDX98CT	004	46C
VMD370	001	010

HCPVPGBK— VIRTUAL PAGE BLOCK

DSECT NAME: VPGBK

DESCRIPTIVE NAME: VIRTUAL PAGE BLOCK

FUNCTION: THE VPGBK IS USED TO MAP A PAGTE, PGSTE AND ASATE FOR ONE VIRTUAL PAGE. IT EXISTS SOLELY FOR ADDRESSABILITY. THE ADDRESS OF A PAGTE IS USED AS A VPGBK ADDRESS SO THAT THE CORRESPONDING PGSTE AND ASATE CAN BE ACCESSED USING ONLY ONE BASE REGISTER.

LOCATED BY:

THE VPGBK IS NOT A FIXED BLOCK. ITS ADDRESS IS THE SAME AS THE ADDRESS FOR ANY PAGTE.

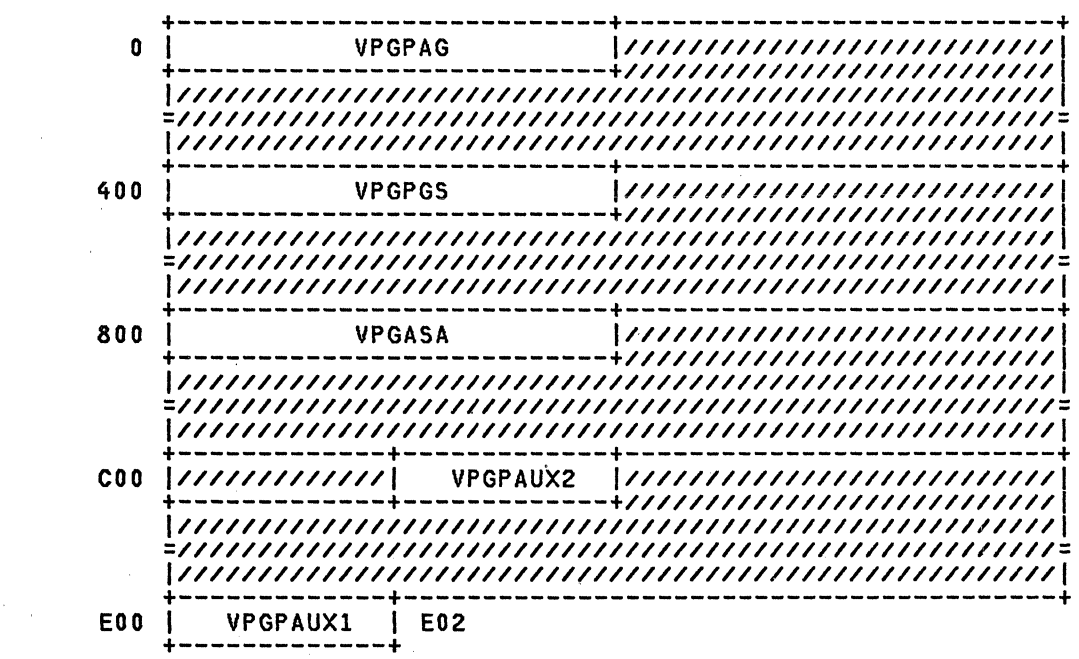
CREATED BY:

A VPGBK IS USED FOR ADDRESSABILITY ONLY. IT IS NOT CREATED OR DELETED.

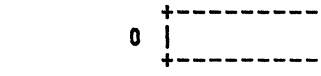
DELETED BY:

SEE CREATED BY

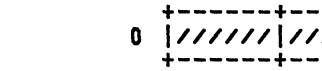
VPGBK - VIRTUAL PAGE BLOCK



REDEFINITION -



REDEFINITION - PAGE STATUS WITHIN PAGE ENTRY



REDEFINITION -

```
    +---------------------------+
400 |          VPGSNTRY        | 404
    +---------------------------+
```

REDEFINITION - VIRTUAL PAGE STATUS

```
    +--------------------+------+
400 |      VPGSVKCF      |//////| 404
    +--------------------+------+
```

REDEFINITION - VIRTUAL PAGE STATUS

```
    +------+------+------+------+
400 |:SVKEY|:SRCP |:SFLAG|:SSTAT| 404
    +------+------+------+------+
```

REDEFINITION -

```
    +---------------------------+
800 |          VPGANTRY         | 804
    +---------------------------+
```

REDEFINITION - AUXILIARY STORAGE ADDRESS

```
    +-------------+------+------+
800 |   VPGACNUM  |:APNUM|:AVOL | 804
    +-------------+------+------+
```

disp	name	length	description
000	VPGPAG	004	PAGE TABLE ENTRY
004	VPGNEXT	004	ADDRESS FOR NEXT VPGBK
004		255F	
400	VPGPGS	004	PAGE STATUS TABLE ENTRY
404		255F	
800	VPGASA	004	AUXILIARY STORAGE ADDRESS ENTRY
804		255F	
C00		H	
C02	VPGPAUX2	002	AUXILARY FIELD USED IF PTE > 128
C04		127F	
E00	VPGPAUX1	002	AUXILARY FIELD USED IF PTE < 128

REDEFINITION -

000	VPGPNTRY	004	HARDWARE PAGE TABLE ENTRY

REDEFINITION - PAGE STATUS WITHIN PAGE ENTRY

000	VPGPLINK	002	USED TO LINK DASD BLOCKS
000		X	BITS 1-19 ARE ARCHITECTED AS THE
001		X	4K ALIGNED PAGE FRAME ADDRESS.
002	VPGPSTAT	001	BITS 0, 20, AND 23 MUST BE ZERO,
			BITS 21 AND 22 ARE DEFINED BELOW

BITS DEFINED FOR VPGPSTAT BY HCPPAGTE PAGSTAT

003		X	THIS BYTE IS NOT ARCHITECTED AND
			IS AVAILABLE FOR SOFTWARE USE.
			IT IS RECOMMENDED THAT SOFTWARE
			REFRAIN FROM USING THIS BYTE

```
                        UNLESS IT IS TO STORE THE GUEST
                        STORAGE KEY.

          REDEFINITION -

400   VPGSNTRY   004      VIRTUAL PAGE STATUS ENTRY

          REDEFINITION - VIRTUAL PAGE STATUS

400   VPGSVKCF   003      FIELD CONTAINING VPGSVKEY,VPGSRCP
                          AND VPGSFLAG
403              X        RESERVED FOR FUTURE IBM USE

          REDEFINITION - VIRTUAL PAGE STATUS

400   VPGSVKEY   001      GUEST STORAGE KEY BITS 0-4
401   VPGSRCP    001      ARCHITECTED AREA FOR RCP BYTE
                          IF THE STORAGE KEY ASSIST IS
                          BEING UTILIZED. (SEE THE PGSTE
                          AND RCPTE CONTROL BLOCKS FOR
                          FURTHER DETAILS)

          BITS DEFINED FOR VPGSRCP BY HCPPGSTE PGSRCP

402   VPGSFLAG   001      VIRTUAL PAGE FLAGS

          BITS DEFINED FOR VPGSFLAG BY HCPPGSTE PGSFLAG

403   VPGSSTAT   001      VIRTUAL PAGE STATUS BITS

          BITS DEFINED FOR VPGSSTAT BY HCPPGSTE PGSSTAT


          REDEFINITION -

800   VPGANTRY   004      AUXILIARY STORAGE ADDRESS

          REDEFINITION - AUXILIARY STORAGE ADDRESS

800   VPGACNUM   002      AUXILIARY STORAGE CYLINDER NUMBER
802   VPGAPNUM   001      AUXILIARY STORAGE PAGE NUMBER
803   VPGAVOL    001      AUXILIARY STORAGE VOLUME CODE

                    MORE EQUATES

          000    VPGPAGTE    VPGBK PAGE TABLE ENTRY
          400    VPGPGSTE    VPGBK PAGE STATUS ENTRY
          800    VPGASATE    VPGBK AUX STORAGE ADDRESS
          001    VPGBYTE3    MULTIPLIER FOR VPGSNTRY BYTE 3
          100    VPGBYTE2    MULTIPLIER FOR VPGSNTRY BYTE 2
          000    VPGBYTE1    MULTIPLIER FOR VPGSNTRY BYTE 1
          000    VPGBYTE0    MULTIPLIER FOR VPGSNTRY BYTE 0

                             MASK FOR SETTING LONG TERM SERIALIZATION:

          040    VPGLON

                             MASK FOR SETTING SHORT TERM SERIALIZATION:

          000    VPGSON

                             MASK FOR SETTING FOR 'PAGE IN ERROR':

          001    VPGEON

                             MASK FOR RESETTING PAGE SERIALIZATION BITS:

          FBE    VPGOFF
```

CROSS REFERENCE

Name	Len	Val/Disp
VPGACNUM	002	800
VPGANTRY	004	800
VPGAPNUM	001	802
VPGASA	004	800
VPGASATE	001	800
VPGAVOL	001	803
VPGBK	001	000
VPGBYTE0	001	000
VPGBYTE1	001	000
VPGBYTE2	001	100
VPGBYTE3	001	001
VPGEON	001	804
VPGFOFF	001	804
VPGLON	001	804
VPGNEXT	004	004
VPGPAG	004	000
VPGPAGTE	001	000
VPGPAUX1	002	E00
VPGPAUX2	002	C02
VPGPGS	004	400
VPGPGSTE	001	400
VPGPLINK	002	000
VPGPNTRY	004	000
VPGPSTAT	001	002
VPGSFLAG	001	402
VPGSNTRY	004	400
VPGSON	001	804
VPGSRCP	001	401
VPGSSTAT	001	403
VPGSVKCF	003	400
VPGSVKEY	001	400

HCPVPXBK— VIRTUAL PRINTER EXTENSION BLOCK

DSECT NAME: VPXBK

DESCRIPTIVE NAME: VIRTUAL PRINTER EXTENSION BLOCK

FUNCTION: THIS CONTROL BLOCK CONTAINS INFORMATION SPECIFIC TO VIRTUAL 3800 PRINTERS.

LOCATED BY:

VDEVVPX FIELD OF HCPVDEV

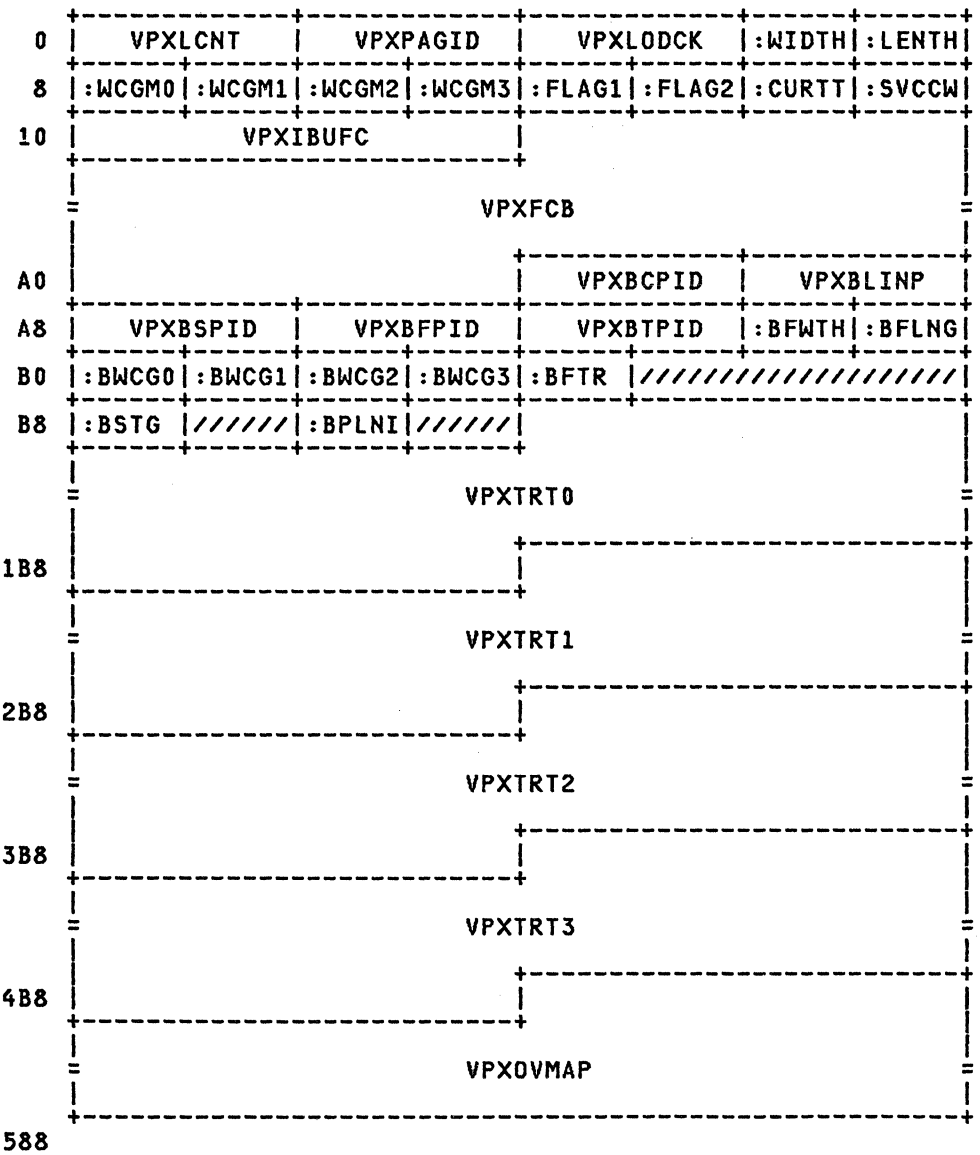
CREATED BY:

HCPVDSDF - WHILE DEFINING A VIRTUAL DEVICE.

DELETED BY:

HCPVDBDL - WHEN DELETING A VIRTUAL DEVICE.

VPXBK - VIRTUAL PRINTER EXTENSION BLOCK



disp	name	length	description
000		0F	
000	VPXLCNT	002	CURRENT LINE NUMBER
002	VPXPAGID	002	CHANNEL PAGE ID
004	VPXLODCK	002	RELATIVE DISPLACEMENT FOR LOAD CHECKS
006	VPXWIDTH	001	CODE FOR FORMS WIDTH
007	VPXLENTH	001	CODE FOR FORMS LENGTH
008	VPXWCGM0	001	CONTENTS OF WCGM 0
009	VPXWCGM1	001	CONTENTS OF WCGM 1
00A	VPXWCGM2	001	CONTENTS OF WCGM 2
00B	VPXWCGM3	001	CONTENTS OF WCGM 3
00C	VPXFLAG1	001	FEATURES/MISCELLANEOUS FLAGS
	BITS DEFINED IN VPXFLAG1 (AT HEX DISPLACEMENT: C)		
	80 VPXTT0V		TRANSLATE TABLE 0 IS VALID
	40 VPXTT1V		TRANSLATE TABLE 1 IS VALID
	20 VPXTT2V		TRANSLATE TABLE 2 IS VALID
	10 VPXTT3V		TRANSLATE TABLE 3 IS VALID
	08 VPXBTS		BURSTER-TRIMMER-STACKER FEATURE
	04 VPX4WCGM		4-WCGM FEATURE INSTALLED
	02 VPXBLKDC		DATA CHECKS SHOULD BE BLOCKED
	01 VPXALLDC		REFLECT ALL DATA CHECKS
00D	VPXFLAG2	001	SIMULATION CONTROLS
	BITS DEFINED IN VPXFLAG2 (AT HEX DISPLACEMENT: D)		
	80 VPXCLPRS		'CLR PRT' SUPPRESSED ON LOAD CCW
	40 VPXBIGBF		LARGE BUFFER IN USE
	20 VPXOVPRT		CHECK NEXT LINE FOR OVERPRINT
	10 VPXNORML		CURRENT CCW IS NOT A LOAD CCW
	08 VPXLFCB		A 'LOAD FCB' HAS BEEN ISSUED
00E	VPXCURTT	001	CURRENT TRANSLATE TABLE
00F	VPXSVCCW	001	CURRENT CCW COMMAND CODE
010		0F	
010	VPXIBUFC	004	DATA COUNT FOR INTERMEDIATED BUFFER
014	VPXFCB	144	FCB CURRENTLY LOADED
0A4	VPXINTBF	024	INTERMEDIATE BUFFER SUBFIELDS IN 3800 INTERMEDIATE BUFFER IN RESPONSE TO THE REQUEST PRINTER INFORMATION ORDER CODE OF THE EXECUTE ORDER CONTROL CCW.
0A4	VPXBCPID	002	CHANNEL PAGE ID
0A6	VPXBLINP	002	FCB LINE POSITION
0A8	VPXBSPID	002	STACKED PAGE ID
0AA	VPXBFPID	002	FUSER PAGE ID
0AC	VPXBTPID	002	TRANSFER PAGE ID
0AE	VPXBFWTH	001	FORMS WIDTH CODE
0AF	VPXBFLNG	001	LENGTH OF CURR PAGE (1/2 IN)
0B0	VPXBWCGS	004	WCGMS 0-3 IDS
0B0	VPXBWCG0	001	WCGM 0 ID
0B1	VPXBWCG1	001	WCGM 1 ID
0B2	VPXBWCG2	001	WCGM 2 ID
0B3	VPXBWCG3	001	WCGM 3 ID
0B4	VPXBFTR	001	FEATURES
	BITS DEFINED IN VPXBFTR (AT HEX DISPLACEMENT: B4)		
	08 VPXB4WCG		4 WCGM INSTALLED
	04 VPXBBTS		BTS INSTALLED
0B5		XL3	
0B8	VPXBSTG	001	STORAGE SIZE, 3800-3
	CODES DEFINED IN VPXBSTG (AT HEX DISPLACEMENT: B8)		
	31 VPXBSTGS		DEFAULT STORAGE SIZE,3800-3

```
0B9                 XL1
0BA    VPXBPLNI     001        PAPER LINE INFO, 3800-3

         BITS DEFINED IN VPXBPLNI (AT HEX DISPLACEMENT: BA)

         01     VPXBBTS3     BTS INSTALLED 3800-3

0BB                 XL1
0BC    VPXTRT0      256       BYTE MAP FOR UNPRINTABLE
1BC    VPXTRT1      256       ... CHARACTERS FOR EACH
2BC    VPXTRT2      256       ... OF THE POSSIBLE
3BC    VPXTRT3      256       ... TRANSLATE TABLES
4BC    VPXOVMAP     204       MAP FOR OVERPRINT DETECTION

                      EQUATES

         B1     VPXSIZE      BLOCK SIZE IN DBL-WORDS

                      MORE EQUATES

         008    VPXWCGMS     WCGM CODES DEFINED
         014    VPXFCB1      1ST BYTE OF FCB
         00F    VPXFCBND     6 BYTES BEFORE END OF FCB
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
VPXALLDC	001	001	VPXLFCB	001	008
VPXBBTS	001	004	VPXLODCK	002	004
VPXBBTS3	001	001	VPXNORML	001	010
VPXBCPID	002	0A4	VPXOVMAP	204	4BC
VPXBFLNG	001	0AF	VPXOVPRT	001	020
VPXBFPID	002	0AA	VPXPAGID	002	002
VPXBFTR	001	0B4	VPXSIZE	001	0B1
VPXBFWTH	001	0AE	VPXSVCCW	001	00F
VPXBIGBF	001	040	VPXTRT0	256	0BC
VPXBK	001	000	VPXTRT1	256	1BC
VPXBLINP	002	0A6	VPXTRT2	256	2BC
VPXBLKDC	001	002	VPXTRT3	256	3BC
VPXBPLNI	001	0BA	VPXTT0V	001	080
VPXBSPID	002	0A8	VPXTT1V	001	040
VPXBSTG	001	0B8	VPXTT2V	001	020
VPXBSTGS	001	031	VPXTT3V	001	010
VPXBTPID	002	0AC	VPXWCGMS	004	008
VPXBTS	001	008	VPXWCGM0	001	008
VPXBWCGS	004	0B0	VPXWCGM1	001	009
VPXBWCG0	001	0B0	VPXWCGM2	001	00A
VPXBWCG1	001	0B1	VPXWCGM3	001	00B
VPXBWCG2	001	0B2	VPXWIDTH	001	006
VPXBWCG3	001	0B3	VPX4WCGM	001	004
VPXB4WCG	001	008			
VPXCLPRS	001	080			
VPXCURTT	001	00E			
VPXFCB	144	014			
VPXFCBND	144	00F			
VPXFCB1	001	014			
VPXFLAG1	001	00C			
VPXFLAG2	001	00D			
VPXIBUFC	004	010			
VPXINTBF	024	0A4			
VPXLCNT	002	000			
VPXLENTH	001	007			

HCPVRSBK— V=R RECOVERY STORAGE MANAGEMENT

DSECT NAME: VRSBK

DESCRIPTIVE NAME: V=R RECOVERY STORAGE MANAGEMENT BACKUP AREA.

FUNCTION: A SAVEAREA FOR V=R FREE STORAGE DATA

LOCATED BY:

HCPWRKRS

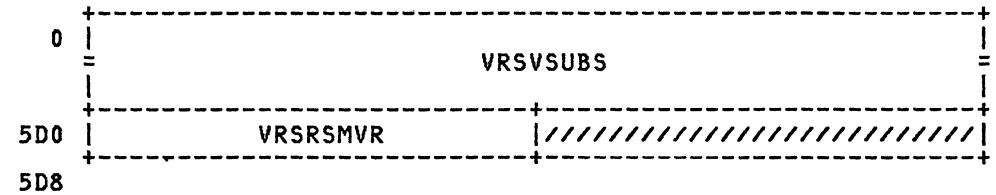
CREATED BY:

NEVER CREATED. HCPVRSBK MAPS THE DATA AREA 'HCPWRKRS' LOCATED IN THE DATA MODULE 'HCPWRK'.

DELETED BY:

NEVER DELETED - SEE ABOVE

VRSBK - V=R RECOVERY STORAGE MANAGEMENT BACKUP AREA



disp	name	length	description
000	VRSVSUBS	004	SUBPOOL TABLE BACKUP AREA (62 SUBPOOL ELEMENTS, 6 FWS EACH)
5D0	VRSRSMVR	004	DW'S OF V=R FREE STORAGE IN USE
5D4		F	RESERVED FOR FUTURE IBM USE

EQUATES

BB	VRSSIZE	LENGTH OF HCPVRSBK IN DWS

CROSS REFERENCE

Name	Len	Val/Disp
VRSBK	001	000
VRSRSMVR	004	5D0
VRSSIZE	001	0BB
VRSVSUBS	004	000

HCPVSATB— VECTOR SAVE AREA TABLE

DSECT NAME: VSATB

DESCRIPTIVE NAME: VECTOR SAVE AREA TABLE

FUNCTION: MAPS THE VECTOR REGISTER SAVE AREA FOR THE GUESTS VIRTUAL VECTOR FACILITY

LOCATED BY:

VECVSATB (FIELD IN VECBK)

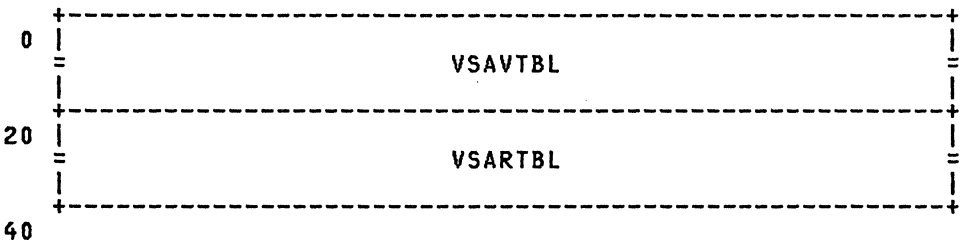
CREATED BY:

HCPVSMAL

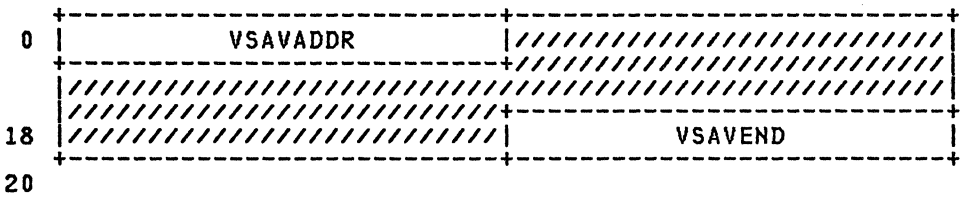
DELETED BY:

HCPVSMDA

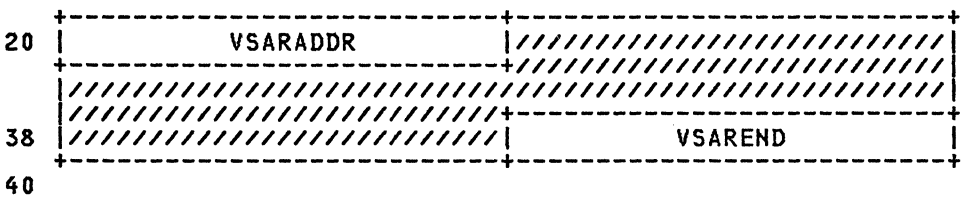
VSATB - VECTOR SAVE AREA TABLE



REDEFINITION -



REDEFINITION -



disp	name	length	description
000		0D	ALIGN TO DOUBLEWORD BOUNDARY
000	VSAVTBL	004	VIRTUAL ADDRESS SECTION. CONTAINS 8 SYSTEM VIRTUAL ADDRESSES
020	VSARTBL	004	REAL ADDRESS SECTION. CONTAINS 8 REAL ADDRESSES

EQUATES

08	VSASIZE	SIZE OF TABLE IN DOUBLEWORDS

```
         REDEFINITION -

000   VSAVADDR   004      FIRST SYSTEM VIRTUAL ADDRESS

                  EQUATES

        04     VSAELMSZ    SIZE OF ONE ELEMENT IN BYTES

004              6A        6 SYSTEM VIRTUAL ADDRESSES...
                           IN BETWEEN
01C   VSAVEND    004       LAST SYSTEM VIRTUAL ADDRESS


         REDEFINITION -

020   VSARADDR   004       FIRST REAL ADDRESSES
024              6A        6 REAL ADDRESSES IN BETWEEN
03C   VSAREND    004       LAST REAL ADDRESS
```

CROSS REFERENCE

Name	Len	Val/Disp
VSAELMSZ	001	004
VSARADDR	004	020
VSAREND	004	03C
VSARTBL	004	020
VSASIZE	001	008
VSATB	001	000
VSAVADDR	004	000
VSAVEND	004	01C
VSAVTBL	004	000

HCPVSHBK— VIRTUAL SIE PAGE TABLE DESCRIPTION

DSECT NAME: VSHBK

DESCRIPTIVE NAME: VIRTUAL SIE PAGE TABLE DESCRIPTION

FUNCTION: DESCRIBES THE SHADOW PAGE TABLES USED WITH V/SIE

LOCATED BY:

MULTIPLE COPIES OF THE VSHBK ARE CONTAINED IN THE VSIBK WHICH IS POINTED TO BY THE VMDWSHAD FIELD OF HCPVMDBK.
VSISHPTS IN THE VSIBK POINTS TO THE FIRST OF THE PAGE TABLE DESCRIPTORS.
VSISHPTL POINTS TO THE LAST OF THE PAGE TABLE DESCRIPTORS.

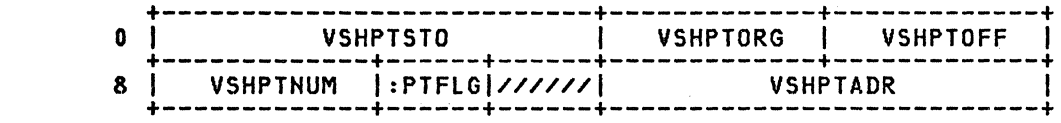
CREATED BY:

HCPWSHPX

DELETED BY:

HCPWSHFR

VSHBK - VIRTUAL SIE SHADOW CONTROL



disp	name	length	description
000	VSHPTSTO	004	STO VALUE AT LAST USE
004	VSHPTORF	004	VGUEST ORIGIN AND OFFSET
004	VSHPTORG	002	VGUEST ORIGIN FOR THIS TABLE
006	VSHPTOFF	002	OFFSET TO LAST STE USING THIS
008	VSHPTNUM	002	SEGMENT FAULT CREATION NUMBER
00A	VSHPTFLG	001	FLAG FOR PAGE TABLE LOOKASIDE
	BITS DEFINED IN VSHPTFLG (AT HEX DISPLACEMENT: A)		
	80 VSHPTVLD		THIS PAGE TABLE IS VALID
	40 VSHPTUSE		THIS PAGE TABLE IN USE
00B		X	RESERVED FOR FUTURE IBM USE
00C	VSHPTADR	004	SHADOW PAGE TABLE ADDRESS
010	VSHPTEND	004	END OF PAGE TABLE DESCRIPTOR
	EQUATES		
	10 VSHPTLEN		LENGTH OF PAGE TABLE DESCRIPTOR WARNING - THIS FIELD MUST BE 16 BYTES FOR COMPATIBILITY WITH VSIBK COPY FILE AND HCPWSH MODULE. FOLLOWING EQUATES VERIFY THIS LENGTH
	FF VSHLXXX1		LENGTH CHECK
	FF VSHWXXX2		LENGTH CHECK (ASSEMBLY ERROR IS GENERATED IF LENGTH CHECK FAILS)

CROSS REFERENCE

Name	Len	Val/Disp
VSHBK	001	000
VSHLXXX1	001	FFF
VSHPTADR	004	00C
VSHPTEND	004	010
VSHPTFLG	001	00A
VSHPTLEN	001	010
VSHPTNUM	002	008
VSHPTOFF	002	006
VSHPTORF	004	004
VSHPTORG	002	004
VSHPTSTO	004	000
VSHPTUSE	001	040
VSHPTVLD	001	080
VSHWXXX2	001	FFF

HCPVSIBK— V/SIE SHADOW TRANSLATION TABLE CONTROL

DSECT NAME: VSIBK

DESCRIPTIVE NAME: V/SIE SHADOW TRANSLATION TABLE CONTROL

FUNCTION: THIS BLOCK CONTROLS THE SHADOW TRANSLATION TABLES USED WHEN A GUEST HAS ISSUED A SIE INSTRUCTION (V/SIE). THE SHADOW TRANSLATION TABLES ALLOW THE HARDWARE TO TRANSLATE FROM VIRTUAL GUEST REAL TO HOST REAL, IN THE SAME WAY AS IT NORMALLY TRANSLATES GUEST REAL TO HOST REAL FOR NORMAL GUESTS. WITHIN THIS CONTROL BLOCK, THERE ARE UP TO 12 COPIES OF THE VSHBK COPY FILE WHICH IS USED TO DESCRIBE THE PAGE TABLES USED BY V/SIE. THE VSIBK CONTAINS MOSTLY SEGMENT TABLE INFORMATION, WHILE THE VSHBK HAS PAGE TABLE INFORMATION.

LOCATED BY:

THE VMDWSHAD FIELD OF THE VMDBK

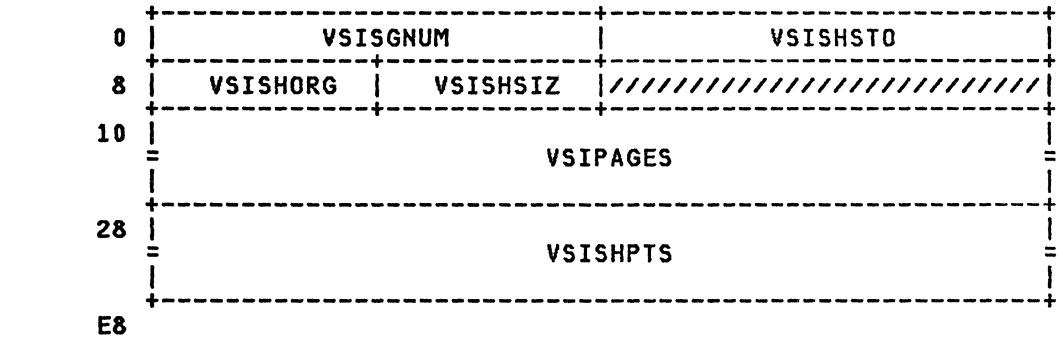
CREATED BY:

HCPWSHPX

DELETED BY:

HCPWSHFR

VSIBK - VIRTUAL SIE PAGE TABLE DESCRIPTION



disp	name	length	description
000	VSISGNUM	004	CURRENT SEGMENT FAULT NUMBER FIELD INCREMENTED BY ONE AT EACH SEGMENT FAULT. USED AS AN 'AGE' FACTOR TO DETERMINE VALID ENTRIES.
004	VSISHSTO	004	STO VALUE AT LAST VSIE ENTRY
008	VSISHORG	002	SIEMSORG FOR CURRENT TABLES
00A	VSISHSIZ	002	SIEGMSIZ FOR CURRENT TABLES
00C		F	RESERVED FOR FUTURE IBM USE VIRTUAL-GUEST MAIN STORAGE ORIGIN VALUE IF NOT ZERO
010	VSIPAGES	008	SYSTEM PAGE DESCRIPTORS * ??? THIS FIELD NEEDS MORE DESCRIPTION

EQUATES

03	VSIPGCNT	NUMBER OF SYSTEM PAGE SLOTS
0C	VSIPTCNT	NUMBER OF PAGE TABLES
28	VSISHDRL	LENGTH TO CLEAR TO ZEROES

028	VSISHDES	008	ALIGNMENT FOR SHADOW DESCRIPTORS
028	VSISHPTS	016	TWELVE COPIES OF VSHBK COPY

EQUATES

D8	VSISHPTL	ADDRESS OF LAST ENTRY IN TABLE WARNING - THERE ARE 12 COPIES OF VSHBK CONTAINED WITHIN VSISHPTS, OF EXACTLY 16 BYTES EACH. THIS LENGTH CANNOT BE CHANGED WITHOUT CHANGES


```
                        TO VSIBK COPY FILE AND HCPWSH MODULE.
                        FOLLOWING EQUATES USED TO ENSURE VSHBK IS 16 BYTES.
FF      VSILXXX1        LENGTH CHECK
FF      VSIWXXX2        LENGTH CHECK
                        (ASSEMBLY ERROR IS GENERATED IF LENGTH CHECK FAILS)
E8      VSISHLEN        LENGTH OF BLOCK IN BYTES
1D      VSISIZE         BLOCK SIZE, DOUBLE WORDS
```

CROSS REFERENCE

Name	Len	Val/Disp
VSIBK	001	000
VSILXXX1	001	FFF
VSIPAGES	008	010
VSIPGCNT	001	003
VSIPTCNT	001	00C
VSISGNUM	004	000
VSISHDES	008	028
VSISHDRL	001	028
VSISHLEN	001	0E8
VSISHORG	002	008
VSISHPTL	001	0D8
VSISHPTS	016	028
VSISHSIZ	002	00A
VSISHSTO	004	004
VSISIZE	001	01D
VSIWXXX2	001	FFF

HCPVSMBK— VTAM SERVICE MACHINE BLOCK

DSECT NAME: VSMBK

DESCRIPTIVE NAME: VTAM SERVICE MACHINE BLOCK

FUNCTION: TO CONTAIN INFORMATION ABOUT A SINGLE VSM

LOCATED BY:

SYSVSMBK	FIELD OF SYSCM
VSMNEXT	FORWARD CHAIN

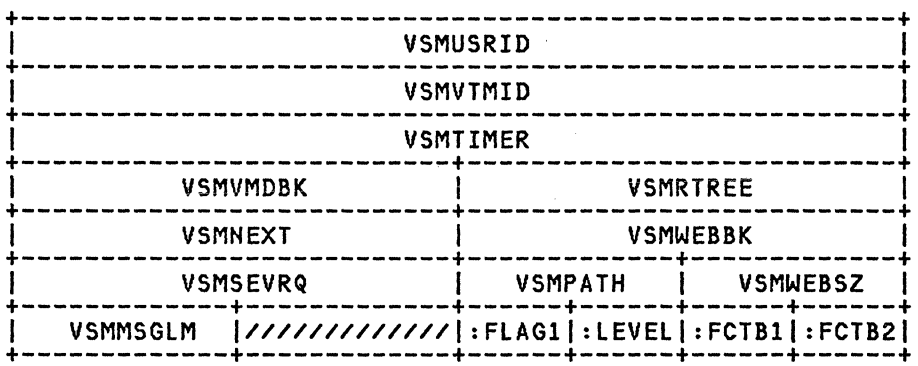
CREATED BY:

HCPVCTCN	DURING GLOBAL IUCV CONNECT BY THE VSM
HCPVCWDV	DISABLE COMMAND PROCESSING FOR A SPECIFIC VSM USERID
HCPVCWEV	ENABLE COMMAND PROCESSING FOR A SPECIFIC VSM USERID

DELETED BY:

HCPVCZRL DELETE SNABK/RDEV OR VSMBK

VSMBK - VTAM SERVICE MACHINE BLOCK



disp	name	length	description
000	VSMUSRID	008	VSM USERID
008	VSMVTMID	008	VTAM MACHINE USERID
010	VSMTIMER	008	VALUE FOR REDISPLAY TIMER
018	VSMVMDBK	004	VSM VMDBK ADDRESS
01C	VSMRTREE	004	RADIX TREE ANCHOR
020	VSMNEXT	004	POINTER TO THE NEXT VSMBK
024	VSMWEBBK	004	POINTER TO WEBBK FOR LOGO
028	VSMSEVRQ	004	QUEUE OF SNABKS AWAITING SEVER
02C	VSMPATH	002	IUCV PATHID FOR THE VSM
02E	VSMWEBSZ	002	SIZE OF WEBBK IN DOUBLEWORDS
030	VSMMSGLM	002	MESSAGE LIMIT
032		1H	RESERVED FOR FUTURE IBM USE
034	VSMFLAG1	001	STATUS
035	VSMLEVEL	001	LEVEL OF SUPPORT IN VSM VSM FUNCTION TABLE THIS 2-BYTE TABLE IDENTIFIES THE FUNCTIONS THAT ARE SUPPORTED BY A GIVEN VSM LEVEL.
036	VSMFCTNS	002	VSM FUNCTION FLAGS
036	VSMFCTB1	001	FUNCTION FLAG BYTE 1
037	VSMFCTB2	001	FUNCTION FLAG BYTE 2 BITS 0 - 7 RESERVED FOR FUTURE IBM USE

EQUATES

07	VSMSIZE	VSMBK SIZE IN DOUBLEWORDS

MORE EQUATES

080	VSMCONNP	CONNECT PENDING
040	VSMENABL	VSM DEVICES ENABLED
020	VSMSEVER	GLOBAL VSM PATH HAS BEEN SEVERED
080	VSMFDIA	DIAL FUNCTION SUPPORTED
040	VSMFWSF	WSF QUERY REPLY DATA SUPPORTED
020	VSMFEAU	ERASE ALL UNPROTECTED SUPPORTED
010	VSMFTTY	ENHANCED TTY DEVICE SUPPORT
008	VSMFWFP	WRITE FOR POSITION SUPPORTED
004	VSMFCON	CONMODE 3270 SUPPORTED
002	VSMFVTM	VTAM USERID TRANSACTION SUPPORTED

CROSS REFERENCE

Name	Len	Val/Disp
VSMBK	001	000
VSMCONNP	001	080
VSMENABL	001	040
VSMFCON	001	004
VSMFCTB1	001	036
VSMFCTB2	001	037
VSMFCTNS	002	036
VSMFDIA	001	080
VSMFEAU	001	020
VSMFLAG1	001	034
VSMFTTY	001	010
VSMFVTM	001	002
VSMFWFP	001	008
VSMFWSF	001	040
VSMLEVEL	001	035
VSMMSGLM	002	030
VSMNEXT	004	020
VSMPATH	002	02C
VSMRTREE	004	01C
VSMSEVER	001	020
VSMSEVRQ	004	028
VSMSIZE	001	007
VSMTIMER	008	010
VSMUSRID	008	000
VSMVMDBK	004	018
VSMVRREC	001	080
VSMVTMID	008	008
VSMWEBBK	004	024
VSMWEBSZ	002	02E

HCPVSPBK— VIRTUAL SPOOLING DEVICE BLOCK

DSECT NAME: VSPBK

DESCRIPTIVE NAME: VIRTUAL SPOOLING DEVICE BLOCK

FUNCTION: CONTAIN THE INFORMATION NECESSARY FOR SIM- ULATION OF A VIRTUAL SPOOLING DEVICE (READER, PRINTER, PUNCH, OR CONSOLE).

LOCATED BY:

ANCHOR IN HCPVDEV

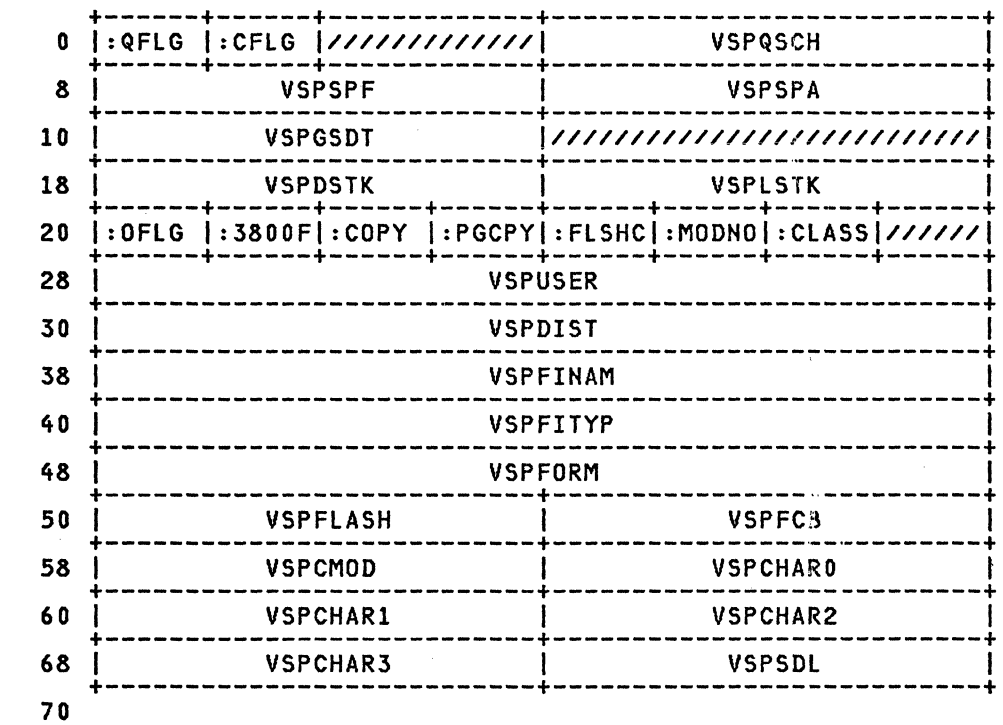
CREATED BY:

HCPABNDS : MUST CREATE A DUMMY SPOOLING PRINTER ON WHICH A PRINTABLE DUMP MAY BE CREATED.
HCPVSPBV : BUILD A VSPBK FOR A SPOOLING DEVICE.

DELETED BY:

HCPABNDS : ONCE A PRINTABLE DUMP ON THE DUMMY PRINTER HAS BEEN CREATED.
HCPVDBDL : WHEN DELETING A VIRTUAL DEVICE.

VSPBK - VIRTUAL SPOOLING DEVICE BLOCK



disp	name	length	description
000	VSPQFLG	001	SPOOL FILE QUEUE FLAG

BITS DEFINED IN VSPQFLG (AT HEX DISPLACEMENT: 0)

80	VSPRDR	CHAIN ON RDR QUEUE AT CLOSE
40	VSPPUN	CHAIN ON PUN QUEUE AT CLOSE
20	VSPPRT	CHAIN ON PRT QUEUE AT CLOSE

001	VSPCFLG	001	SPOOLING DEVICE CONTROL FLAG

BITS DEFINED IN VSPCFLG (AT HEX DISPLACEMENT: 1)

80	VSPACTV		SPOOLING TASK ACTIVE ON THE DEVICE
002		1H	RESERVED FOR FUTURE IBM USE
004	VSPQSCH	004	SPFBK LAST 'FOUND' IN DIAG. SUPPORT
008	VSPSPF	004	POINTER TO ACTIVE SPFBK
00C	VSPSPA	004	POINTER TO CURRENT SPABK
010	VSPGSDT	004	POINTER TO GSDBK CONTAINING TAG DATA
014		1F	RESERVED FOR IBM USE
018	VSPDSTK	004	LOCAL SPOOLING TASK STACK (CPEBK'S)
01C	VSPLSTK	004	LAST CPEBK ON TASK STACK
020	VSPOFLG	001	VIRTUAL DEVICE SPOOL OPTIONS FLAG

BITS DEFINED IN VSPOFLG (AT HEX DISPLACEMENT: 20)

80	VSPCONT	'CONT' OPTION SET
40	VSPHOLD	'HOLD' OPTION SET
20	VSPKEEP	'KEEP' OPTION SET
10	VSPMSG	'MSG' OPTION SET
08	VSPSTRT	'START' OPTION SET
04	VSPTERM	'TERM' OPTION SET
02	VSPEOF	'EOF' OPTION SET

021	VSP3800F	001	VIRTUAL 3800 PRINTER FLAGS

BITS DEFINED IN VSP3800F (AT HEX DISPLACEMENT: 21)

80	VSPFLALL	FLASH ALL COPIES OF THE FILE

022	VSPCOPY	001	FILE COPY COUNT
023	VSPPGCPY	001	PAGE COPY COUNT (USED ONLY FOR 3800)
024	VSPFLSHC	001	3800 FLASH COUNT FOR SPOOL FILES
025	VSPMODNO	001	3800 COPY MOD CHAR SET NUMBER (0-3)
026	VSPCLASS	001	SPOOL CLASS (A-Z OR 0-9)
027		1X	RESERVED FOR FUTURE IBM USE
028	VSPUSER	008	USERID TO RECIEVE RESULTING SPOOL FILES
030	VSPDIST	008	DISTRIBUTION CODE
038	VSPFINAM	008	FILENAME
040	VSPFITYP	008	FILETYPE
048	VSPFORM	008	FORM NAME
050	VSPFLASH	004	3800 FORMS OVERLAY (FLASH) NAME
054	VSPFCB	004	3800 FORMS CONTROL BUFFER (FCB) NAME
058	VSPCMOD	004	3800 COPY MODIFICATION NAME
05C	VSPCHARS	016	LENGTH ATTRIBUTE TO CLEAR CHAR0 - CHAR3
05C	VSPCHAR0	004	3800 CHARACTER SET NAME - FIRST
060	VSPCHAR1	004	3800 CHARACTER SET NAME - SECOND
064	VSPCHAR2	004	3800 CHARACTER SET NAME - THIRD
068	VSPCHAR3	004	3800 CHARACTER SET NAME - FOURTH
06C	VSPSDL	004	ADDRESS OF THE SDLBK - USED BY SPOOL

EQUATES

0E	VSPSIZE	VSPBK SIZE IN DOUBLE-WORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
VSPACTV	001	080	VSPCHARS	016	05C	VSPCHAR2	004	064
VSPBK	001	000	VSPCHAR0	004	05C	VSPCHAR3	004	068
VSPCFLG	001	001	VSPCHAR1	004	060	VSPCLASS	001	026

Name	Len	Val/Disp
VSPCMOD	004	058
VSPCONT	001	080
VSPCOPY	001	022
VSPDIST	008	030
VSPDSTK	004	018
VSPEOF	001	002
VSPFCB	004	054
VSPFINAM	008	038
VSPFITYP	008	040
VSPFLALL	001	080
VSPFLASH	004	050
VSPFLSHC	001	024
VSPFORM	008	048
VSPGSDT	004	010
VSPHOLD	001	040
VSPKEEP	001	020
VSPLSTK	004	01C
VSPMODNO	001	025
VSPMSG	001	010
VSPOFLG	001	020
VSPPGCPY	001	023
VSPPRT	001	020
VSPPUN	001	040
VSPQFLG	001	000
VSPQSCH	004	004
VSPRDR	001	080
VSPSDL	004	06C
VSPSIZE	001	00E
VSPSPA	004	00C
VSPSPF	004	008
VSPSTRT	001	008
VSPTERM	001	004
VSPUSER	008	028
VSP3800F	001	021

HCPWEBBK— WORK ELEMENT BLOCK

DSECT NAME: WEBBK

DESCRIPTIVE NAME: WORK ELEMENT BLOCK

FUNCTION: INTERFACE CONTROL BLOCK PASSED BETWEEN SNA/CCS AND A VSM (KNOWN THERE AS DTIWEB). IT IS USED TO REQUEST THE OTHER COMPONENT TO DO A CERTAIN PIECE OF WORK.

LOCATED BY:

WEIWEBBK FIELD OF WEIBK
VSMWEBBK FIELD OF VSMBK - FOR INITIAL LOGO

CREATED BY:

HCPVCVEB - BUILDING A WEBBK (REGULAR)
HCPVCXGO - BUILDING A WEBBK FOR LOGO
HCPVCXSA - PROCESSING AN ERROR IN A WEBBK FROM VSM

DELETED BY:

HCPVCPIL - PROCESSING ASYNCHRONOUS INPUT FROM VSM
HCPVCQSR - PROCESSING A RETURN FROM AN IUCV SEND WITH NO REPLY
HCPVCVEB - BUILDING A WEBBK (REGULAR)
HCPVCVIN - CLEAN-UP SNABK INPUT CHAIN
HCPVCVUT - CLEAN-UP SNABK OUTPUT CHAIN
HCPVCXFU - PROCESSING A NON-ZERO IUCV RETURN CODE
HCPVCXSA - PROCESSING AN ERROR IN A WEBBK FROM VSM

WEBBK - SNA/CCS WORK ELEMENT BLOCK

```
    +------+------+-------------+------+------+------+------+
  0 |WEBFMT|WEBCAN|   WEBCOUNT  |WEBFUN|:MODE |:CHAR |:EDIT |
    +------+------+-------------+------+------+------+------+
  8 |:FLAGS|:CPFLG|   WEBLINE   |   WEBCURSR  |:TABCH|//////|
    +------+------+-------------+-------------+------+------+
 10 |   WEBOFSET  |/////////////|          WEBVSMWK          |
    +------+------+------+------+-------------+-------------+
 18 |:TYPC |:DMDL |:DFTR |:LINEL|   WEBSAPTH  |   WEBPACE   |
    +------+------+------+------+-------------+-------------+
 20 |:DTYPE|                    WEBRSRVD                     |
    +------+------+-------------+-------------+-------------+
 28 |:TYPE |//////|   WEBCNT2   |   WEBLOGL2  |   WEBLOGB2  |
    +------+------+-------------+-------------+-------------+
    :                                                       :
    :                        WEBDATA2                       :
    :                                                       :
    +-------------------------------------------------------+
```

REDEFINITION - INBOUND REQUESTS

```
        +------+------+------+
 8 ...  |:SAFLG|:LAID |:NLLOS| C
        +------+------+------+
```

REDEFINITION - LOGO SIZE

```
    +-------------+-------------+
 10 |   WEBLOGOL  |   WEBLOGOB  | 14
    +-------------+-------------+
```

REDEFINITION - TTY WRITE DATA LENGTH

```
    +-------------+
 10 |   WEBWTCNT  | 12
    +-------------+
```

```
      +-------------+


         REDEFINITION - DEVICE INFORMATION (TERMINAL CMD)

      +-------+
   18 |:DFLGS| 19
      +-------+
```

disp	name	length	description
000	WEBFMT	001	CONTROL AREA FORMAT
001	WEBCAN	001	NUMBER OF CONTROL AREAS
002	WEBCOUNT	002	DATA COUNT - LENGTH OF WEBDATA
004	WEBFUN	001	FUNCTION CODE
005	WEBENVR	005	ENVIRONMENT DEFINITION
005	WEBMODE	001	MODE OF OPERATION
006	WEBCHAR	001	CHARACTER SET
007	WEBEDIT	001	EDITING CHARACTERISTICS
008	WEBFLAGS	001	CCS FLAGS FOR VSM
009	WEBCPFLG	001	CCS STATUS FLAGS FOR VSM OUTBOUND
00A	WEBLINE	002	LINE NUMBER FOR CMS WEBCMWRT AND WEBCMEWT (0 ORIGIN)
00C	WEBCURSR	002	RELATIVE CURSOR POSITION INBOUND/OUTBOUND
00E	WEBTABCH	001	LOGICAL TAB CHARACTER
00F		1X	RESERVED FOR FUTURE IBM USE
010	WEBOFSET	002	OFFSET OF DATA WITHIN WEBDATA
012		1H	RESERVED FOR FUTURE IBM USE
014	WEBVSMWK	004	VSM WORKAREA

EQUATES

03	WEBSIZE	WEBBK FIXED SIZE IN DOUBLEWORDS
18	WEBBSIZE	WEBBK FIXED SIZE IN BYTES

018	WEBDATA	001	DATA AREA - VARIABLE SIZE
018	WEBTYPC	001	LU DEVICE CLASS
019	WEBDMDL	001	DEVICE MODEL
01A	WEBDFTR	001	DEVICE FEATURES
01B	WEBLINEL	001	DEVICE LINE LENGTH
01C	WEBSAPTH	002	VSM IUCV PATHID
01E	WEBPACE	002	DEVICE PACE VALUE
020	WEBDTYPE	001	APL INDICATOR/DEVICE TYPE
021	WEBWSFQD	001	WSFQ REPLY DATA
021	WEBRSRVD	007	USED FOR ALIGNMENT PURPOSES
028	WEBPART2	008	WEBBK EXTENSION
028	WEBTYPE	001	TYPE OF WEBBK LOGO EXTENSION
029		1X	RESERVED FOR FUTURE IBM USE
02A	WEBCNT2	002	LENGTH OF WEBDATA2
02C	WEBLOGL2	002	NUMBER OF LINES IN SECOND LOGO
02E	WEBLOGB2	002	NUMBER OF BYTES PER LINE

EQUATES

01	WEBSIZE2	WEBBK EXTENSION SIZE IN DOUBLEWORDS
08	WEBBSIZ2	WEBBK EXTENSION SIZE IN BYTES

030	WEBDATA2	001	START OF VARIABLE LENGTH DATA

REDEFINITION - INBOUND REQUESTS

009	WEBSAFLG	001	VSM STATUS FLAGS FOR CCS
00A	WEBLAID	001	LOGICAL ATTENTION IDENTIFIER
00B	WEBNLLOS	001	NUMBER LINES LEFT ON SCREEN

REDEFINITION - LOGO SIZE


```
010   WEBLOGOL   002      NUMBER OF LINES FOR LOGO
012   WEBLOGOB   002      NUMBER OF BYTES PER LINE

        REDEFINITION - TTY WRITE DATA LENGTH

010   WEBWTCNT   002      NUMBER OF BYTES TO WRITE
                          PRIOR TO THE READ FOR VSM TTY

        REDEFINITION - DEVICE INFORMATION (TERMINAL CMD)

018   WEBDFLGS   001      DEVICE INFORMATION FLAGS

                  MORE EQUATES

        000    WEBFMT1     MSG FORMAT-SINGLE CONTROL AREA
        001    WEBCAN1     NUMBER OF CONTROL AREAS IS ONE
        000    WEBCPWRT    WRITE TO NEXT LINE IN OUTPUT AREA
        001    WEBCPRED    READ REQUEST
        002    WEBCPBRK    BREAK CONNECTION (CP LOGOFF OR
                           DISCONNECT)
        003    WEBCPWIC    WRITE TO INPUT AREA, POSITION
                           CURSOR AS INDICATED IN WEBCURSR
        004    WEBCPCPY    COPY REQUEST
        005    WEBCPIED    INVALID ENVIRONMENT DEFINITION
        006    WEBCPPFR    PFK REPLY-TREAT AS TERMINAL INPUT
        007    WEBCPIA     INPUT DATA ACCEPTED - PROCESS
        008    WEBCPINA    INPUT DATA NOT ACCEPTED
        009    WEBCPREX    REPLY EXPECTED BY SYNCHRONOUS PATH
        00A    WEBCPTAB    PF KEY TAB OPERATION
        00B    WEBCPLER    LOGICAL ERROR
        00C    WEBCPLGO    LOGO IN WEBDATA
        00D    WEBCPTMR    CMD END-NO OUTPUT FOR CMD ENTERED
        00E    WEBCPPTH    IUCV PATHID
        00F    WEBCPCAH    COLOR & HILITE MAP
        010    WEBCPLSA    DEVICE INFORMATION (TERMINAL CMD)
                           .......
                           FUNCTION CODE - OUTBOUND IN CMS MODE
        000    WEBCMWRT    WRITE TO LINE NUMBER SPECIFIED IN
                           WEBLINE
        001    WEBCMEWT    ERASE OUTPUT AREA-WRITE TO WEBLINE
        002    WEBCMCLR    ERASE ENTIRE SCREEN AND REFRESH
                           OUTPUT, INPUT, AND STATUS AREAS
                           ................
                           FUNCTION CODE - OUTBOUND IN FULL-SCREEN SUPPORT MODE
        000    WEBFSWRT    FSSM WRITE
        001    WEBFSEWT    FSSM ERASE/WRITE
        002    WEBFSEWA    FSSM ERASE/WRITE ALTERNATE
        003    WEBFSRDM    FSSM READ MODIFIED
        004    WEBFSRDB    FSSM READ BUFFER
        005    WEBFSWSF    FSSM WRITE STRUCTURED FIELD
        006    WEBFSEAU    FSSM ERASE ALL UNPROTECTED
        007    WEBFSRBP    FSSM READ BUFFER FOR POSITION
        008    WEBFSRMP    FSSM READ MODIFIED FOR POSITION
                           .........
                           FUNCTION CODE - INBOUND IN ALL MODES
        001    WEBINLOG    LOGON REQUEST
        002    WEBINATT    ATTENTION INTERRUPT WITHOUT DATA
        003    WEBINERR    UNRECOVERABLE I/O ERROR, LOGOFF
                           CONDITION
        004    WEBINPUT    AID AND OPTIONAL DATA INPUT
        005    WEBINCB1    CURSOR BACK 1 (CURSOR ATTENTION)
        006    WEBINLGF    VTAM GENERATED LOGOFF CONDITION -
                           CCS WILL LOGOFF USER
        007    WEBINFNU    FSSM REQUEST REJECTED -
                           SCREEN NOT USER MODE
        008    WEBINAOK    NORMAL RESPONSE
        009    WEBINACT    ACCOUNTING DATA FOR VSM USER
        00A    WEBINOPC    OPERATION CHECK FOR FSSM REQUEST
        00B    WEBINLER    LOGIC ERROR IN SNA/CCS WEBBK
        00C    WEBINVER    VSM LOGIC ERROR
        00D    WEBRDERR    LINE TERMINAL READ ERROR
        00E    WEBINVTM    VTAM MACHINE USERID INPUT
                           ..............
```

		FUNCTION CODE - INBOUND IN FULL-SCREEN SUPPORT MODE
00F	WEBINCC1	ATTN + BUSY, WITH CC1
010	WEBINECU	EQUIP CHK + UNIT SPEC
011	WEBINDCU	DATA CHK + UNIT SPEC
012	WEBINEC	EQUIP CHK
013	WEBINCRJ	CMD REJ
014	WEBINCDC	(CHANNEL) DATA CHK
015	WEBINCCC	(CHANNEL) CONTROL CHK
000	WEBCONS	CONSOLE MODE
001	WEBCMS	CMS MODE
002	WEBFSSM	FULL-SCREEN SUPPORT MODE
004	WEBVSAN	VSM INTERNAL MODE
000	WEBCHEBC	EBCDIC CHARACTER SET
001	WEBCHAPL	APL CHARACTER SET
002	WEBCHTXT	TEXT CHARACTER SET
008	WEBHIEKO	HIGHLIGHT INPUT REDISPLAY
004	WEBEDPTI	INHIBIT PRINTING (OR NON-DISPLAY)
002	WEBNOEKO	DO NOT REDISPLAY INPUT ON NEXT OUTPUT LINE
001	WEBEDCUP	CONVERT TO UPPER CASE
080	WEBTTYWT	TTY WRITE WITH OUTSTANDING READ
040	WEBCONMD	OPERATION TO TERMINAL WITH CONMODE 3270
020	WEBLED	LIMITED EDIT WRITE
010	WEBANFSW	ALLOW ANY FSSM WRITE - RESET DONE
008	WEBDIAL	OPERATION TO A DIALED DEVICE
004	WEBNOMOR	CLEAR SCREEN BUT NO MORE STATUS
002	WEBPRMPT	TELL VSM INITIAL LOGON PROMPT
001	WEBPASPA	PASS PA1 KEY TO APPLICATION
080	WEBCPNCR	NO CARRIAGE RETURN (K/P ONLY)
040	WEBCPPRI	PRIORITY MSG
020	WEBCPALM	ALARM
010	WEBCPMDE	CP
008	WEBCPHLW	HIGHLIGHT THE WRITE
004	WEBCPRSP	CCS RESPONSE (REPLY)
002	WEBCPRRR	CCS REQUEST, REQUIRED RESPONSE (SEND/REPLY)
001	WEBCPRNR	CCS REQUEST, NO RESPONSE REQUIRED (SEND)
080	WEBTERM	KEYBOARD/PRINTER
040	WEBGRAF	GRAPHICS DEVICE
002	WEBSCRN2	SCREEN SIZE IS 24 X 80
003	WEBSCRN3	SCREEN SIZE IS 32 X 80
004	WEBSCRN4	SCREEN SIZE IS 43 X 80
005	WEBSCRN5	SCREEN SIZE IS 27 X 132
080	WEBXCLOR	EXTENDED COLOR
040	WEBXHILI	EXTENDED HIGHLIGHT
020	WEBXPSS	PROGRAMMED SYMBOL SETS
010	WEBWSFQ	WSFQ REPLY DATA IS PRESENT
000	WEBT3215	3215-TYPE TERMINAL
001	WEBT3278	3278-TYPE TERMINAL
004	WEBT3277	3277-TYPE TERMINAL
020	WEBTTTY	TTY-TYPE TERMINAL
009	WEBINLL	SIZE ON INBOUND RECORD IN BYTES
001	WEBTYPE1	MINIMUM LOGO DATA FOLLOWS
002	WEBTYPE2	SYSTEM ID DATA FOLLOWS
003	WEBTYPE3	TTY ONLINE MSG FOLLOWS
004	WEBTYPE4	2741 ONLINE MSG FOLLOWS
005	WEBTYPE5	LOGO INPUT AREA FOLLOWS
020	WEBSAHLD	HOLDING
010	WEBSAMOR	MORE
004	WEBSARSP	INDICATES CCS RESPONSE
002	WEBSARRR	VSM REQUEST, RESPONSE REQUIRED
001	WEBSARNR	VSM REQUEST, NO RESPONSE REQUIRED
000	WEBLANTR	ENTER
001	WEBLAPA1	PA1
002	WEBLAPA2	PA2
003	WEBLAPA3	PA3
004	WEBLACLR	CLEAR KEY (VSM INTERNAL)
005	WEBSATTN	SINGLE ATTENTION
006	WEBMATTN	MULTIPLE ATTENTION
064	WEBLALPD	LIGHT PEN
065	WEBLA001	PF1

066	WEBLA002	PF2
067	WEBLA003	PF3
068	WEBLA004	PF4
069	WEBLA005	PF5
06A	WEBLA006	PF6
06B	WEBLA007	PF7
06C	WEBLA008	PF8
06D	WEBLA009	PF9
06E	WEBLA010	PF10
06F	WEBLA011	PF11
070	WEBLA012	PF12
071	WEBLA013	PF13
072	WEBLA014	PF14
073	WEBLA015	PF15
074	WEBLA016	PF16
075	WEBLA017	PF17
076	WEBLA018	PF18
077	WEBLA019	PF19
078	WEBLA020	PF20
079	WEBLA021	PF21
07A	WEBLA022	PF22
07B	WEBLA023	PF23
07C	WEBLA024	PF24
008	WEBDHILT	TERM HILITE IN EFFECT
004	WEBDNBRK	TERM BRKKEY NONE IN EFFECT
002	WEBDMASK	TERM MASK IN EFFECT
001	WEBDATTN	TERM ATTN IN EFFECT

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
WEBANFSW	001	010	WEBCPPFR	001	006	WEBFSEWA	001	002
WEBBK	001	000	WEBCPPRI	001	040	WEBFSEWT	001	001
WEBBSIZE	001	018	WEBCPPTH	001	00E	WEBFSRBP	001	007
WEBBSIZ2	001	008	WEBCPRED	001	001	WEBFSRDB	001	004
WEBCAN	001	001	WEBCPREX	001	009	WEBFSRDM	001	003
WEBCAN1	001	001	WEBCPRNR	001	001	WEBFSRMP	001	008
WEBCHAPL	001	001	WEBCPRRR	001	002	WEBFSSM	001	002
WEBCHAR	001	006	WEBCPRSP	001	004	WEBFSWRT	001	000
WEBCHEBC	001	000	WEBCPTAB	001	00A	WEBFSWSF	001	005
WEBCHTXT	001	002	WEBCPTMR	001	00D	WEBFUN	001	004
WEBCMCLR	001	002	WEBCPWIC	001	003	WEBGRAF	001	040
WEBCMEWT	001	001	WEBCPWRT	001	000	WEBHIEKO	001	008
WEBCMS	001	001	WEBCURSR	002	00C	WEBINACT	001	009
WEBCMWRT	001	000	WEBDATA	001	018	WEBINAOK	001	008
WEBCNT2	002	02A	WEBDATA2	001	030	WEBINATT	001	002
WEBCONMD	001	040	WEBDATTN	001	001	WEBINCB1	001	005
WEBCONS	001	000	WEBDFLGS	001	018	WEBINCCC	001	015
WEBCOUNT	002	002	WEBDFTR	001	01A	WEBINCC1	001	00F
WEBCPALM	001	020	WEBDHILT	001	008	WEBINCDC	001	014
WEBCPBRK	001	002	WEBDIAL	001	008	WEBINCRJ	001	013
WEBCPCAH	001	00F	WEBDMASK	001	002	WEBINDCU	001	011
WEBCPCPY	001	004	WEBDMDL	001	019	WEBINEC	001	012
WEBCPFLG	001	009	WEBDNBRK	001	004	WEBINECU	001	010
WEBCPHLW	001	008	WEBDTYPE	001	020	WEBINERR	001	003
WEBCPIA	001	007	WEBEDCUP	001	001	WEBINFNU	001	007
WEBCPIED	001	005	WEBEDIT	001	007	WEBINLER	001	00B
WEBCPINA	001	008	WEBEDPTI	001	004	WEBINLGF	001	006
WEBCPLER	001	00B	WEBENVR	005	005	WEBINLL	001	009
WEBCPLGO	001	00C	WEBFLAGS	001	008	WEBINLOG	001	001
WEBCPLSA	001	010	WEBFMT	001	000	WEBINOPC	001	00A
WEBCPMDE	001	010	WEBFMT1	001	000	WEBINPUT	001	004
WEBCPNCR	001	080	WEBFSEAU	001	006	WEBINVER	001	00C

Name	Len	Val/Disp
WEBINVTM	001	00E
WEBLACLR	001	004
WEBLAID	001	00A
WEBLALPD	001	064
WEBLANTR	001	000
WEBLAPA1	001	001
WEBLAPA2	001	002
WEBLAPA3	001	003
WEBLA001	001	065
WEBLA002	001	066
WEBLA003	001	067
WEBLA004	001	068
WEBLA005	001	069
WEBLA006	001	06A
WEBLA007	001	06B
WEBLA008	001	06C
WEBLA009	001	06D
WEBLA010	001	06E
WEBLA011	001	06F
WEBLA012	001	070
WEBLA013	001	071
WEBLA014	001	072
WEBLA015	001	073
WEBLA016	001	074
WEBLA017	001	075
WEBLA018	001	076
WEBLA019	001	077
WEBLA020	001	078
WEBLA021	001	079
WEBLA022	001	07A
WEBLA023	001	07B
WEBLA024	001	07C
WEBLED	001	020
WEBLINE	002	00A
WEBLINEL	001	01B
WEBLOGB2	002	02E
WEBLOGL2	002	02C
WEBLOGOB	002	012
WEBLOGOL	002	010
WEBMATTN	001	006
WEBMODE	001	005
WEBNLLOS	001	00B
WEBNOEKO	001	002
WEBNOMOR	001	004
WEBOFSET	002	010
WEBPACE	002	01E
WEBPART2	008	028
WEBPASPA	001	001
WEBPRMPT	001	002
WEBRDERR	001	00D
WEBRSRVD	007	021
WEBSAFLG	001	009
WEBSAHLD	001	020
WEBSAMOR	001	010
WEBSAPTH	002	01C
WEBSARNR	001	001
WEBSARRR	001	002
WEBSARSP	001	004
WEBSATTN	001	005
WEBSCRN2	001	002
WEBSCRN3	001	003
WEBSCRN4	001	004
WEBSCRN5	001	005
WEBSIZE	001	003
WEBSIZE2	001	001
WEBTABCH	001	00E
WEBTERM	001	080
WEBTTTY	001	020
WEBTTYWT	001	080
WEBTYPC	001	018
WEBTYPE	001	028
WEBTYPE1	001	001
WEBTYPE2	001	002
WEBTYPE3	001	003
WEBTYPE4	001	004
WEBTYPE5	001	005
WEBT3215	001	000
WEBT3277	001	004
WEBT3278	001	001
WEBVSAN	001	004
WEBVSMWK	004	014
WEBWSFQ	001	010
WEBWSFQD	001	021
WEBWTCNT	002	010
WEBXCLOR	001	080
WEBXHILI	001	040
WEBXPSS	001	020

HCPWEIBK— WORK ELEMENT IDENTIFIER BLOCK

DSECT NAME: WEIBK

DESCRIPTIVE NAME: WORK ELEMENT IDENTIFIER BLOCK

FUNCTION: IDENTIFIED A SINGLE WEBBK, FUNCTIONING BASICALLY AS A HEADER FOR THAT WEBBK

LOCATED BY:

SNAINN	FIELD OF SNABK - START OF INPUT CHAIN
SNAOUT	FIELD OF SNABK - START OF OUTPUT CHAIN
SNAINNL	FIELD OF SNABK - LAST IN INPUT CHAIN
SNAOUTL	FIELD OF SNABK - LAST IN OUTPUT CHAIN
WEINEXT	FORWARD CHAIN
WEIBACK	BACKWARD CHAIN

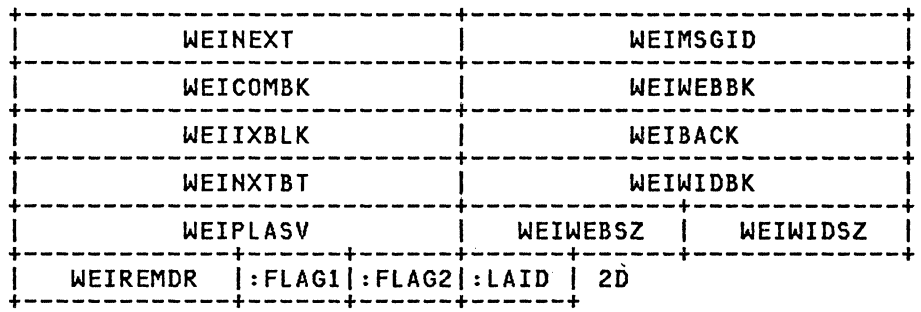
CREATED BY:

HCPVCVCI - BUILD AND CHAIN A WEIBK TO INPUT CHAIN
HCPVCVCO - BUILD AND CHAIN A WEIBK TO OUTPUT CHAIN

DELETED BY:

HCPVCVIN - CLEAN-UP SNABK INPUT CHAIN
HCPVCVUT - CLEAN-UP SNABK OUTPUT CHAIN

WEIBK - SNA/CCS WORK IDENTIFIER BLOCK



disp	name	length	description
000	WEINEXT	004	ADDRESS OF NEXT WEIBK
004	WEIMSGID	004	MESSAGE ID FOR THE WEBBK
008	WEICOMBK	004	ADDRESS OF COMBK FOR THE WEBBK
00C	WEIWEBBK	004	ADDRESS OF THE WEBBK
010	WEIIXBLK	004	ADDRESS OF IUCV IXBLK
014	WEIBACK	004	ADDRESS OF PREVIOUS WEIBK
018	WEINXTBT	004	ADDRESS OF AVAILABLE BYTE
01C	WEIWIDBK	004	ADDRESS OF WIDBK
020	WEIPLASV	004	SAVE AREA ADDRESS
024	WEIWEBSZ	002	CHAINED WEBBK SIZE IN DOUBLEWORDS
026	WEIWIDSZ	002	WIDBK SIZE IN DOUBLEWORDS
028	WEIREMDR	002	NUMBER BYTES REMAINING IN BUFFER
02A	WEIFLAG1	001	STATUS FLAGS
02B	WEIFLAG2	001	STATUS FLAGS
02C	WEILAID	001	LOGICAL AID FROM VSM

MORE EQUATES

080	WEINOIDA	NON-IDA DATA PRESENT
040	WEIRSTRQ	RESTART 'NOT PROCESSED' REQUEST
020	WEIDBLRD	REQ NOT PROCESSED-MULTIPLE READS
010	WEIBATCH	BATCHING IN PROGRESS
008	WEISNDBF	SEND THE BUFFER
004	WEIDONE	RETURN CODE IS ALREADY SET

002	WEIMSGFL	REQ NOT PROCESSED-MSG LIMIT FLOOD
001	WEIRESPN	RESPONSE IS REQUIRED
080	WEIIRADN	IRA HAS BEEN INVOKED
040	WEISENT	SUCCESSFUL SEND HAS BEEN ISSUED
020	WEIRERD	MAY NEED RE-READ
006	WEISIZE	WEIBK SIZE IN DOUBLEWORDS

CROSS REFERENCE

Name	Len	Val/Disp
WEIBACK	004	014
WEIBATCH	001	010
WEIBK	001	000
WEICOMBK	004	008
WEIDBLRD	001	020
WEIDONE	001	004
WEIFLAG1	001	02A
WEIFLAG2	001	02B
WEIIRADN	001	080
WEIIXBLK	004	010
WEILAID	001	02C
WEIMSGFL	001	002
WEIMSGID	004	004
WEINEXT	004	000
WEINOIDA	001	080
WEINXTBT	004	018
WEIPLASV	004	020
WEIREMDR	002	028
WEIRERD	001	020
WEIRESPN	001	001
WEIRSTRQ	001	040
WEISENT	001	040
WEISIZE	001	006
WEISNDBF	001	008
WEIWEBBK	004	00C
WEIWEBSZ	002	024
WEIWIDBK	004	01C
WEIWIDSZ	002	026

HCPWIDBK— WORK INDIRECT DATA ADDRESS BLOCK

DSECT NAME: WIDBK

DESCRIPTIVE NAME: WORK INDIRECT DATA ADDRESS BLOCK

FUNCTION: THIS CONTROL BLOCK IS A LIST OF INDIRECT ADDRESS WORDS (IDAW) AND COUNTS THAT IDENTIFIES DISCONTIGUOUS BUFFERS TO IUCV

LOCATED BY:

WEIWIDBK FIELD OF WEIBK

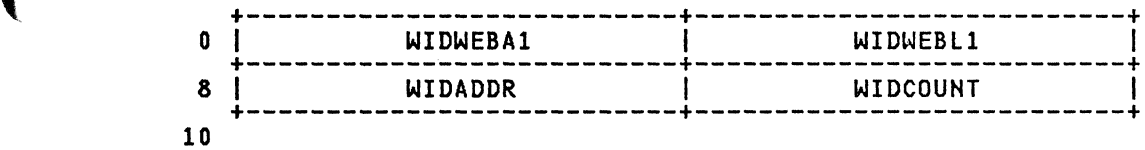
CREATED BY:

HCPVCYSM - BUILDING A WIDBK FOR SNA FSSM OR DIAL

DELETED BY:

HCPVCYSM - CLEAN-UP A SNA FSSM OR DIAL OPERATION

WIDBK - WORK INDIRECT DATA ADDRESS BLOCK



disp	name	length	description
000	WIDHDR1	008	WIDBK HEADER
000	WIDWEBA1	004	WEBBK ADDRESS
004	WIDWEBL1	004	WEBBK LENGTH

EQUATES

08	WIDHDRSZ	WIDBK HEADER LENGTH

008	WIDELMT	008	FIRST IDA ELEMENT
008	WIDADDR	004	ADDRESS OF IDA BUFFER
00C	WIDCOUNT	004	BYTE COUNT OF IDA BUFFER

EQUATES

08	WIDELMSZ	IDA ELEMENT LENGTH

CROSS REFERENCE

Name	Len	Val/Disp
WIDADDR	004	008
WIDBK	001	000
WIDCOUNT	004	00C
WIDELMSZ	001	008
WIDELMT	008	008
WIDHDRSZ	001	008
WIDHDR1	008	000
WIDWEBA1	004	000
WIDWEBL1	004	004

HCPWRMBK— WARMSTART WORKAREA OVERLAY

DSECT NAME: WRMBK

DESCRIPTIVE NAME: WARMSTART WORKAREA OVERLAY

FUNCTION: OVERLAYS THE WARM START FREE STORAGE WORK AREA PAGE CREATED BY HCPWRM.

LOCATED BY:

N/A

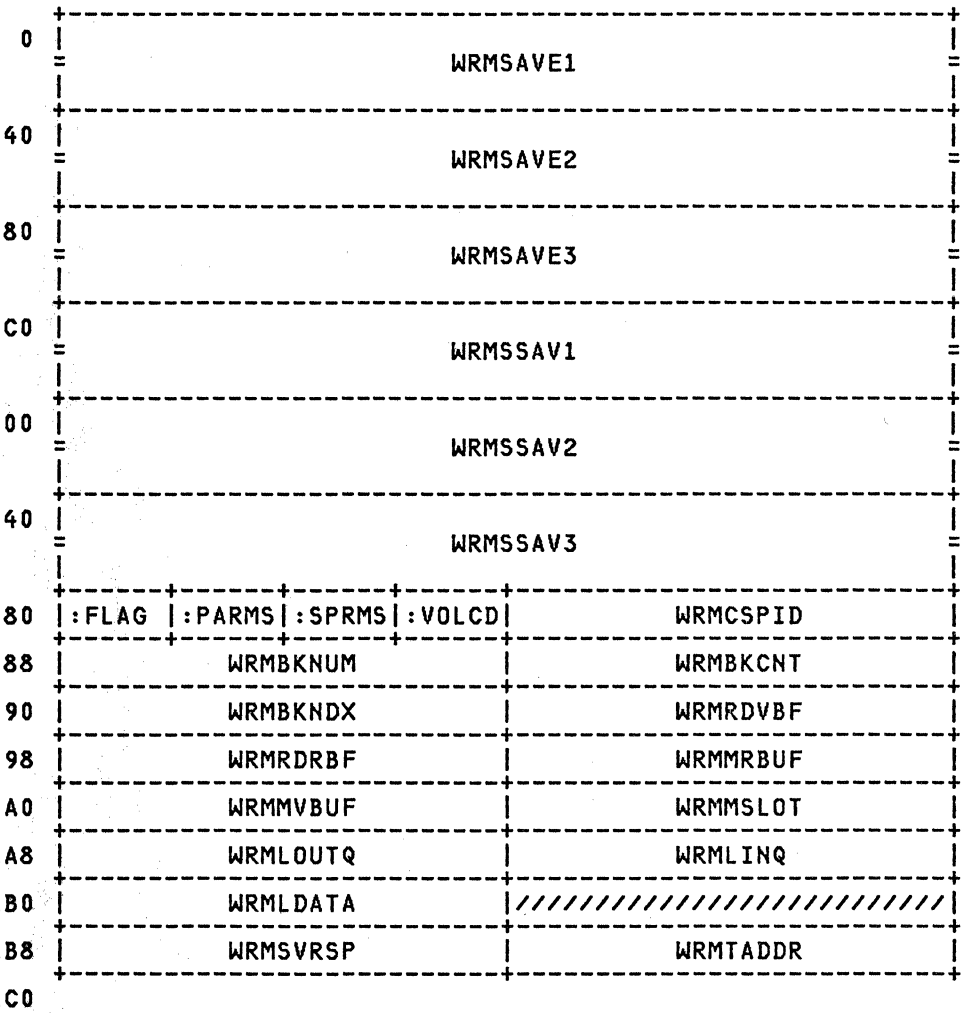
CREATED BY:

N/A

DELETED BY:

N/A

WRMBK - WARMSTART WORKAREA OVERFLOW



disp	name	length	description
000	WRMSAVE1	004	1ST LEVEL SUBROUTINE SAVEAREA
040	WRMSAVE2	004	2ND LEVEL SUBROUTINE SAVEAREA
080	WRMSAVE3	004	3RD LEVEL SUBROUTINE SAVEAREA
0C0	WRMSSAV1	004	1ST LEVEL SUBROUTINE SAVEAREA


```
100    WRMSSAV2    004       2ND LEVEL SUBROUTINE SAVEAREA
140    WRMSSAV3    004       3RD LEVEL SUBROUTINE SAVEAREA
180    WRMFLAG     001       WARM-START CONTROL FLAG
181    WRMPARMS    001       WORK COPY OF WRM ENTRY PARAMETERS
182    WRMSPRMS    001       WORK COPY OF WRS ENTRY PARAMETERS
183    WRMVOLCD    001       VOLUME CODE FOR SYSRES DEVICE
184    WRMCSPID    004       CURRENT SPOOL FILE RECOVERY SPID
188    WRMBKNUM    004       NUMBER OF CURRENT DASD BLOCK
18C    WRMBKCNT    004       NUMBER OF DASD BLOCKS FOR ENTRY
190    WRMBKNDX    004       ADDRESS OF NEXT RECORD IN BUFFER
194    WRMRDVBF    004       VIRTUAL BUFFER ADDRESS
198    WRMRDRBF    004       REAL BUFFER ADDRESS
19C    WRMMRBUF    004       SPOOL FILE CKPT MAP REAL ADDRESS
1A0    WRMMVBUF    004       SPOOL FILE CKPT MAP VIRT ADDRESS
1A4    WRMMSLOT    004       ADDRESS OF ASA IN MAP PAGE
1A8    WRMLOUTQ    004       CURRENT OUTPUT QUEUE POINTER
1AC    WRMLINQ     004       CURRENT INPUT QUEUE POINTER
1B0    WRMLDATA    004       CURRENT DATA QUEUE POINTER
1B4                F         RESERVED FOR IBM USE
1B8    WRMSVRSP    004       SAVE AREA FOR RSPBK POINTER
1BC    WRMTADDR    004       SAVE AREA FOR VIRTUAL ADDRESS
1C0    WRMEND      004       MARKER FOR END OF WORK AREA

                    EQUATES

 38    WRMSIZE     WRMBK SIZE IN DOUBLEWORDS


                  MORE EQUATES

002    WRMRSTRT    UNIT RECORD RESTART REQUIRED
004    WRMUPDTE    UPDATE CURRENT SFNDX PAGE
                   EQU   X'08'          RESERVED FOR FUTURE IBM USE
010    WRMM9201    MESSAGE 9201W SENT ONCE ALREADY
                   EQU   X'20'          RESERVED FOR FUTURE IBM USE
                   EQU   X'40'          RESERVED FOR FUTURE IBM USE
                   EQU   X'80'          RESERVED FOR FUTURE IBM USE
```

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
WRMAUTO	001	010	WRMRDVBF	004	194
WRMBK	001	000	WRMRSTRT	001	002
WRMBKCNT	004	18C	WRMSAVE1	004	000
WRMBKNDX	004	190	WRMSAVE2	004	040
WRMBKNUM	004	188	WRMSAVE3	004	080
WRMCOLD	001	001	WRMSHTDN	001	008
WRMCSPID	004	184	WRMSIZE	004	038
WRMDRAIN	001	004	WRMSPRMS	001	182
WRMDSABL	001	040	WRMSSAV1	004	0C0
WRMEND	004	1C0	WRMSSAV2	004	100
WRMFLAG	001	180	WRMSSAV3	004	140
WRMFRCE	001	020	WRMSVRSP	004	1B8
WRMLDATA	004	1B0	WRMTADDR	004	1BC
WRMLINQ	004	1AC	WRMUPDTE	001	004
WRMLOUTQ	004	1A8	WRMVOLCD	001	183
WRMMRBUF	004	19C	WRMWARM	001	002
WRMMSLOT	004	1A4			
WRMMVBUF	004	1A0			
WRMM9201	001	010			
WRMNODIR	001	080			
WRMPARMS	001	181			
WRMRDRBF	004	198			

HCPXBLBK— XA BUFFER LIST BLOCK.

DSECT NAME: XBLBK

DESCRIPTIVE NAME: XA BUFFER LIST BLOCK.

FUNCTION: THIS BLOCK IS USED TO KEEP TRACK OF THE REAL BUFFERS THAT CONTAIN VIRTUAL DEVICE INFORMATION.

LOCATED BY:

ADDRESSABILITY IS ESTABLISHED WHEN OBTAINING FREE STORAGE. THE BLOCK IS NOT ANCHORED ANYWHERE.

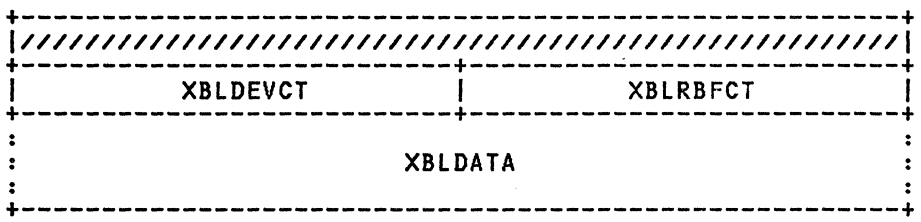
CREATED BY:

HCPIIR WHEN SAVING THE VIRTUAL DEVICE INFORMATION.
- HCPNSE WHEN RESTORING THE VIRTUAL DEVICE INFORMATION.

DELETED BY:

HCPNSE WILL RETURN THE BLOCK TO FREE STORAGE.

XBLBK - XA BUFFER LIST BLOCK



REDEFINITION -

disp	name	length	description
000		XL8	RESERVED FOR FUTURE IBM USE.
008	XBLDEVCT	004	COUNT OF THE NUMBER OF DEVICES.
00C	XBLRBFCT	004	COUNT OF REAL BUFFER ADDRESSES.
			EQUATES
	02 XBLHDRSZ		THIS IS THE HEADER SIZE IN DW.
010	XBLDATA	004	START OF VARIABLE LENGTH DATA.
			REDEFINITION -
010	XBLRBFAD	004	THE FIRST REAL BUFFER ADDRESS STARTS HERE.
			EQUATES
	04 XBLRBSIZ		THIS IS THE SIZE OF AN ENTRY FOR A REAL BUFFER.

CROSS REFERENCE

Name	Len	Val/Disp
XBLBK	001	000
XBLDATA	004	010
XBLDEVCT	004	008
XBLHDRSZ	001	002
XBLRBFAD	004	010
XBLRBFCT	004	00C
XBLRBSIZ	001	004

HCPXDRBK— EXPANDED STORAGE DIRECTORY BLOCK

DSECT NAME: XDRBK

DESCRIPTIVE NAME: EXPANDED STORAGE DIRECTORY BLOCK

FUNCTION: THIS BLOCK MAINTAINS THE STATE OF ALL INCREMENTS OF EXPANDED STORAGE INSTALLED ON THE SYSTEM.

LOCATED BY:

THE POINTER TO THE COLLECTION OF XDRBKS KNOWN AS THE "DIRECTORY" IS LOCATED IN FIELD XSTDIRAN OF THE EXPANDED STORAGE MANAGEMENT DATA BLOCK (XSTMG).

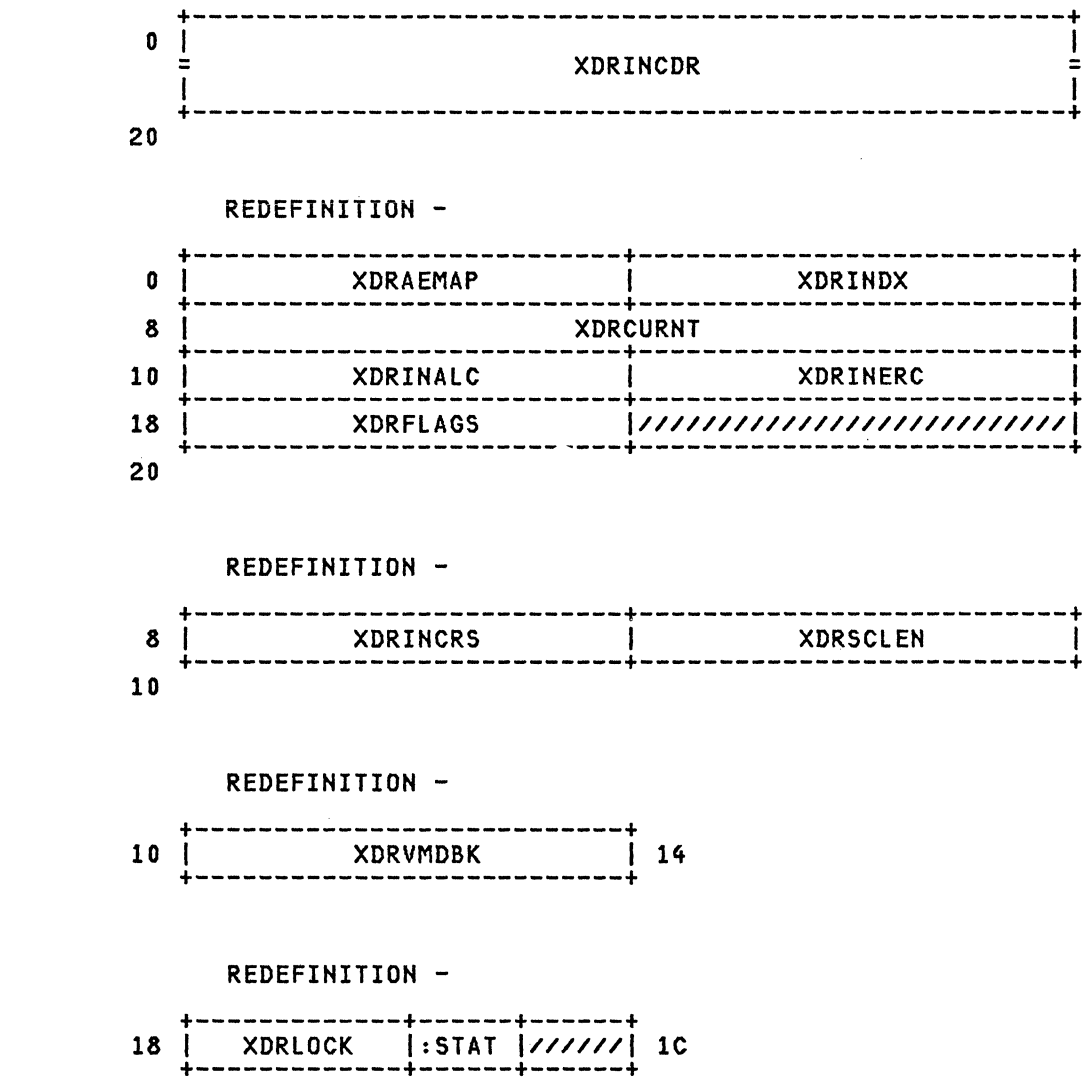
CREATED BY:

HCPESCDI DURING INITIALIZATION PROCESSING.

DELETED BY:

HCPESCDI IF NO EXPANDED STORAGE IS CONFIGURED TO THE SYSTEM.

XDRBK - EXPANDED STORAGE DIRECTORY BLOCK



REDEFINITION -

```
   +------+------+
18 |:INCLK|:OWNER| 1A
   +------+------+
```

disp	name	length	description
000	XDRINCDR	008	INCREMENT DIRECTORY ENTRY
	REDEFINITION -		
000	XDRENTRY	008	INCREMENT DIRECTORY ENTRY
000	XDRAEMAP	004	ADDRESS OF ALLOCATION AND ERROR MAPS (XSUBK) FOR THIS INCREMENT.
004	XDRINDX	004	INCREMENT INDEX.
008	XDRCURNT	008	CURRENT STATUS OF ALLOCATION.
010	XDRINALC	004	COUNT OF BLOCKS AVAILABLE IN THE INCREMENT
014	XDRINERC	004	COUNT OF BLOCKS IN ERROR IN THE INCREMENT.
018	XDRFLAGS	004	FLAGS AND LOCKS FOR THE ENTRY
01C		F	RESERVED FOR IBM USE
	REDEFINITION -		
008	XDRINCRS	004	INCREMENT CURSOR WHICH POINTS TO THE NEXT AVAILABLE BLOCK TO ATTEMPT TO ALLOCATE WITHIN THIS INCREMENT.
00C	XDRSCLEN	004	LENGTH OF ALLOCATION MAP LEFT TO SCAN. IT IS THE NUMBER OF BYTES BETWEEN XDRINCRS AND THE END OF THE ALLOCATION MAP.
	REDEFINITION -		
010	XDRVMDBK	004	ADDRESS OF THE BASE VMDBK WHICH OWNS THIS INCREMENT OF XSTORE. THIS BASE VMDBK IS THE BASE FOR THE PRIMARY CONFIGURATION FOR THIS USER. IT IS EQUIVALENT TO VMDORIG. THIS FIELD IS VALID IF XDRSTAT IS IN THE GUEST AND NOT MIGRATING STATE.
	REDEFINITION -		
018	XDRLOCK	002	LOCK AREA FOR THIS INCREMENT
01A	XDRSTAT	001	INCREMENT STATUS FLAG BYTE

BITS DEFINED IN XDRSTAT (AT HEX DISPLACEMENT: 1A)

80	XDRCONFG	INCREMENT IS CONFIGURED TO THIS HARDWARE PARTITION.
40	XDRSTDBY	INCREMENT IS IN STANDBY MODE
20	XDRRESVD	INCREMENT IS IN RESERVED MODE
08	XDRONLIN	INCREMENT IS LOGICALLY ONLINE AND USABLE. WHEN THIS BIT IS ON, THE XSUBK ADDRESS IN XDRAEMAP CAN BE USED. WHEN THIS BIT IS OFF, ALL THE BLOCKS ASSOCIATED WITH THIS XDRBK ARE IN ERROR DESPITE THE CONTENTS OF THE ALLOCATION AND ERROR MAPS.
02	XDRCP	INCREMENT BELONGS TO CP. WHEN OFF THE INCREMENT BELONGS TO A GUEST.

	01	XDRINCMD	INCREMENT STATE MODIFIER. WHEN ON: IF XDRCP IS ON THEN INCREMENT IS IN THE CP-RETAINED STATE. IF XDRCP IS OFF THEN INCREMENT IS IN THE GUEST-MIGRATING STATE.
01B		X	RESERVED FOR IBM USE

REDEFINITION -

018	XDRINCLK	001	THIS IS THE LOCK BYTE FOR THE INCREMENT. THE LOCK MUST BE OBTAINED TO SCAN FOR A BLOCK WITHIN THE INCREMENT.
019	XDROWNER	001	THIS IS THE LOCK OWNER IDENTIFIER FIELD.

CODES DEFINED IN XDROWNER (AT HEX DISPLACEMENT: 19)

E3	XDRATTCH	ATTACH OWNS THE LOCK
D9	XDREPAIR	USABILITY MAP REPAIR OWNS LOCK
D8	XDRQUERY	QUERY XSTORE OWNS THE LOCK
D5	XDRETAIN	RETAIN XSTORE OWNS THE LOCK
D4	XDRMCH	MACHINE CHECK HANDLER OWNS LOCK
C5	XDRDETCH	DETACH OWNS THE LOCK
C4	XDRDEALC	DEALLOCATION OWNS THE LOCK
00	XDRALLOC	IF XDRINCLK IS SET, ALLOCATION OWNS THE LOCK. IF XDRINCLK IS NOT SET THEN NO OWNER.

MORE EQUATES

020	XDRLENTH	LENGTH OF EACH XDRBK IN BYTES
004	XDRSIZE	LENGTH OF EACH XDRBK IN DWORDS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp
XDRAEMAP	004	000	XDROWNER	001	019
XDRALLOC	001	000	XDRQUERY	001	0D8
XDRATTCH	001	0E3	XDRRESVD	001	020
XDRBK	001	000	XDRSCLEN	004	00C
XDRCONFG	001	080	XDRSIZE	001	004
XDRCP	001	002	XDRSTAT	001	01A
XDRCURNT	008	008	XDRSTDBY	001	040
XDRDEALC	001	0C4	XDRVMDBK	004	010
XDRDETCH	001	0C5			
XDRENTRY	008	000			
XDREPAIR	001	0D9			
XDRETAIN	001	0D5			
XDRFLAGS	004	018			
XDRINALC	004	010			
XDRINCDR	008	000			
XDRINCLK	001	018			
XDRINCMD	001	001			
XDRINCRS	004	008			
XDRINDX	004	004			
XDRINERC	004	014			
XDRLENTH	001	020			
XDRLOCK	002	018			
XDRMCH	001	0D4			
XDRONLIN	001	008			

HCPXSTMG— EXPANDED STORAGE MANAGEMENT DATA

DSECT NAME: XSTMG

DESCRIPTIVE NAME: EXPANDED STORAGE MANAGEMENT DATA

FUNCTION: THIS BLOCK IS USED TO KEEP TRACK OF GLOBAL INFORMATION ASSOCIATED WITH THE EXPANDED STORAGE FACILITY AND BLOCK PAGING.

LOCATED BY:

THIS DSECT OVERLAYS THE DATA ENTRY POINT HCPPGDXT.

CREATED BY:

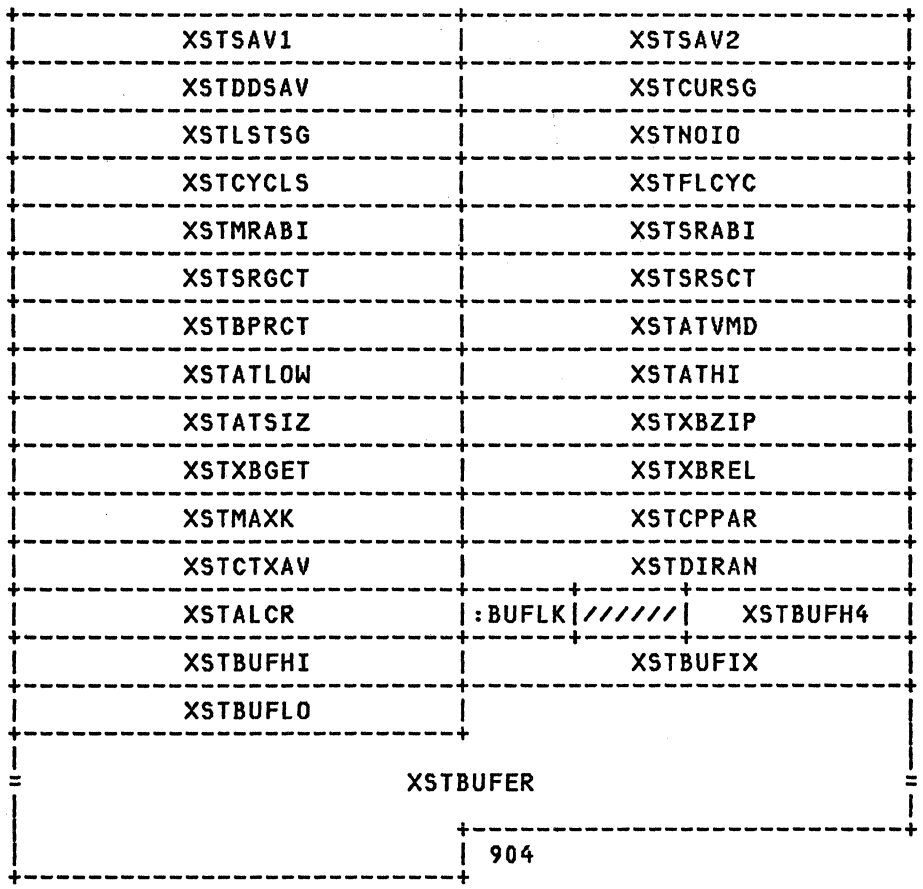
HCPPGD IS LOADED BY THE SYSTEM DURING IPL. THE XSTMG IS INITIALIZED BY HCPESCDI.

DELETED BY:

NEVER DELETED.

XSTMG - EXPANDED STORAGE MANAGEMENT BLOCK

0	:STAFG	//////////	XSTSTATL	
8	XSTCTXTS		XSTCTXER	
10	XSTOTALB		XSTGUEST	
18	XSTINCRB		XSTCPINC	
20	XSTCPSTR		XSTPEDRT	
28	XSTTOTTM			
30	:MIGLK	:MIFLG	XSTBMULT	XSTCYCLE
38	XSTFRMAQ		XSTNUMAQ	
40	XSTEPOCH	XSTTARGT	XSTSTIME	//////////
48	XSTCYCMX		XSTMAXCT	
50	////////////		XSTITIME	
58	XSTSUMAG			
60	XSTUSRDM		XSTUSRCY	
68	XSTUSRSH		XSTCTGAL	
70	XSTBLKDM		XSTBLKCY	
78	XSTBLKSH		XSTBLKSY	
80	XSTQUEND		////////////	
88	////////////		XSTMIGS	
90	XSTCTPGM		XSTFROUT	
98	XSTLOTHR		XSTHITHR	
A0	XSTRSTLO		XSTRLOCT	
A8	XSTRSTHI		XSTRHICT	
B0	XSTHICNT		XSTLOH2O	
B8	////////////			



disp	name	length	description
000	XSTMGSTR	004	START OF XSTMG BLOCK
000	XSTFLAGS	004	FLAGS FOR THE XSTMG BLOCK. UPDATED WITH COMPARE AND SWAP.
000	XSTSTAFG	001	STATUS INFORMATION FLAG THE FOLLOWING ARE THE FLAGS THAT INDICATE STATUS.

BITS DEFINED IN XSTSTAFG (AT HEX DISPLACEMENT: 0)

01	XSTNCONF	XSTORE IS NOT CONFIGURED TO THE SYSTEM.
01	XSTOFFLN	XSTORE WAS TAKEN OFFLINE BECAUSE ALL BLOCKS ARE IN ERROR.
02	XSTMPDSB	XSTORE HAS BEEN DISABLED FOR CP PAGING TEMPORARILY UNTIL AT LEAST ONE INCREMENT CAN BE BROUGHT ONLINE DURING INITILIZATION OR RECOVERY FROM A MACHINE CHECK. THIS BIT HAS NO MEANING IF XSTOFFLN IS ON.
08	XSTMDALL	INDICATES THAT THERE IS NO XSTORE AVAILABLE FOR PAGING ALLOCATION. THE XSTORE IS TO BE USED ONLY FOR ALLOCATION TO THE MDCACHE FUNCTION
04	XSTNAVAL	INDICATES THAT THERE IS NO XSTORE AVAILABLE FOR ALLOCATION. THIS MAY HAPPEN IF ALL XSTORE HAS BEEN ATTACHED TO A GUEST OR THE CP

			PARTITION HAS BEEN COMPLETELY ALLOCATED.
	40	XSTRREQD	USABILITY-MAP REPAIR IS REQUIRED. WHEN THIS BIT IS ON, WORK HAS BEEN STACKED TO PERFORM THE REPAIR ACTION. THIS BIT HAS NO MEANING IF XSTOFFLN IS ON.
001		3X	RESERVED FOR IBM USE
004	XSTSTATL	004	XSTORE STATISTICS LOCK USED TO SERIALIZE UPDATES TO : XSTTOTTM, XSTCTXTS, PGMXSTCT, VMDCTXBK, XSTEPOCH
008	XSTCTXTS	004	COUNT OF XSTORE BLOCKS CURRENTLY IN USE FOR CP PAGING. USED BY MIG TO CALCULATE AVERAGE TIMESTAMP. SERIALIZED BY XSTSTATL.
00C	XSTCTXER	004	NUMBER OF BLOCKS IN ERROR THAT HAVE NOT YET BEEN REFLECTED TO A GUEST. UPDATE HOLDING XSTBUFLK.
010	XSTOTALB	004	AMOUNT OF XSTORE ONLINE IN BLOCKS. IT REPRESENTS THE NUMBER OF BLOCKS IN "CONFIGURED" INCREMENTS. SET AT INITIALIZATION AND NOT CHANGED.
014	XSTGUEST	004	NUMBER OF BLOCKS ATTACHED TO VIRTUAL MACHINES INCLUDING ERROR BLOCKS. TO UPDATE HOLD HCPPGDXL.
018	XSTINCRB	004	NUMBER OF BLOCKS PER XDRBK.
01C	XSTCPINC	004	AMOUNT OF XSTORE IN BLOCKS THAT ARE IN THE "CP" STATE AND ARE "CONFIGURED". IT INCLUDES ERROR BLOCKS BUT EXCLUDES CP-RETAINED BLOCKS. TO UPDATE HOLD HCPPGDXL.
020	XSTCPSTR	004	TOTAL NUMBER OF BLOCKS THAT ARE IN THE CP-RETAINED STATE INCLUDING BLOCKS IN ERROR. TO UPDATE HOLD HCPPGDXL.
024	XSTPEDRT	004	AMOUNT OF XSTORE IN BLOCKS THAT IS WAITING TO BE ASSIGNED THE RETAINED STATE. THIS IS PENDING RETAIN. THE SUM OF XSTCPSTR AND XSTPEDRT IS THE AMOUNT SPECIFIED ON THE LAST RETAIM XSTORE COMMAND. TO UPDATE HOLD HCPPGDXL.
028	XSTTOTTM	008	SUM OF ALL TIME STAMPS OF BLOCKS CURRENTLY IN USE FOR CP PAGING. SERIALIZED BY XSTSTATL.
030		0F	MIGRATION LOCK AND FLAG WORD
030	XSTMIGLK	001	TS LOCK BYTE FOR MIGRATION
031	XSTMIFLG	001	MIGRATION FLAG BYTE

BITS DEFINED IN XSTMIFLG (AT HEX DISPLACEMENT: 31)

032	XSTBMULT	002	USED TO CONTROL NUMBER OF MIGRATE BUFFERS OBTAINED AT MIGRATION INVOCATION. (XSTBMULT*PAGING VOLS)

EQUATES

0F	XSTMMAX	HIGHEST ALLOWED VALUE FOR XSBMULT
05	XSTMMIN	LOWEST VALUE ALLOWED FOR XSTBMULT

034	XSTCYCLE	004	THE VMDBK ADDRESS OF A USER IN THE CYCLIC LIST THAT WILL BE THE NEXT TARGET OF MIGRATION.
038	XSTFRMAQ	004	MIGRATION FRAME QUEUE (BUFFERS)
03C	XSTNUMAQ	004	NUMBER ON THE MIGRATE FRAME QUEUE
040	XSTEPOCH	002	CURRENT STEAL TOD CLOCK EPOCH SERIALIZED BY XSTSTATL.
042	XSTTARGT	002	TARGET AGE IN SECONDS
044	XSTSTIME	002	MIGRATE/STEAL TIMER
046		H'0'	RESERVED FOR IBM USE
048	XSTCYCMX	004	NUMBER OF USERS TO VISIT BEFORE

			LOWERING TARGET TIME
04C	XSTMAXCT	004	NUM OF TIMES TARGET TIME LOWERED
050		F'0'	RESERVED FOR IBM USE
054	XSTITIME	004	TOD OF FIRST STEAL OR TMR WRAP
058	XSTSUMAG	008	SUM OF AGES OF MIGRATED BLOCKS
060	XSTUSRDM	004	NUMBER OF DORMANT GUESTS THAT WERE THE TARGET OF MIGRATION
064	XSTUSRCY	004	NUMBER OF NON-DORMANT GUESTS THAT WERE THE TARGET OF MIGRATION
068	XSTUSRSH	004	NUMBER OF SHARED SYSTEMS THAT WERE THE TARGET OF MIGRATION
06C	XSTCTGAL	004	COUNT OF BLOCKS TO FLUSH FROM THE USERS PARTITION BEING ASSIGNED TO THE VIRTUAL MACHINE GIVEN BY XSTATVMD. TO UPDATE HOLD XSTBUFLK.
070	XSTBLKDM	004	NUMBER OF BLOCKS MIGRATED FROM A DORMANT GUEST
074	XSTBLKCY	004	NUMBER OF BLOCKS MIGRATED FROM A NON-DORMANT GUEST
078	XSTBLKSH	004	NUMBER OF BLOCKS MIGRATED FROM A SHARED SYSTEM
07C	XSTBLKSY	004	NUMBER OF BLOCKS MIGRATED FROM THE CP SYSTEM
080	XSTQUEND	004	ANCHOR OF CURRENT SNT QUEUE
084		2F	RESERVED FOR IBM USE
08C	XSTMIGS	004	COUNT OF MIGRATE INVOCATIONS
090	XSTCTPGM	004	COUNT OF PGMBKS SELECTED
094	XSTFROUT	004	QUEUE OF FRAMES TO BE WRITTEN
098	XSTLOTHR	004	LOW THRESHOLD FOR MIGRATION
09C	XSTHITHR	004	HIGH THRESHOLD FOR MIGRATION
0A0	XSTRSTLO	004	XSTLOTHR IS RAISED IF XSTLOH20 IS SMALLER THAN RSTLO AT END OF MIG
0A4	XSTRLOCT	004	NUMBER OF TIMES BUFFER INCREASED
0A8	XSTRSTHI	004	XSTLOTHR IS LOWERED IF XSTLOH20 IS LARGER 3 TIMES IN A ROW AT MIG END
0AC	XSTRHICT	004	NUMBER OF TIMES BUFFER DECREASED
0B0	XSTHICNT	004	NUMBER OF TIMES XSTLOH20 WAS LARGER THAN XSTRSTHI
0B4	XSTLOH20	004	MINIMUM NUMBER OF XSTORE BLOCKS AVAILABLE DURING THIS MIGRATION
0B8		2F	RESERVED FOR IBM USE
0C0	XSTSAV1	004	REGISTER SAVE AREA
0C4	XSTSAV2	004	REGISTER SAVE AREA
0C8	XSTDDSAV	004	SAVE AREA FOR XSFDD'S R13 WHILE MIGRATOR RUNS.
0CC	XSTCURSG	004	SEGMENT CURRENTLY BEING MIGRATED
0D0	XSTLSTSG	004	MIGRATEE'S FINAL SEGMENT
0D4	XSTNOIO	004	NO IO WAS REQUIRED FOR MIGRATION
0D8	XSTCYCLS	004	NUMBER OF TIMES THROUGH CYCLIC
0DC	XSTFLCYC	004	NUMBER OF CYCLES WHILE FLUSHING
0E0	XSTMRABI	004	COUNT OF PAGES THAT WERE READ IN AS PART OF A BLOCK BUT NOT USED (AS SEEN BY MIGRATE)
0E4	XSTSRABI	004	COUNT OF PAGES THAT WERE READ IN AS PART OF A BLOCK BUT NOT USED (AS SEEN BY STEAL)
0E8	XSTSRGCT	004	SINGLE READS FOR GUESTS
0EC	XSTSRSCT	004	SINGLE READS FOR SYSTEM
0F0	XSTBPRCT	004	BLOCKS OF PAGES READ
0F4	XSTATVMD	004	ADDRESS OF THE VMDBK HAVING XSTORE ATTACHED. THIS IS THE BASE VMDBK FOR THE PRIMARY CONFIGURATION FOR THIS VIRTUAL MACHINE (VMDORIG). TO UPDATE HOLD XSTBUFLK AND HCPPGDXL.
0F8	XSTATLOW	004	LOWEST BLOCK NUMBER ASSOCIATED WITH THE PARTITION BEING ATTACHED TO THE VIRTUAL MACHINE GIVEN IN XSTATVMD. TO UPDATE HOLD XSTBUFLK AND HCPPGDXL.
0FC	XSTATHI	004	HIGHEST BLOCK NUMBER ASSOCIATED WITH THE PARTITION BEING ATTACHED TO THE VIRTUAL MACHINE GIVEN IN

			XSTATVMD. TO UPDATE HOLD XSTBUFLK AND HCPPGDXL.
100	XSTATSIZ	004	AMOUNT OF CONFIGURED EXPANDED STORAGE BEING ATTACHED TO THE VIRTUAL MACHINE GIVEN IN XSTATVMD. TO UPDATE HOLD XSTBUFLK AND HCPPGDXL.
104	XSTXBZIP	004	TIMES NO XSTORE WAS AVAILABLE
108	XSTXBGET	004	NUMBER OF XSTORE ALLOCATIONS
10C	XSTXBREL	004	NUMBER OF XSTORE RELEASES
110	XSTMAXK	004	HIGHEST XSTORE INCREMENT NUMBER
114	XSTCPPAR	004	NUMBER OF BLOCKS IN CP PARTITION AVAILABLE FOR ALLOCATION. THIS IS THE TOTAL NUMBER OF BLOCKS IN THE CP AND CP-RETAINED STATES EXCLUDING THOSE IN ERROR. TO UPDATE HOLD HCPPGDXL.
118	XSTCTXAV	004	COUNT OF AVAILABLE BLOCKS IN THE CP PARTITION. TO UPDATE HOLD XSTBUFLK.

EQUATES

1C	XSTMGMSZ	SIZE OF MONITORED PORTION OF XSTMG

11C	XSTDIRAN	004	ANCHOR TO THE XSTORE DIRECTORY
120	XSTALCR	004	ALLOCATION CURSOR: POINTS TO THE DIRECTORY ENTRY (XDRBK) WHERE THE THE LAST BLOCK WAS ALLOCATED.
124	XSTBUFLK	001	TS LOCK FOR BAT BUFFER
125		X'00'	RESERVED FOR IBM USE
126	XSTBUFH4	002	TABLE ENTRY INDEX SIZE
128	XSTBUFHI	004	END OF THE BAT BUFFER
12C	XSTBUFIX	004	NEXT ENTRY TO TAKE IN BAT BUFFER
130	XSTBUFLO	004	ADDR OF START OF BUFFER
134	XSTBUFER	004	THE BAT BUFFER

EQUATES

04	XSTBUFND	ADDR OF LAST ENTRY IN THE BAT BUFFER

MORE EQUATES

040	XSTMISLP	MIGRATION IS AWAITING REDRIVE
020	XSTNORML	NORMAL MIGRATION IN PROGRESS
008	XSTFLUSH	FLUSH IS IN PROGRESS
004	XSTDCS	DCS SCAN IS IN PROGRESS
002	XSTNSS	NSS SCAN IS IN PROGRESS
006	XSTSHARE	A SHRED SYSTEM SCAN IS IN PROGRESS

CROSS REFERENCE

Name	Len	Val/Disp	Name	Len	Val/Disp	Name	Len	Val/Disp
XSTALCR	004	120	XSTBLKSY	004	07C	XSTBUFLO	004	130
XSTATHI	004	0FC	XSTBMULT	002	032	XSTBUFND	001	904
XSTATLOW	004	0F8	XSTBPRCT	004	0F0	XSTCPINC	004	01C
XSTATSIZ	004	100	XSTBUFER	004	134	XSTCPPAR	004	114
XSTATVMD	004	0F4	XSTBUFHI	004	128	XSTCPSTR	004	020
XSTBLKCY	004	074	XSTBUFH4	002	126	XSTCTGAL	004	06C
XSTBLKDM	004	070	XSTBUFIX	004	12C	XSTCTPGM	004	090
XSTBLKSH	004	078	XSTBUFLK	001	124	XSTCTXAV	004	118

Name	Len	Val/Disp	Name	Len	Val/Disp
XSTCTXER	004	00C	XSTXBZIP	004	104
XSTCTXTS	004	008			
XSTCURSG	004	0CC			
XSTCYCLE	004	034			
XSTCYCLS	004	0D8			
XSTCYCMX	004	048			
XSTDCS	001	004			
XSTDDSAV	004	0C8			
XSTDIRAN	004	11C			
XSTEPOCH	002	040			
XSTFLAGS	004	000			
XSTFLCYC	004	0DC			
XSTFLUSH	001	008			
XSTFRMAQ	004	038			
XSTFROUT	004	094			
XSTGUEST	004	014			
XSTHICNT	004	0B0			
XSTHITHR	004	09C			
XSTINCRB	004	018			
XSTITIME	004	054			
XSTLOH2O	004	0B4			
XSTLOTHR	004	098			
XSTLSTSG	004	0D0			
XSTMAXCT	004	04C			
XSTMAXK	004	110			
XSTMDALL	001	008			
XSTMG	001	000			
XSTMGMSZ	001	11C			
XSTMGSTR	004	000			
XSTMIFLG	001	031			
XSTMIGLK	001	030			
XSTMIGS	004	08C			
XSTMISLP	001	040			
XSTMMAX	001	00F			
XSTMMIN	001	005			
XSTMPDSB	001	002			
XSTMRABI	004	0E0			
XSTNAVAL	001	004			
XSTNCONF	001	001			
XSTNOIO	004	0D4			
XSTNORML	001	020			
XSTNSS	001	002			
XSTNUMAQ	004	03C			
XSTOFFLN	001	001			
XSTOTALB	004	010			
XSTPEDRT	004	024			
XSTQUEND	004	080			
XSTRHICT	004	0AC			
XSTRLOCT	004	0A4			
XSTRREQD	001	040			
XSTRSTHI	004	0A8			
XSTRSTLO	004	0A0			
XSTSAV1	004	0C0			
XSTSAV2	004	0C4			
XSTSHARE	001	006			
XSTSRABI	004	0E4			
XSTSRGCT	004	0E8			
XSTSRSCT	004	0EC			
XSTSTAFG	001	000			
XSTSTATL	004	004			
XSTSTIME	002	044			
XSTSUMAG	008	058			
XSTTARGT	002	042			
XSTTOTTM	008	028			
XSTUSRCY	004	064			
XSTUSRDM	004	060			
XSTUSRSH	004	068			
XSTXBGET	004	108			
XSTXBREL	004	10C			

HCPXSUBK— EXPANDED STORAGE USABILITY MAP

DSECT NAME: XSUBK

DESCRIPTIVE NAME: EXPANDED STORAGE USABILITY MAP

FUNCTION: THIS MAP IS USED TO KEEP TRACK OF THE ALLOCATION OF EXPANDED STORAGE. EACH MAP CORRESPONDS TO ONE INCREMENT OF XSTORE AND CAN THEREFORE REPRESENT UP TO 64MEG OF EXPANDED STORAGE.

LOCATED BY:

XDRUMAPT LOCATED IN THE HCPXDRBK.

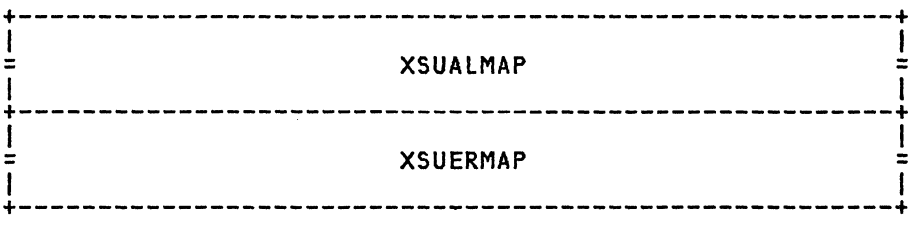
CREATED BY:

HCPESCDI DURING INITIALIZATION PROCESSING.

DELETED BY:

HCPESCDI IF NO EXPANDED STORAGE IS CONFIGURED TO THE SYSTEM.

XSUBK - EXPANDED STORAGE USABILITY MAP



disp	name	length	description
000	XSUALMAP	001	XSTORE AVAILABILITY MAP. WHEN A BIT'S VALUE IS "1" THEN THE CORRESPONDING BLOCK IS ALLOCATED.
800	XSUERMAP	001	XSTORE ERROR MAP. WHEN A BIT'S VALUE IS "1" THEN THE CORRESPONDING BLOCK IS IN ERROR.

CROSS REFERENCE

Name	Len	Val/Disp
XSUALMAP	001	000
XSUBK	001	000
XSUERMAP	001	800

HCPZPMBK— ZONE PARAMETER BLOCK

DSECT NAME: ZPMBK

DESCRIPTIVE NAME: ZONE PARAMETER BLOCK

FUNCTION: THE ZPMBK DESCRIBES THE ZONE PARAMETERS BLOCK USED AS INPUT TO THE SET ZONE PARAMETERS AND AS OUTPUT TO THE STORE ZONE PARAMETERS INSTRUCTION

LOCATED BY:

HCPWRKZP USED DURING DUMP PROCESSING TO DUMP ALL ZONE PARAMETERS
ALL USERS OF HCPZPMBK, EXCEPT DUMP PROCESSING, GET FREE STORAGE FOR THE ZPMBK IN ORDER TO ISSUE EITHER STZP OR SZP INSTRUCTIONS AND RETURN THE STORAGE WHEN FINISHED ISSUING THE INSTRUCTIONS.

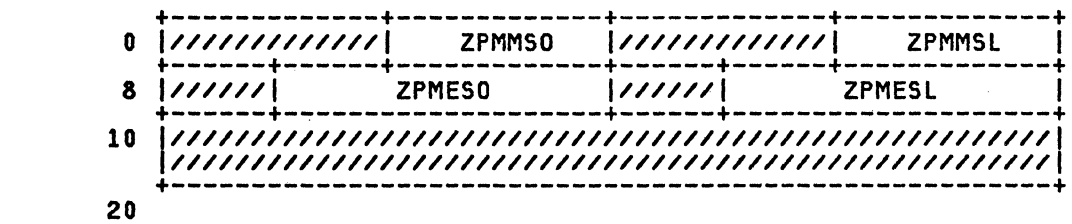
CREATED BY:

HCPZMIIN
HCPZMGAZ
HCPZMGDZ
HCPZMXEE
HCPZMXDE

DELETED BY:

HCPZMIIN
HCPZMGAZ
HCPZMGDZ
HCPZMXEE
HCPZMXDE

ZPMBK - ZONE PARAMTER BLOCK



disp	name	length	description
000		0F	
000		H	RESERVED FOR FUTURE IBM USE
002	ZPMMSO	002	MAIN STORAGE ORIGIN
004		H	RESERVED FOR FUTURE IBM USE
006	ZPMMSL	002	MAIN STORAGE LIMIT
008		X	RESERVED FOR FUTURE IBM USE
009	ZPMESO	003	EXPANDED STORAGE ORIGIN
00C		X	RESERVED FOR FUTURE IBM USE
00D	ZPMESL	003	EXPANDED STORAGE ORIGIN
010		4F	RESERVED FOR FUTURE IBM USE

EQUATES

04	ZPMSIZE	:ZPMBK SIZE IN DOUBLE WORDS
20	ZPMLENTH	ZPMBK LENGTH IN BYTES

CROSS REFERENCE

Name	Len	Val/Disp
ZPMBK	001	000
ZPMESL	003	00D
ZPMESO	003	009
ZPMLENTH	001	020
ZPMMSL	002	006
ZPMMSO	002	002
ZPMSIZE	001	004

Summary of Changes

Second Edition

Form of Publication: LY27-8053-1

Level of Product: VM/XA System Product Release 2

Date of Publication: September 1988

Changes to this publication:

- **New device support**

  VM/XA System Product Release 2 fully supports, unless otherwise noted, the following devices:

  - 3101 Models 10, 11, 12, 13, 20, 21, 23 (supported through VM/VTAM or VCNA)
  - 3174 Model 1L (non-SNA channel attachment or SNA channel attachment through VM/VTAM or VCNA)
  - 3174 1R, 51R, 81R, 2R, 3R, 52R, 53R, 82R (remote SNA attachment through VM/VTAM or VCNA)
  - 3274 Models 1A, 21A, 31A, or 41A (SNA attachment through VM/VTAM or VCNA)
  - 3274 Models 1C, 21C, 31C, 41C, 51C, 61C (remote SNA attachment through VM/VTAM or VCNA)
  - 3705, 3720, 3725, 3745 (SNA attachment through VM/VTAM or VCNA)
  - 7171 ASCII Device Attachment Control Unit.

- **ASCII device support**

  VM/XA System Product Release 2 allows you to connect ASCII TTY display terminals to the system through a VM/VTAM service machine or through a 7171 Device Attachment Control Unit (DACU).

- **Group Control System (GCS)**

  GCS is a new component that allows you to implement a native SNA communication network or run RSCS Version 2.

- **CP system trace facility enhancements**

  The CP system trace facility allows you to save CP system trace data in system trace files on disk or tape.

- **Data trace facility**

VM/XA System Product Release 2 provides a facility that allows you to set three different types of data tracing for recording in system data files. These three data tracing types are:

- CP data trace
- I/O data trace
- Guest data trace.

- **Soft abend dump enhancements**

  VM/XA System Product Release 2 enhances existing soft abend dump support by:

  - Allowing more CP functions to request soft abends rather than hard abends
  - Providing snapshot information about abending modules' save areas and associated data areas
  - Flagging storage frames in the soft abend dump that have changed between the time CP started the dump and the time CP actually dumped the frames
  - Changing the format of the soft abend dump to be compatible with the hard abend dump format.

- **Dump viewing facility enhancements**

  VM/XA System Product Release 2 enhances the dump viewing facility to allow you to:

  - Format CP control blocks or virtual machine control blocks
  - Select which trace table entries you wish to view in a CP, standalone, or soft abend dump
  - Process GCS and RSCS Version 2 load maps (with the MAP and ADDMAP commands) in addition to the load maps currently supported
  - Process data trace information as well as CP trace table data
  - Collect GCS guest trace records in a simulated OS QSAM file
  - Process CP soft abend dumps
  - Process dumps with any CMS file name
  - View dump data via the XEDIT interface
  - Use the XEDIT interface to extract data from dumps for use in a REXX EXEC
  - Use an IBM-supplied EXEC to search a dump for a hung user.

- **CP national language support (NLS)**

  VM/XA System Product Release 2 provides CP HELP files and messages in the following languages:

  - Mixed-case English (base version)
  - Uppercase English
  - French
  - German
  - Brazilian Portuguese
  - Japanese (Kanji).

- **Managing 37xx communication controllers**

  VM/XA System Product Release 2 provides new commands that allow you to manage your 37xx communication controllers.

- **SPTAPE enhancements**

  VM/XA System Product Release 2 enhances the SPTAPE command to allow you to dump and load spool files and system data files that span more than one tape volume.

- **DASD dumping and restoring enhancements**

  VM/XA System Product Release 2 enhances the DDR and DDRXA programs to allow you to save the DASD data to tape in compacted form.

- **Expanded Storage caching**

  VM/XA System Product Release 2 uses expanded storage for caching during logon and IPL processing and for CMS file system minidisk caching.

- **DIRECTXA enhancements**

  VM/XA System Product Release 2 enhances the function of the DIRECTXA command and the directory build process by providing automatic deactivation of restricted passwords (ADRP).

- **AUTOLOG command enhancements**

  VM/XA System Product Release 2 provides two commands (AUTOLOG and XAUTOLOG) to allow you to log on virtual machines automatically in a disconnected state.

- **LOGON command enhancement**

  VM/XA System Product Release 2 enhances the LOGON command to allow users to type in their passwords on the LOGON command line.

- **PF key enhancements**

  VM/XA System Product Release 2 enhances PF key functions by allowing you to:

  - Issue a command to clear the RETRIEVE PF key buffer
  - Specify whether or not you wish a PF key's definition displayed when you press the PF key
  - Specify a PF key definition with substitution characters.

- **New and changed publications**

  VM/XA System Product Release 2 adds two new books to the VM/XA SP library and combines two existing books into one book. The two new books are:

  - *VM/XA System Product: Group Control System Command and Macro Reference*, SC23-0433
  - *VM/XA System Product: Group Control System Diagnosis Reference*, LY27-8060

  The combined book is *VM/XA SP Release 2 Planning and Administration.* This book replaces the *VM/XA SP Release 1 Administration* (SC23-0353) and *VM/XA SP Release 1 Planning* (GC23-0378) manuals.

- **Programming enhancements**

VM/XA System Product Release 2 provides new and changed DIAGNOSE code and IUCV functions

- **Processor Resource/Systems Manager (PR/SM) feature**

  The PR/SM feature supersedes the Multiple High Performance Guests Support feature on 3090 Enhanced Model Processors, and offers additional functions.

Glossary

A

automatic software re-IPL. The process by which the control program attempts to restart the system after abnormal termination. This process does not involve the hardware IPL process. See also virtual = real machine recovery.

C

CCS. Console communication services.

CCW. Channel command word.

channel command word (CCW). A doubleword structure that directs an I/O operation on a device or channel and includes pointers to any storage areas associated with the operation. One or more CCWs make up a channel program.

CMS. Conversational monitor system.

console communication services (CCS). A group of CP routines that interface with the VTAM service machine, providing full VM/XA™ SP console capabilities for SNA/CCS terminal users.

control program (CP). The component of VM/XA SP that manages the resources of a single System/370-Extended Architecture system so that multiple computing systems appear to exist. Each virtual machine is the functional equivalent of either a System/370 computing system or a System/370-Extended Architecture computing system.

conversational monitor system (CMS). The component of VM/XA SP that, as a virtual machine operating system, provides interactive time-sharing. CMS allows users to communicate with the system and with each other, to create and edit files, and to develop and run application programs. It operates in either System/370 mode or 370-XA mode under the control of CP.

CP. Control program.

D

DCSS. Discontiguous saved segment.

directory. A CP disk file that includes an entry for each user in the system. The entry defines the characteristics of the user's initial virtual machine configuration. These characteristics include the userid, the password, normal and maximum allowable virtual storage, virtual device definitions, the privilege class, the dispatching priority, logical line editing characters, and the account number.

discontiguous saved segment (DCSS). A saved segment that occupies one or more architecturally-defined segments. It begins and ends on segment boundaries. It is accessed by its own name. Contrast with member saved segment. See also saved segment, segment, segment space.

dump viewing facility. A VM/XA SP component that allows users to display, format, and print data interactively from CP hard and soft abend, stand-alone, and virtual machine dumps, and to process CP trace table data stored on tape or in a system trace file.

dynamic paging area. The area of real storage allocated by CP for V = V machine paging. This area also contains CP nonresident modules, CP control blocks, CP trace tables, free storage pages, and the alternate processor's prefix storage areas.

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E

Expanded Storage. Optional integrated high-speed storage. In VM/XA SP, Expanded Storage may be shared by CP and one or more virtual machines. It may also be dedicated to CP or to a particular virtual machine.

F

full-pack minidisk. A virtual disk that contains all of the addressable cylinders of a real DASD volume.

full-screen mode. In VM/XA SP, the environment in which an entire 3270 display screen is under the control of a program running in a virtual machine.

G

GCS. Group control system.

group control system (GCS). The component of VM/XA SP that, as a virtual machine supervisor, executes in a group of System/370 virtual machines under CP control to provide an interface that helps support a native Systems Network Architecture (SNA) network.

guest. An operating system running in a virtual machine managed by the VM/XA SP control program. Contrast with host.

guest real storage. The storage that appears real to the operating system running in a virtual machine. Contrast with guest virtual storage, host real storage, and host virtual storage.

guest virtual storage. The storage that appears virtual to the operating system running in a virtual machine. Contrast with guest real storage, host real storage, and host virtual storage.

H

host. The VM/XA SP control program in its capacity as manager of a virtual machine in which another operating system is running. Contrast with guest.

host real storage. The storage that appears real to the control program. If VM/XA SP is running native, this is real storage; if VM/XA SP is running in a virtual machine, this is virtual storage. Contrast with guest real storage, guest virtual storage, and host virtual storage.

host virtual storage. The storage that appears virtual to the control program. Contrast with guest real storage, guest virtual storage, and host real storage.

I

image library. A set of modules, contained in a system data file, that define the spacing, characters, and copy modification data that a 3800 printer uses to print a spool file or that define the spacing and character set that an impact printer uses to print a spool file. See also system data file.

inter-user communication vehicle (IUCV). A generalized CP interface that facilitates the transfer of data among virtual machines.

IUCV. Inter-user communication vehicle.

M

member saved segment. A saved segment that begins and ends on a page boundary. It belongs to up to 64 segment spaces and is accessed either by the segment space name or by its own name. Contrast with discontiguous saved segment. See also saved segment, segment, segment space.

message repository file. A type of system data file that contains a set of VM/XA SP messages translated into a national language.

missing interrupt handler. A CP function for detecting and dealing with real I/O operations that do not complete within a specified time.

multiple preferred guests. A VM/XA SP facility that supports up to six preferred virtual machines when the Processor Resource/Systems Manager™ (PR/SM™) feature is installed in the real machine. See also preferred virtual machine.

N

named saved system (NSS). A copy of an operating system that a user has named and retained in a system data file. The user can load the operating system by its name, which is more efficient than loading it by device number. See also discontiguous saved segment, member saved segment, saved segment, segment space, system data file.

NSS. Named saved system.

P

pageable virtual machine. Synonymous with virtual = virtual machine.

preferred virtual machine. A virtual machine that runs in the V = R area. CP gives this virtual machine preferred treatment in the areas of performance, processor assignment, and I/O interrupt handling. See also multiple preferred guests, virtual = fixed machine, virtual = real area, virtual = real machine.

Processor Resource/Systems Manager (PR/SM). A separately orderable feature available with 3090E processors that provides for logical partitioning of the real machine and support of multiple preferred guests. See also multiple preferred guests.

PR/SM. Processor Resource/Systems Manager.

R

real system operator. Any user who loads and runs VM/XA SP in the real machine. Contrast with virtual machine operator.

S

saved segment. One or more pages of storage that have been named and retained in a system data file. See also discontiguous saved segment, member saved segment, segment, segment space, system data file.

segment. In System/370 architecture, 64 kilobytes of storage. In 370-XA architecture, 1 megabyte of storage. See also saved segment.

segment space. A saved segment composed of up to 64 member saved segments accessed by a single name. A segment space occupies one or more architecturally-defined segments; it begins and ends on segment boundaries. A user with access to a segment space has access to all of its members. See also discontiguous saved segment, member saved segment, saved segment, segment.

service virtual machine. A virtual machine that provides system services. These services include accounting, error recording, monitoring, and those provided by supported licensed programs.

SMSG function. A CP function that allows a virtual machine to send a special message to another virtual machine programmed to accept and process the message. See also special message.

SNA. Systems Network Architecture.

SNA/CCS terminal. Any terminal accessing VM/XA SP that is managed by a VTAM service machine.

special message. A data transmission, made up of instructions or commands, sent from one virtual

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Processor Resource/Systems Manager and PR/SM are trademarks of the International Business Machines Corporation.

machine to another via the SMSG function. A special message is processed by the receiving virtual machine and does not appear on the receiver's console. See also SMSG function.

spool file. A collection of data along with CCWs for processing on a unit record device. Contrast with system data file.

SVC 76. In VM/XA SP, a supervisor call instruction that records the error incidents encountered by certain operating systems running in virtual machines. When a virtual machine operating system issues an SVC 76, VM/XA SP translates the virtual storage and I/O device addresses to real addresses, records the information on the VM/XA SP error recording virtual machine, and returns control to the issuing virtual machine. This interface bypasses the virtual machine's own error recording routine, and avoids duplicate error recording.

System/370 mode. A virtual machine operating mode in which System/370 functions are simulated. Contrast with 370-XA mode.

system data file. A collection of data associated with a particular function. Types of system data files include saved segments, NSSs, UCR files, image libraries, message repository files, and system trace files. Because a system data file contains no CCWs, it cannot be processed on a unit record device. Contrast with spool file.

system hold status. A spool file status that prevents a file from being printed, punched, or read until the real system operator releases it. Contrast with user hold status.

system trace file. A type of system data file that contains CP or virtual machine trace data.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

U

UCR file. User class restructure file.

unit record device. A reader, a printer, or a punch.

user class restructure file (UCR file). A type of system data file that contains information used to override the IBM-defined privilege class structure of CP commands, DIAGNOSE instruction codes, and certain CP system functions.

user directory. See directory.

user hold status. A spool file status that prevents a file from being printed, punched, or read until the file owner releases it. Contrast with system hold status.

V

Vector Facility (VF). A hardware feature that provides synchronous instruction processing for high-speed manipulation of fixed-point and floating-point data.

VF. Vector Facility.

V = F machine. Virtual = fixed machine.

virtual = fixed machine (V = F machine). A preferred virtual machine with a fixed, contiguous area of host real storage that does not start at page 0. CP provides performance enhancements for this virtual machine. See also multiple preferred guests, preferred virtual machine, virtual = real area, virtual = real machine, virtual = virtual machine.

virtual machine. In VM/XA SP, a functional equivalent of either a System/370 computing system or a System/370-Extended Architecture computing system. Each virtual machine is controlled by an operating system. VM/XA SP controls the concurrent execution of multiple virtual machines on an actual System/370-Extended Architecture system.

Virtual Machine/Extended Architecture™ System Product (VM/XA SP). An operating system that allows multiple IBM System/370 and 370-XA operating systems to run simultaneously on a single 370-XA processor. The multiple systems may be used for production, testing, developing application programs, maintenance, and migration. VM/XA SP also provides a high-capacity interactive environment. There are four components: the control program (CP), the conversational monitor system (CMS), the dump viewing facility, and the group control system (GCS).

virtual machine operator. Any user who loads and runs an operating system in a virtual machine. Contrast with real system operator.

virtual = real area (V = R area). A fixed, contiguous section of real storage, starting at page 0, in which preferred virtual machines execute. CP does not page this storage. See also preferred virtual machine, virtual = fixed machine, virtual = real machine.

virtual = real machine (V = R machine). A preferred virtual machine with a fixed, contiguous area of host real storage that starts at page 0. CP provides performance enhancements and an automatic recovery facility for this virtual machine. See also multiple preferred guests, preferred virtual machine, virtual = real area, virtual = real machine recovery, virtual = virtual machine.

virtual = real machine recovery (V = R machine recovery). A CP function that allows the V = R machine to resume operation after most CP abnormal terminations. When possible, the facility reestablishes the V = R machine environment, allowing the operating system running in that virtual machine to perform its own recovery processes. See also automatic software re-IPL.

virtual = virtual machine (V = V machine). A virtual machine that runs in the dynamic paging area. CP pages this virtual machine's guest real storage in and out of host real storage. See also dynamic paging area, virtual = fixed machine, virtual = real machine.

virtual supervisor state. A condition, controlled by a virtual machine's current PSW, during which the control program allows the virtual machine to issue input/output and other privileged instructions. When these instructions are not emulated, the control program intercepts these instructions and simulates their functions for the virtual machine.

virtual wait time. The period during which the control program suspends the processing of a program while a required resource is unavailable

VM/XA SP. Virtual Machine/Extended Architecture System Product.

VTAM service machine. A collection of networking programs running in a virtual machine that, together with the CP console communication services (CCS) routines, provide full VM/XA SP console capabilities for SNA/CCS terminal users. A VTAM service machine contains either (1) VM/VTAM with VSCS running as an application under control of GCS, or (2) VM/VCNA running as a VTAM application under control of the VSE or VS1 operating system.

V = R area. Virtual = real area.

V = R machine. Virtual = real machine.

V = R machine recovery. Virtual = real machine recovery.

V = V machine. Virtual = virtual machine.

Numerics

370 mode. Synonym for System/370 mode.

370-XA mode. A virtual machine operating mode in which System/370-Extended Architecture functions are simulated. Contrast with System/370 mode.

Virtual Machine/Extended Architecture is a trademark of the International Business Machines Corporation.

Bibliography

This bibliography gives the names and order numbers of microfiche and publications about VM/XA System Product.

VM/XA System Product Microfiche

You can order microfiche listings that contain code. The order numbers for the microfiche are:

Order No.	Description
LYC7-0330	VM/XA System Product: CP listings
LYC7-0331	VM/XA System Product: CMS listings
LYC7-0332	VM/XA System Product: GCS listings
LYC7-0334	VM/XA System Product: dump viewing facility listings.

VM/XA System Product Publications

The publications are shown in Figure 1 on page 846. You can order any of them by their individual order numbers or you can order most of them as a group by using a single order number, SBOF-0260. SBOF-0260 provides:

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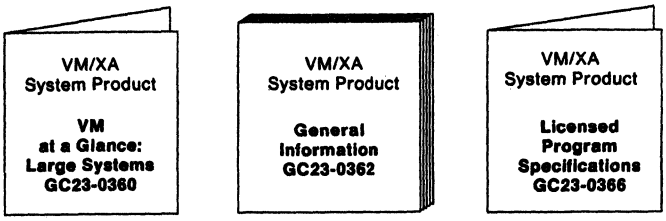
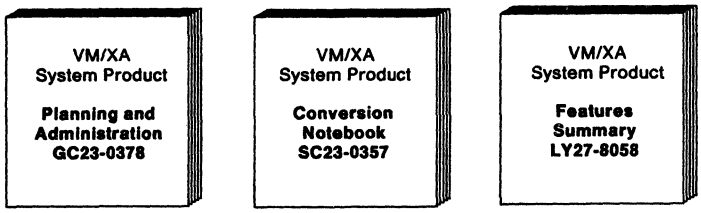
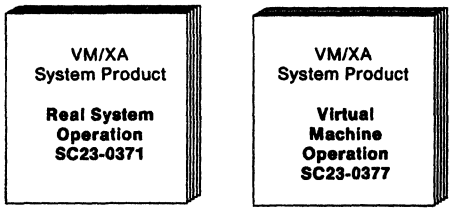


Installation

Planning and Administration



Operation



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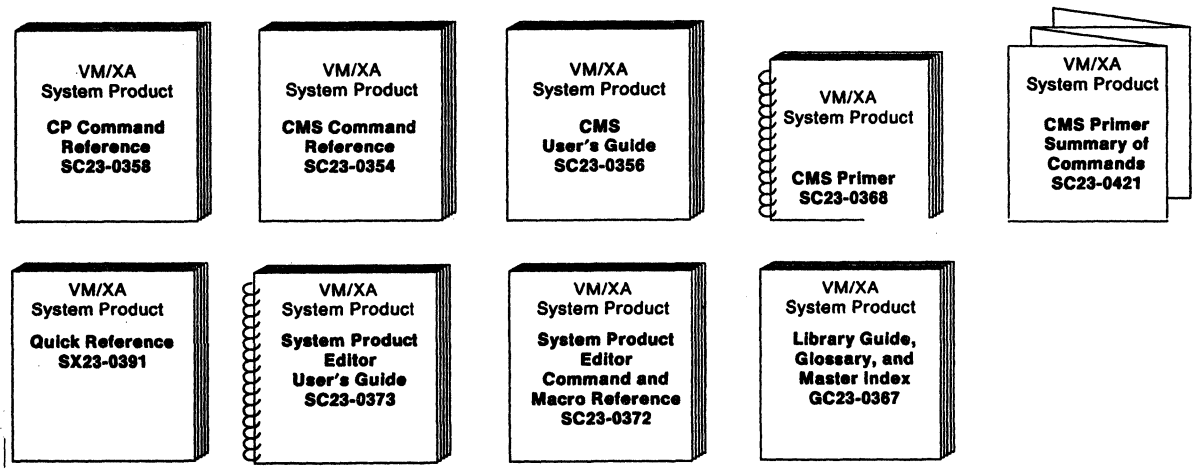
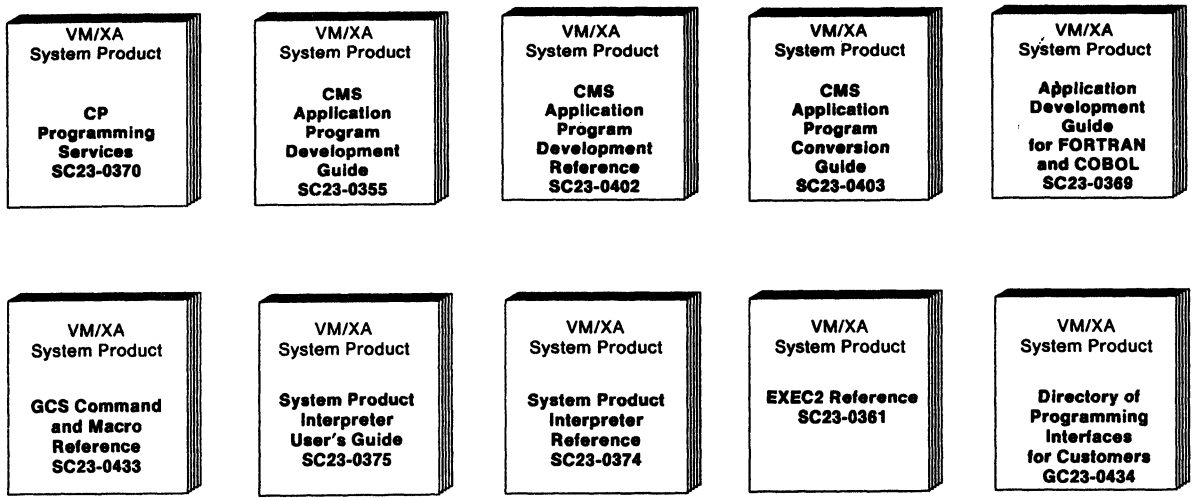


Figure 1 (Part 1 of 2). VM/XA System Product Publications

Application Programming



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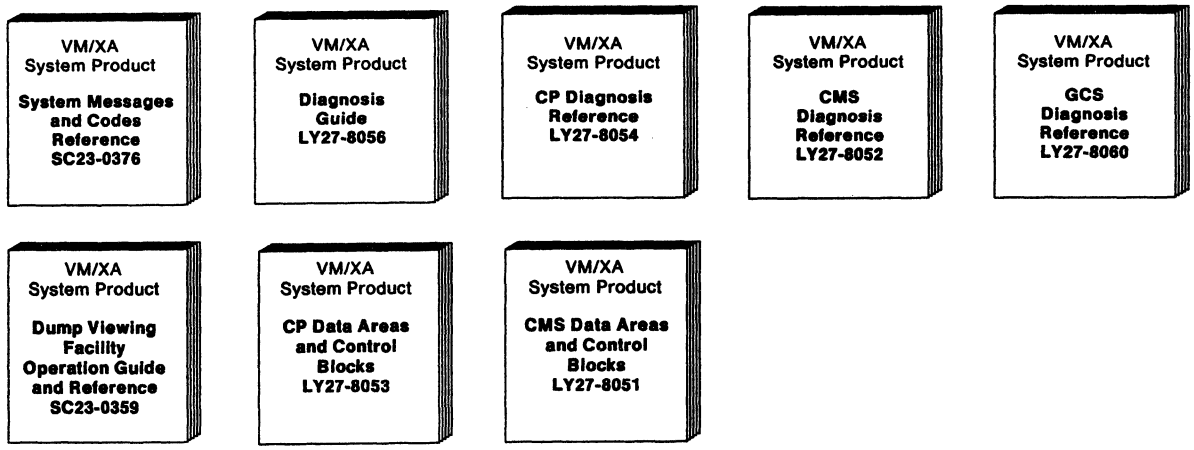

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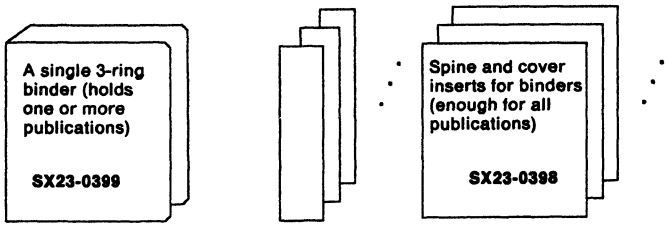

Figure 1 (Part 2 of 2). VM/XA System Product Publications

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System Product
Release 2**

CP Data Areas and Control Blocks

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File No. S370-37

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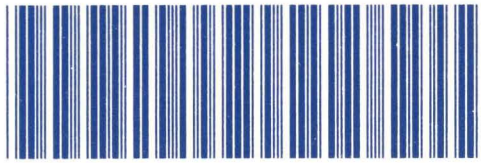

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