516-19
CC-ADH
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THREAD SAVE BLOCKS

The 516 multiprogramming system is designed to make use of reentrant coding in order to reduce the amount of core storage required to handle multiple user processes (threads). Hence, temporary storage must belong to the threads, not to the programs which the threads use. In order to satisfy this requirement, temporary storage is assigned to a "thread save block". The relevant part of the thread save block for the currently active thread is contained in a known place in sector 0 of core memory; the thread save blocks for all inactive threads are contained elsewhere in core. Hence, temporary storage in the thread save block is simply addressed as particular, absolute locations in sector 0, and no modifications of the programs are required to change active threads, just moving portions of the thread save blocks in and out of sector 0.

This document describes the layout of a thread save block, the data movement between the block and sector 0, the relocatable pointers, the initial data values, and the names (equivalent to locations in sector 0) of the various parts of the thread save block.

ITEM DESCRIPTION	SIZE	MUST BE RELOCATED	MOVED TO SECTOR 0	RELATIVE ADDRES IN BLOCK	INITIAL VALUE	PROG. NAME
JST PUSH DOWN LIST	8			0 7	-	-
CALL PUSH DOWN LIST	16	✓		8 23	-	-
USER RELOCATABLE PTRS	8	✓	✓	24 31	0	.RP0-.RP7
SYSTEM RELOCATABLE PTRS	8	✓	✓	32 39	0	.SRP0-.SRP7
CALL PDL PTR.	1		✓	40	22	.PASTA
JST PDL PTR.	1		✓	41	-1	.JPDL
USER TEMP. STORAGE	16		✓	42 57	-	.T0-.T17
SYSTEM TEMP. STORAGE	15		✓	58 72	-	.TST0-.TST16
LAST JMS PDL ENTRY	1		✓	73	78	.JSTAD
CØNTRØL TERMINAL IDENT.	1		✓	74	-	.CONID
INPUT TERM. IDENT	1		✓	75	-	.INPID
ØUTPUT TERM. IDENT	1		✓	76	-	.ØUTID
DIRECTORY ID	1		✓	77	-	.DIRID
TOTALS	78	32	54			