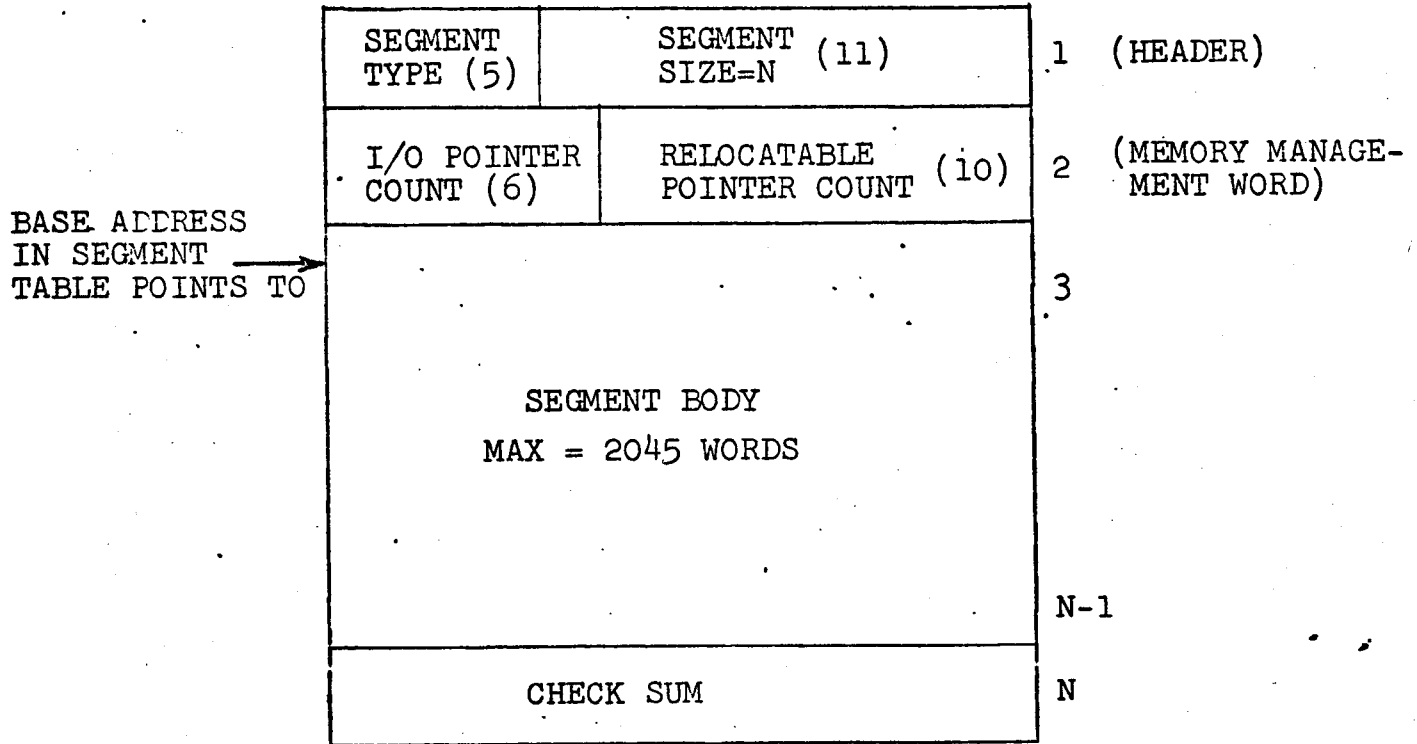


516-6
 CC
 12/13/68

516 SEGMENT FORMAT



The above diagram shows the three words of overhead required for a segment in the 516 virtual addressing scheme. These three words stay with the segment while it is in core or on disk.

SEGMENT TYPE (5 BITS)

The following is a list of segment types and their corresponding 5 bit segment type codes (in hexadecimal).

HIGH ORDER BIT = 0
DO NOT RESTORE TO DISK

00 - HOLE
 01 - REENTRANT SUBR.(NORMAL)
 02 - DIRECTORY(UNCHANGED)
 03 -
 04 -
 05 -
 06 -
 07 -
 08 -
 09 -
 0a -
 0b -
 0c -
 0d -
 0e -
 0f

HIGH ORDER BIT = 1
RESTORE SEGMENT TO DISK

10 - USER DATA SEG.
 11 - REENTRANT SUBR. (INITIAL)
 12 - DIRECTOR(CHANGED)
 13 -
 14 -
 15 -
 16 -
 17 -
 18 -
 19 -
 1a -
 1b -
 1c -
 1d -
 1e -
 1f

SEGMENT SIZE (11 BITS)

is the number of words in the segment (including the 3 words of overhead) MAXIMUM = $2^{11} = 2048$

MEMORY MANAGEMENT WORD (16 BITS)

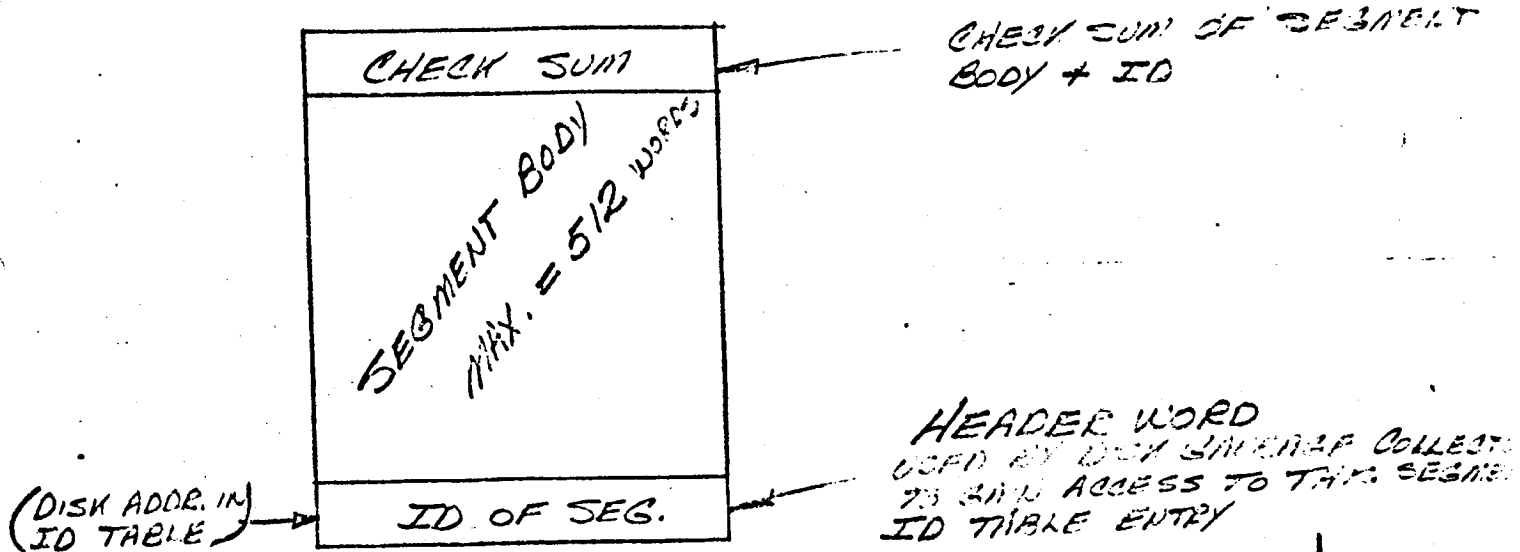
is composed of two counts. One is the count of all relocatable pointers which point to this segment, i.e., user relocatable pointers in thread save blocks, pointers on the call

push down lists. The I/O pointer count is a count of all the relocatable pointers in the I/O transfer vector which point to this segment. Whenever either of these counts is nonzero the segment cannot be removed from core memory. When the segment is on disk the two counts in the memory management word are replaced by the ID of the segment. The check sum word is only used when the segment is written on or read from disk. It is the 2's compliment sum + 1 of all words in the segment except the check sum. This includes the header and the memory management word (ID).

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 C. A. D. H.
 1/18/68

516 SEGMENT FORMATS

ON DISK SEGMENT FORMAT



CONVENTION — INCREASING CORE OR DISK ADDRESS

IN CORE SEGMENT FORMAT

