

Memory and CPU efficient HPACK decoding

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# HPACK DYN TABLE

32 Bytes overhead per field

⇒ FOR 4096 bytes:

1 FIELD:

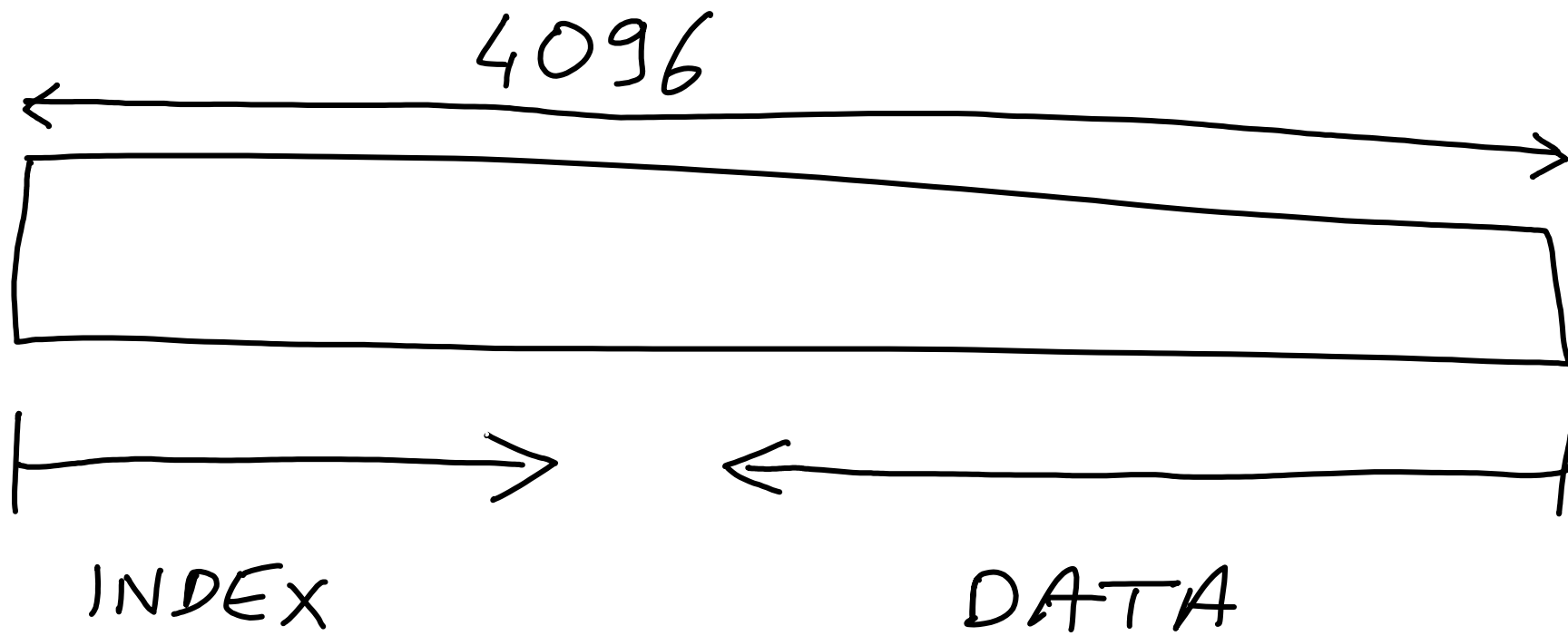
32	INDEX	} 4096
4064	DATA	

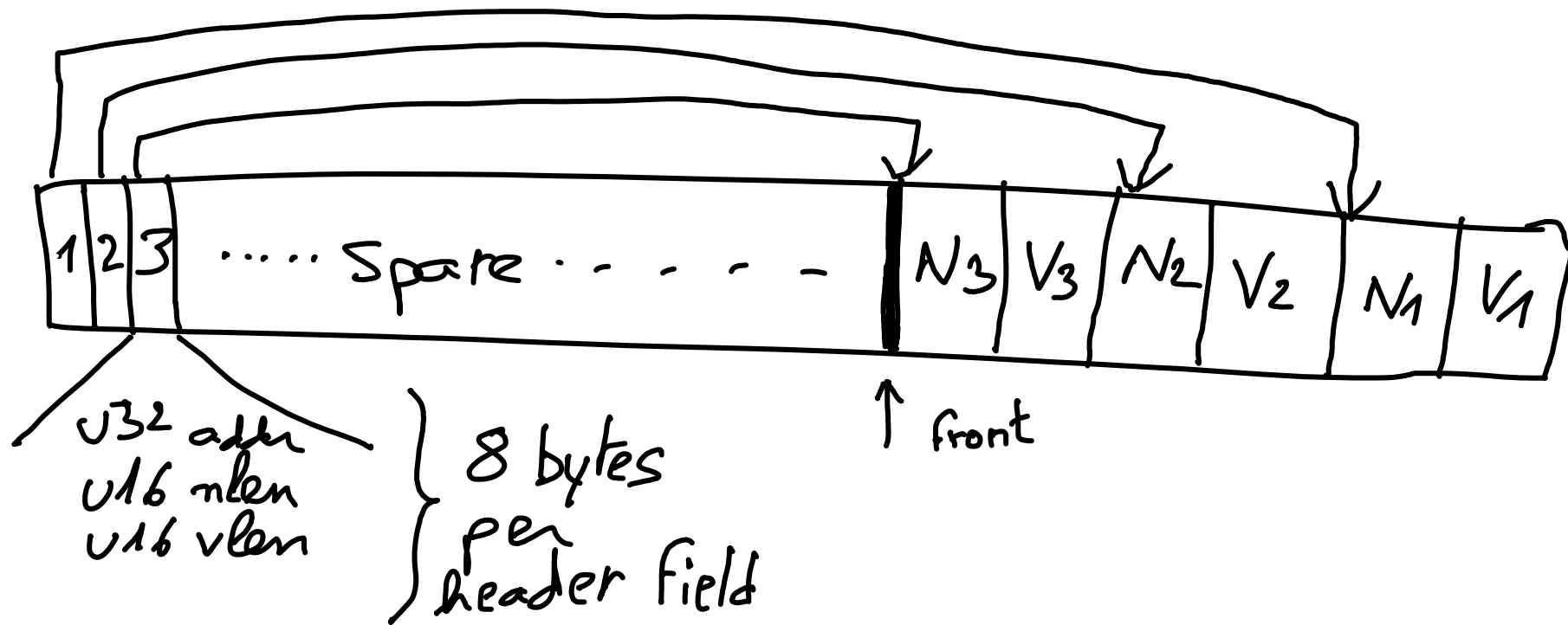
128 FIELDS:

32	INDEX	} 4096
0	DATA	

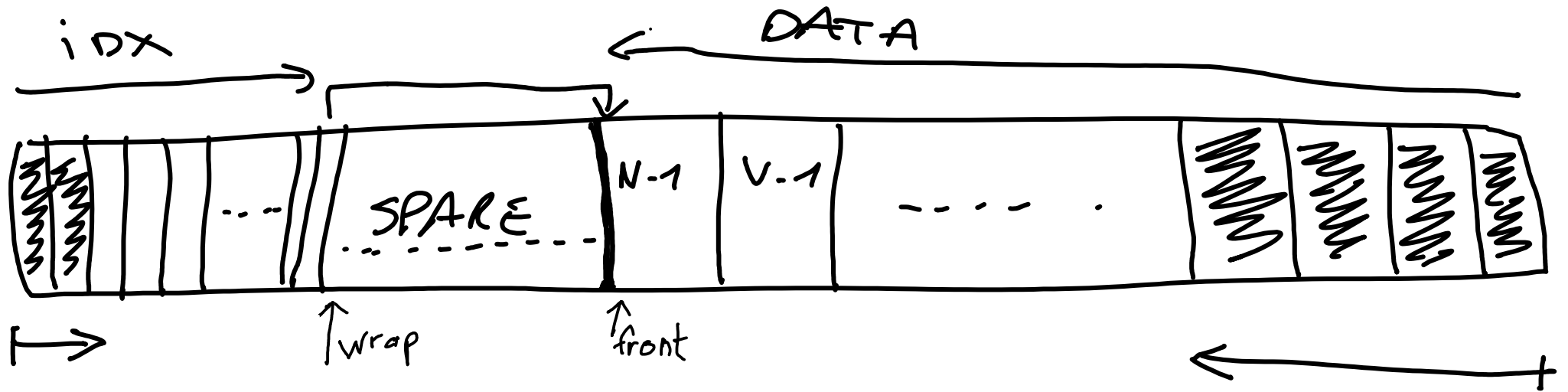
HPACK TEST CASE:

29.2	DATA	} 66.9 FIELDS
32	INDEX	

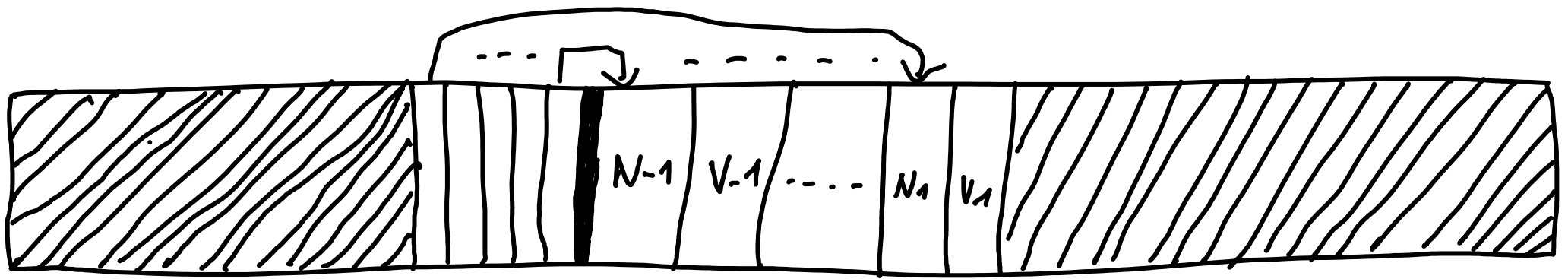




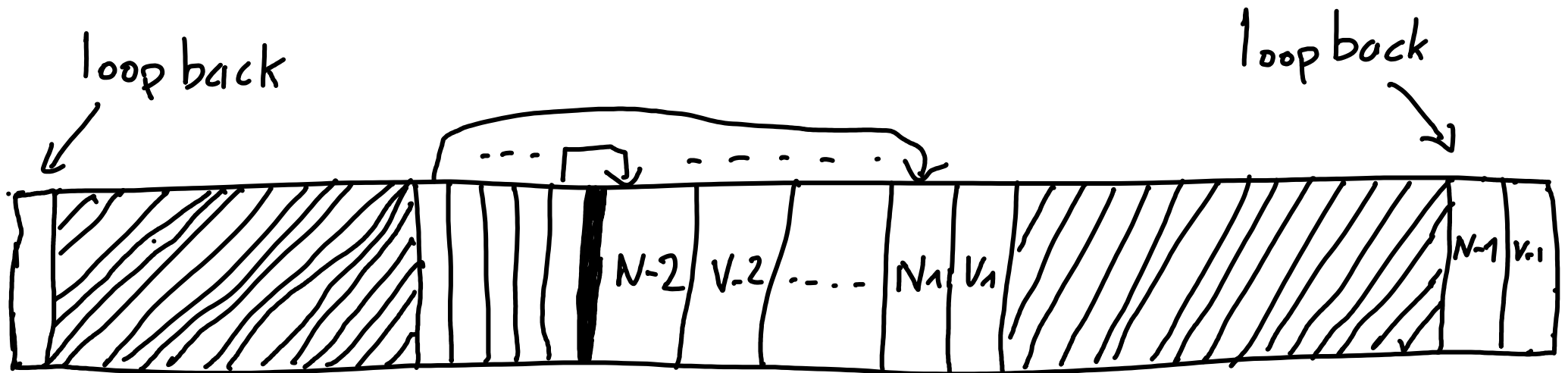
$\Rightarrow$  24 Bytes saved per field.  
 $\approx$  1600 Bytes for 67 fields as in the HACK TEST CASE.

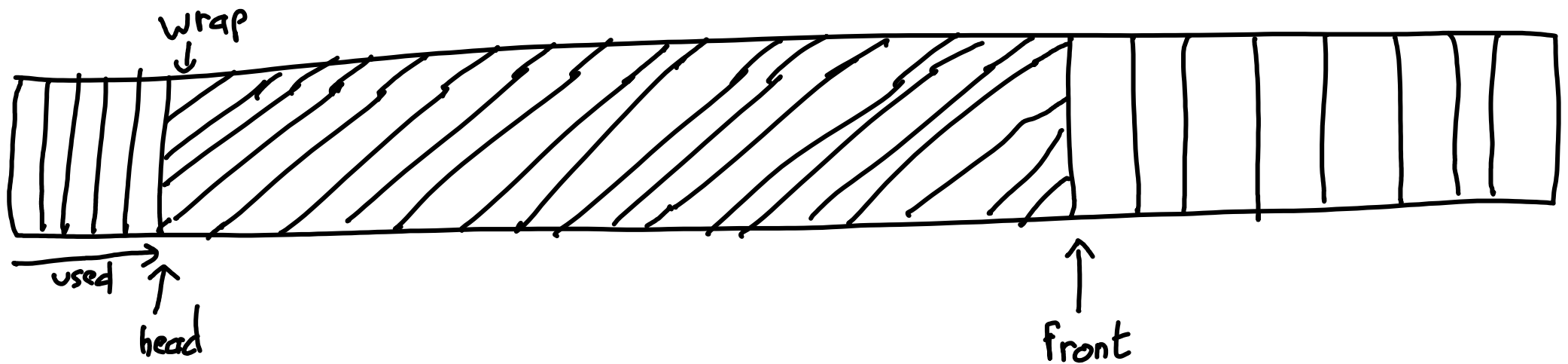
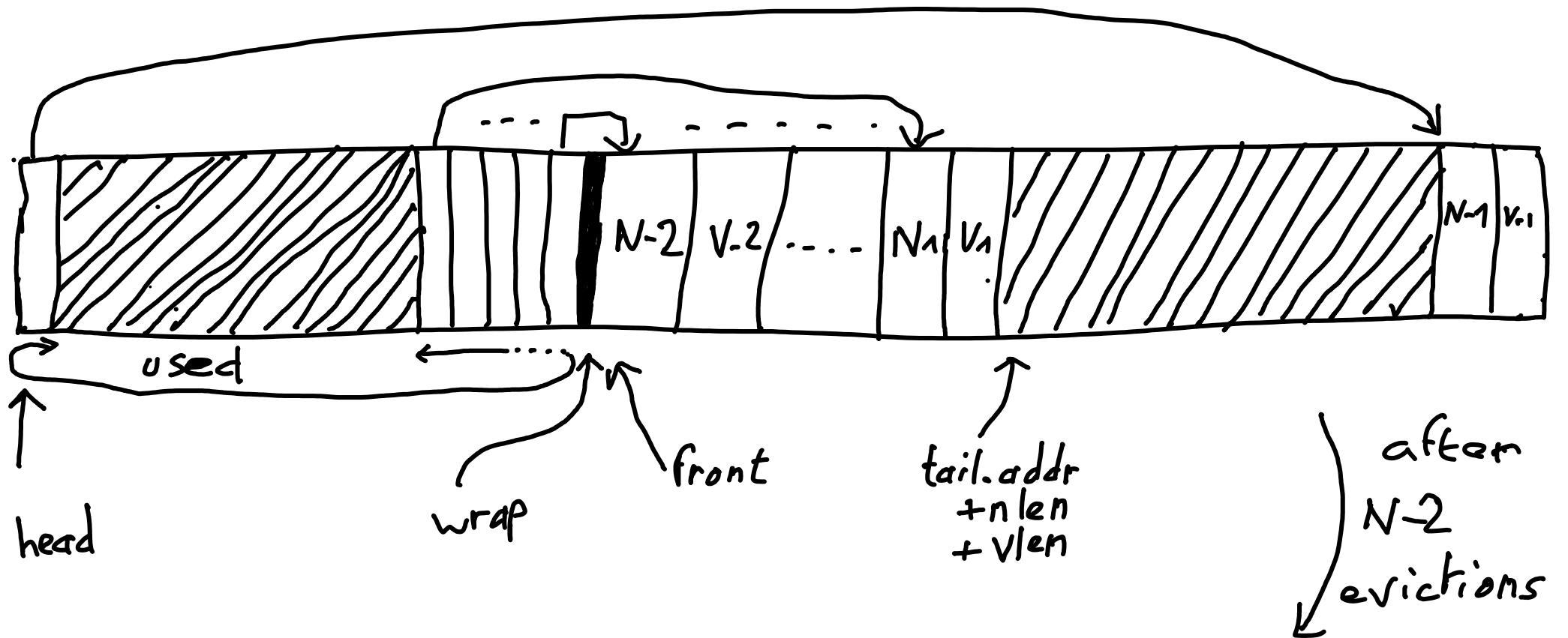


OLD ENTRIES ARE EVICTED BEFORE WE  
RUN OUT OF SPACE.



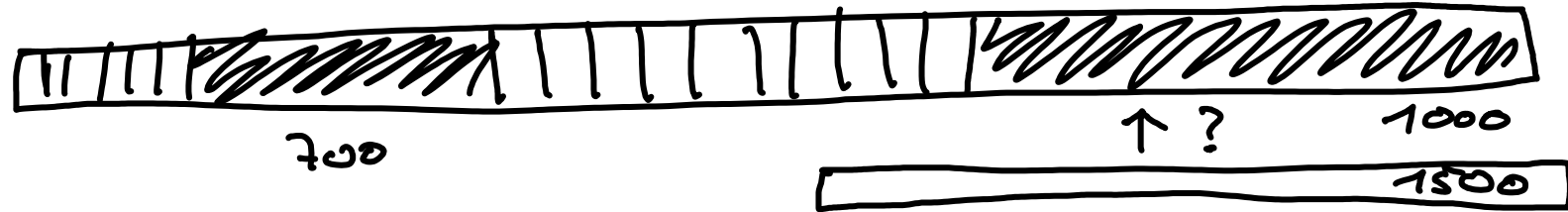
↑ collision:  $\text{wrap} \geq \text{front.addr}$



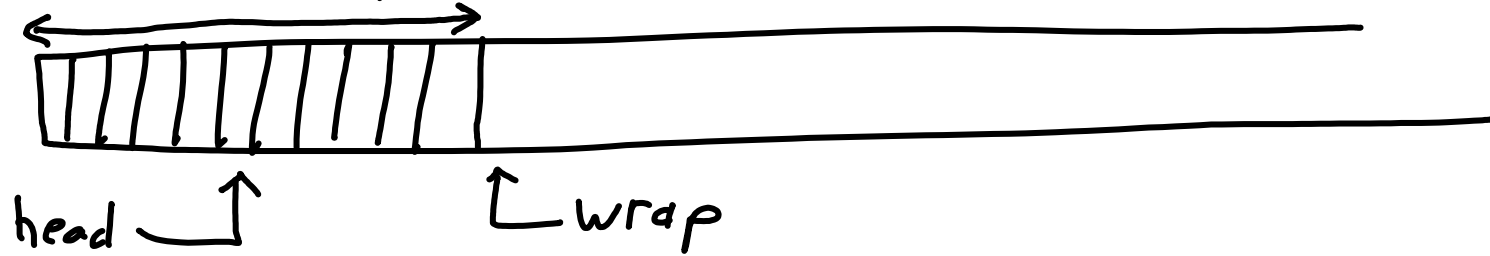


# Notes

- table is full if a contiguous field does not fit



- table is full if index head collides with tail



⇒ happens 1/26000 headers on avg

⇒ resolved by a defragmentation operation ( $2 \times \text{memcpy}()$ )