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Identification

Associative Memory clear function  
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Discussion

The 645 processor contains a small associative memory in which it retains page table words and segment descriptor words recently retrieved from core memory. Since many times the same segment will be the target of successive or near-successive accesses, the associative memory can reduce significantly the number of times reference must be made to core memory for SDW's or PTW's.

As a diagnostic device, a manual switch on the processor control panel can be thrown, to remove the associative memory from the processor/core memory interface path. As presently arranged, if the associative memory is in operation, and then switched off, it retains its then loaded collection of SDW's and PTW's. If at some later time the associative memory is switched back into operation, its by-now outdated collection of SDW's and PTW's will be used by the processor, with probable catastrophe.

An appropriate modification to prevent this possibility is to execute a "clear associative memory" function whenever the associative memory is switched into operation.