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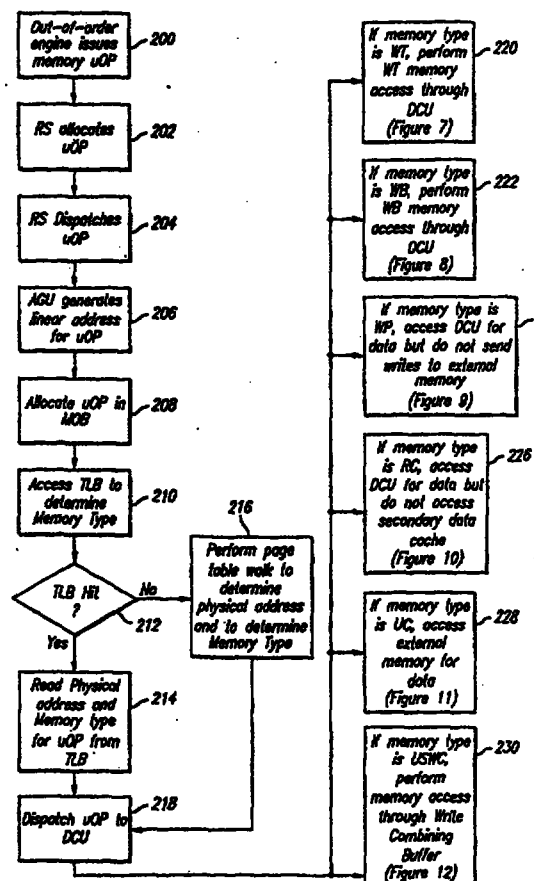
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(54) Title: METHOD AND APPARATUS FOR PROCESSING MEMORY-TYPE INFORMATION WITHIN A MICROPROCESSOR

(57) Abstract

A memory-type value identifying the type of memory contained with a range of memory locations is explicitly stored within a microprocessor (200-216). Prior to processing a memory micro-instruction such as a load or store, the memory-type is determined (214-216) for the memory location identified by the memory micro-instruction. Once the memory-type is known the memory micro-instruction is processed (218-230) in accordance with any one of a number of processing protocols including write-through processing (220), write-back processing (222), write-protect processing (224), restricted-cacheability processing (226), uncacheable speculatable write-combining processing (230), or uncacheable processing (228). By providing memory-type information explicitly within the microprocessor the protocol by which the micro-instruction is processed may be efficiently tailored to the memory-type. In an exemplary embodiment, the microprocessor is an out-of-order microprocessor (200) capable of generating speculative memory microinstructions (202-204).



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