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(54) Title: MICROARCHITECTURE FOR INDICATING THAT THE PACKED DATA STATE IS FULL OR EMPTY

(57) Abstract

An apparatus (unit 605) comprising a plurality of tags (unit 620) associated with a first storage area indicating that locations in the first storage area are either empty or non-empty responsive to execution of floating point instructions which modify data contained in the first storage area. A first circuit is coupled to the plurality of tags which sets only the plurality of tags to an empty state responsive to receipt of a first instruction. The first instruction indicates termination of execution of instructions which operate upon the packed data (unit 610) stored in the first storage area. The apparatus further comprises a second circuit coupled to the plurality of tags for setting the plurality of tags to a non-empty state responsive to receipt of a second instruction. The second instruction specifies an operation upon packed data. The second circuit sets the plurality of tags to indicate execution of instructions which operate upon the packed data. This apparatus provides an architecture for clearing the packed data state at the end of executed blocks of packed data instructions to leave the floating point state in a clear condition for subsequent operations.

