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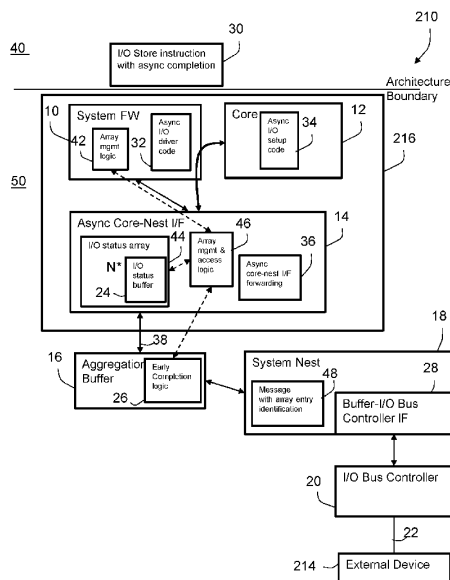
(54) **Title:** HANDLING AN INPUT/OUTPUT STORE INSTRUCTION

Fig. 1

(57) **Abstract:** A data processing system (210) and a method for handling an input/output store instruction (30), comprising a system nest (18) coupled to at least one input/output bus (22) by an input/output bus controller (20). The data processing system (210) further comprises at least a data processing unit (216) comprising a core (12), a system firmware (10) and an asynchronous core-nest interface (14). The data processing unit (216) is coupled to the system nest (18) via an aggregation buffer (16). The system nest (18) is configured to asynchronously load from and/or store data to at least one external device (214) which is coupled to the input/output bus (22). The data processing unit (216) is configured to complete the input/output store instruction (30) before an execution of the input/output store instruction (30) in the system nest (18) is completed. The asynchronous core-nest interface (14) comprises an input/output status array (44) with multiple input/output status buffers (24).

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