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(54) **Title:** OPTIMIZING RECONFIGURABLE HARDWARE USING DATA SAMPLING

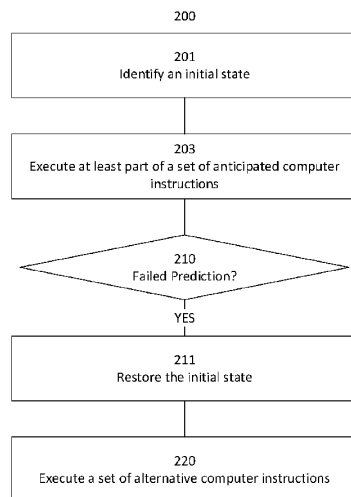


FIG. 2

(57) **Abstract:** An apparatus for computing, comprising a processing circuitry configured for computing an outcome of executing a set of computer instructions comprising a group of data variables, by: identifying an initial state of the processing circuitry; executing a set of anticipated computer instructions produced based on the set of computer instructions and a likely data value, where the likely data value is a value of one the group of data variables anticipated to be computed by executing the set of computer instructions and computed using at least one program data value; and when identifying, while executing the set of anticipated computer instructions, a failed prediction where the data variable is not equal to the likely data value: restoring the initial state of the processing circuitry; and executing a set of alternative computer instructions, produced based on the set of computer instructions and the at least one likely data value.

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