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Moberg et al.

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(54) **SYSTEM AND METHOD FOR ESTABLISHING PROCESSOR REDUNDANCY**

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(75) Inventors: **Kenneth Moberg**, Boulder Creek, CA (US); **William May**, Sunnyvale, CA (US)

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(73) Assignee: **Cisco Technology, Inc.**, San Jose, CA (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Primary Examiner—Scott Baderman
Assistant Examiner—Rita A Ziemer
(74) *Attorney, Agent, or Firm*—Van Pelt & Yi LLP

(21) Appl. No.: **09/205,577**

(57) **ABSTRACT**

(22) Filed: **Dec. 4, 1998**

(51) **Int. Cl.**⁷ **H02H 3/05**

The present invention relates to providing processor redundancy in a system such as a router. According to an embodiment of the present invention, in a system having two or more processors, initialization sequence is started. During the initialization sequence, a redundancy subsystem is initialized. The redundancy subsystem identifies the projects or assignments that are to be off loaded from the primary processor to the secondary processor. According to an embodiment of the present invention, the initialization sequence is then suspended and a discovery process is performed. During the discovery process, it is determined whether the processor running the initialization sequence is a primary or a secondary processor. If it is a secondary processor, then the initialization sequence remains suspended and the secondary processor monitors the health of the primary processor until a failure of the primary processor occurs. If a primary processor failure occurs, then the initialization process is resumed for the secondary processor, hence establishing the secondary processor as the new primary processor.

(52) **U.S. Cl.** **714/10; 712/20; 709/222**

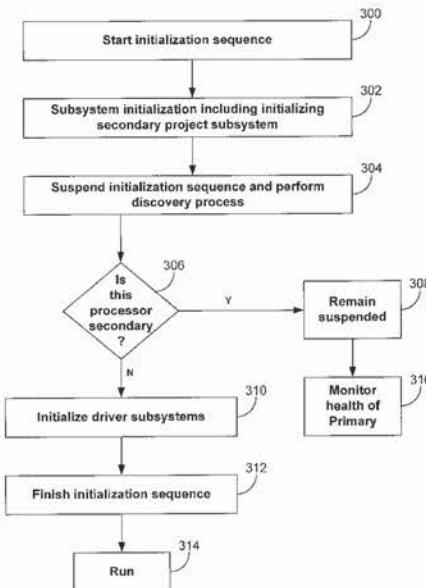
(58) **Field of Search** **714/10; 709/222, 709/238; 712/11, 14, 15, 20**

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19 Claims, 8 Drawing Sheets



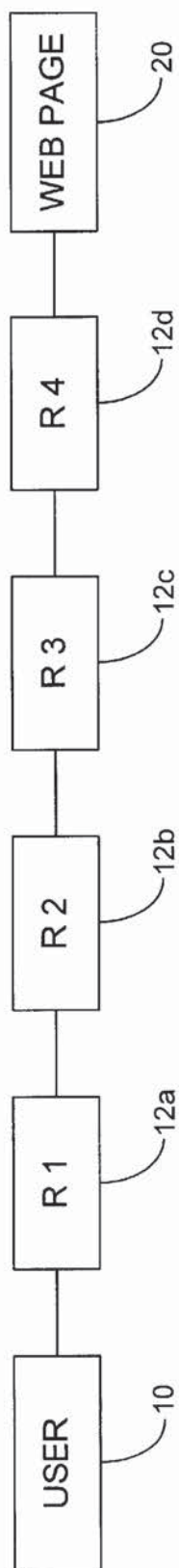


FIG. 1

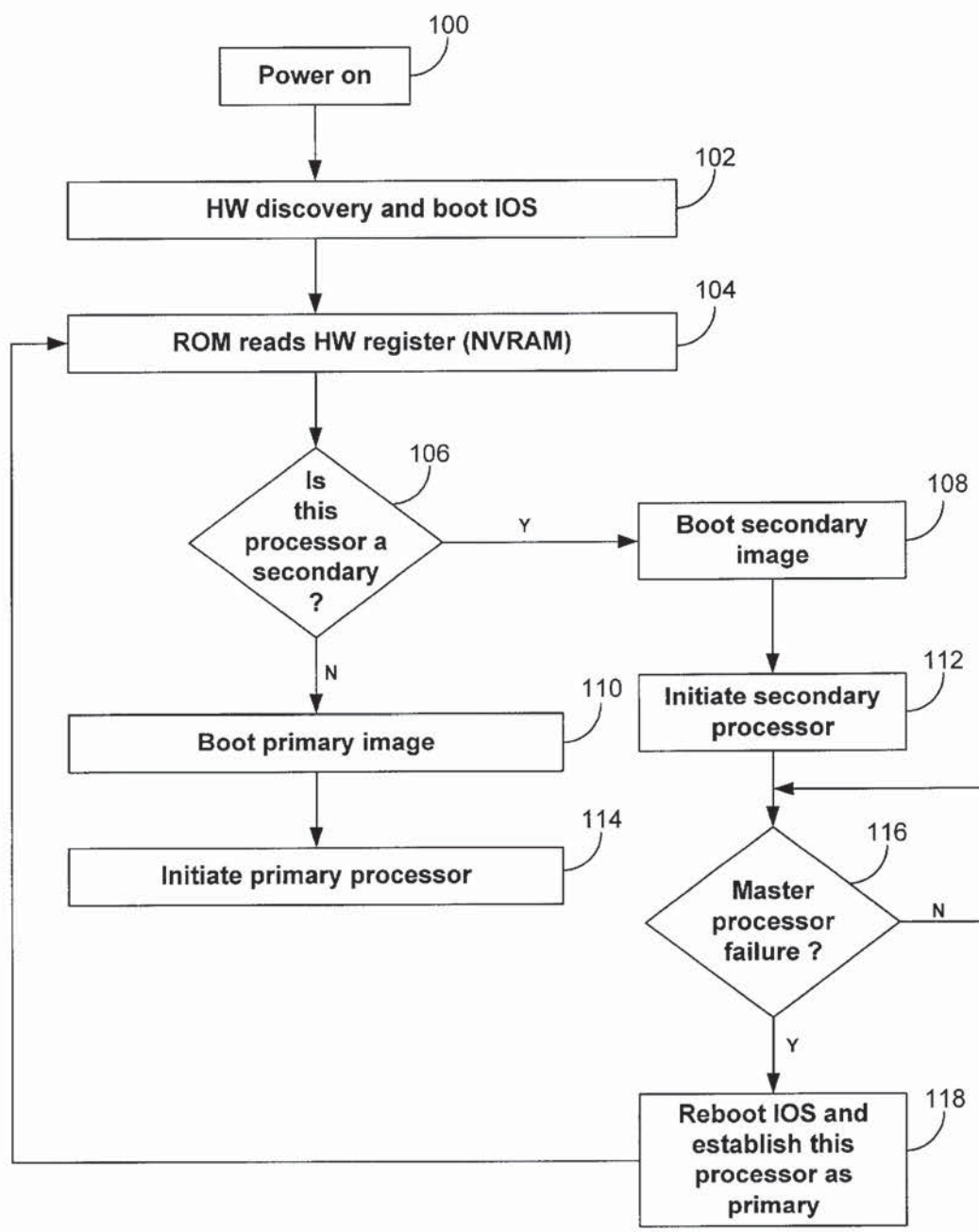


FIG. 2

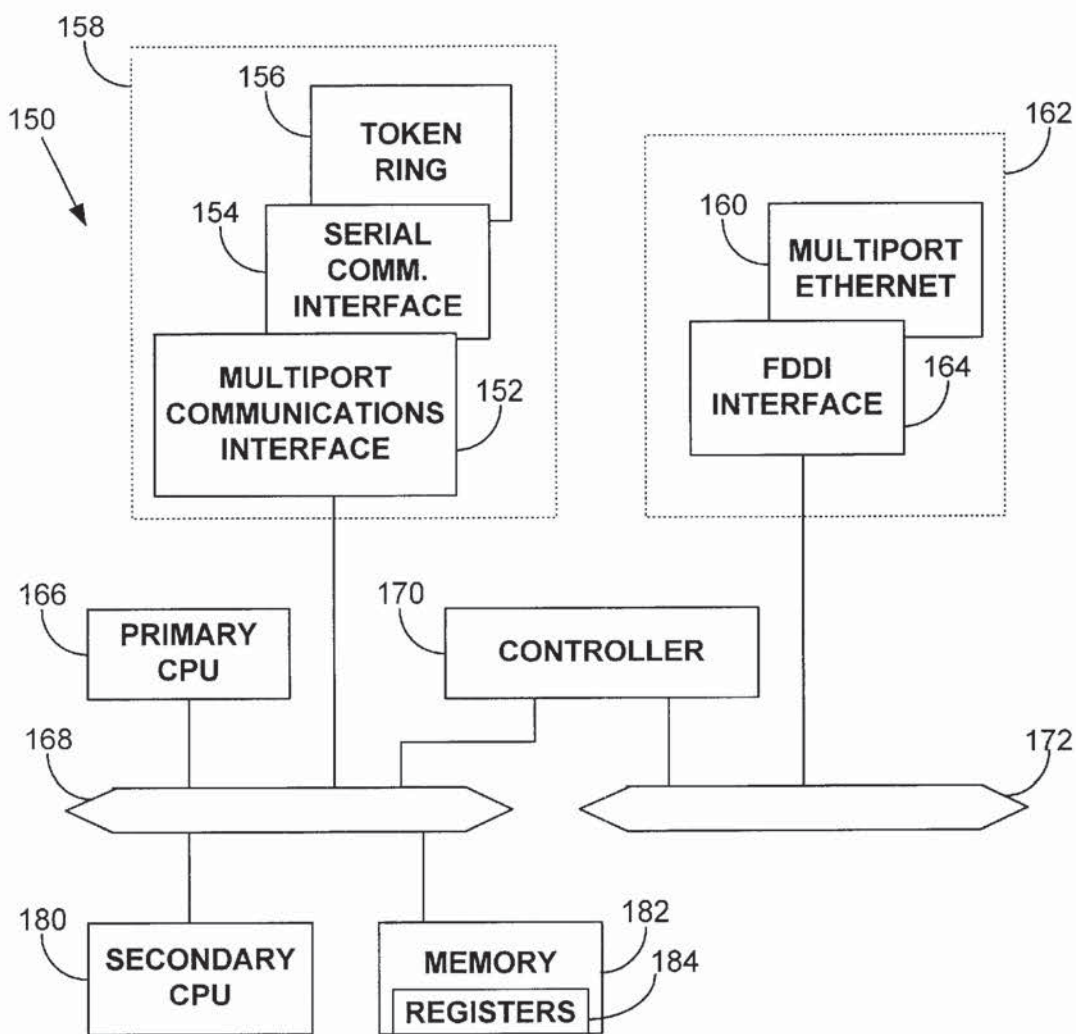


FIG. 3

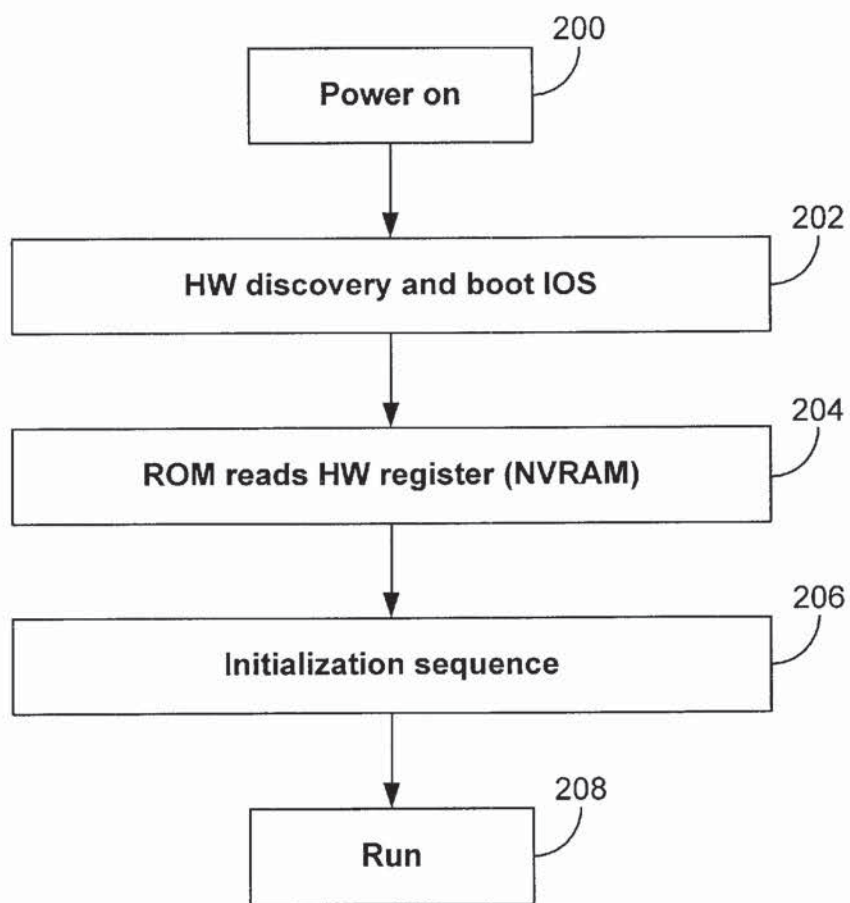


FIG. 4

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