

ABSTRACT

(Figure 3)

INITIALIZATION MECHANISM FOR SYMMETRIC ARBITRATION AGENTS

An initialization mechanism for symmetric arbitration agents ensures that multiple agents on a bus are each initialized with a different arbitration counter value. The arbitration counter of each bus agent is used to keep track of which agent was the last or current owner of the bus and which agent will be the next owner of the bus. All bus agents agree on which agent will be the priority agent at system reset and thus be allowed first ownership of the bus. Each agent's arbitration counter is initialized according to each agent's own agent identification. The arbitration pins of the bus agents are interconnected such that each agent determines for itself a unique agent identification based on which pin of its arbitration pins is active at system reset and the maximum number of bus agents allowed on the bus. After determining its agent identification, each bus agent initializes its arbitration counter such that every agent agrees which agent is the priority agent. Each agent performs this initialization based on its agent identification, the identity of the priority agent, and the maximum number of agents allowed on the bus.