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United States Patent [19]
Kermani

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- [54] **MINIMUM REFRACTORY PERIOD IN A MULTIPLE AGENT RESOURCE SHARING ENVIRONMENT**
- [75] Inventor: **Bahram G. Kermani**, Whitehall, Pa.
- [73] Assignee: **Lucent Technologies, Inc.**, Murray Hill, N.J.
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Primary Examiner—Do Hyun Yoo
Assistant Examiner—Meadi Namazi
Attorney, Agent, or Firm—William H. Bollman

[57] **ABSTRACT**

A multiple agent system providing each of a plurality of agents, i.e., processors, access to a shared synchronous memory. A super agent may be an agent from among a plurality of agents which accesses a shared synchronous memory most frequently. The super agent has direct access to the shared synchronous memory, without negotiation and/or arbitration, while the non-super agents access the shared synchronous memory under the control of an arbiter-and-switch. Open windows are generated when the super agent is not accessing the shared synchronous memory. The non-super agents can be allowed interim access to the shared synchronous memory even before the super agent terminates ownership of the shared synchronous memory. In another aspect of the present invention, subsequent memory access request signals from an agent to the shared synchronous memory are suppressed for a minimum refractory period until a previously received acknowledge signal is cleared to prevent erroneous detection of memory access granted acknowledge signals. In yet another aspect, a pre-arbiter intercepts memory access request signals from each of the agents and outputs a respective conditioned pre-arbitrated memory access request signal to provide the ability for one or more agents to lock ownership of the shared synchronous memory.

Related U.S. Application Data

- [60] Provisional application No. 60/065,855, Nov. 14, 1997, abandoned.
- [51] **Int. Cl.⁷** **G06F 12/00**
- [52] **U.S. Cl.** **711/150; 701/147; 701/158; 701/168; 710/244**
- [58] **Field of Search** **711/150, 147, 711/158, 168, 167, 169, 151, 152; 710/244**

[56] **References Cited**

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15 Claims, 9 Drawing Sheets

