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**Cheyer et al.**

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- (54) **SOFTWARE-BASED ARCHITECTURE FOR COMMUNICATION AND COOPERATION AMONG DISTRIBUTED ELECTRONIC AGENTS**
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- (52) **U.S. Cl.** ..... **719/317; 709/202; 717/114**
- (58) **Field of Search** ..... **719/317; 709/202, 709/207, 317; 717/114**

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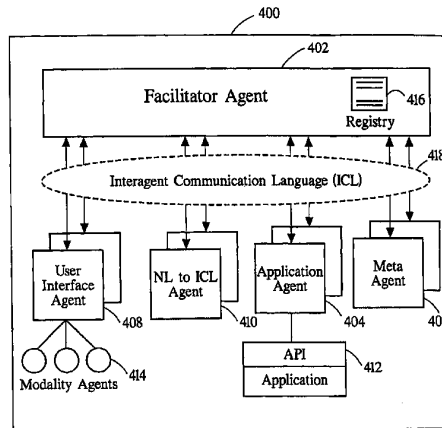
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(57) **ABSTRACT**

A highly flexible, software-based architecture is disclosed for constructing distributed systems. The architecture supports cooperative task completion by flexible and autonomous electronic agents. One or more facilitators are used to broker communication and cooperation among the agents. The architecture provides for the construction of arbitrarily complex goals by users and service-requesting agents. Additional features include agent-based provision of multi modal interfaces, including natural language.

**89 Claims, 16 Drawing Sheets**



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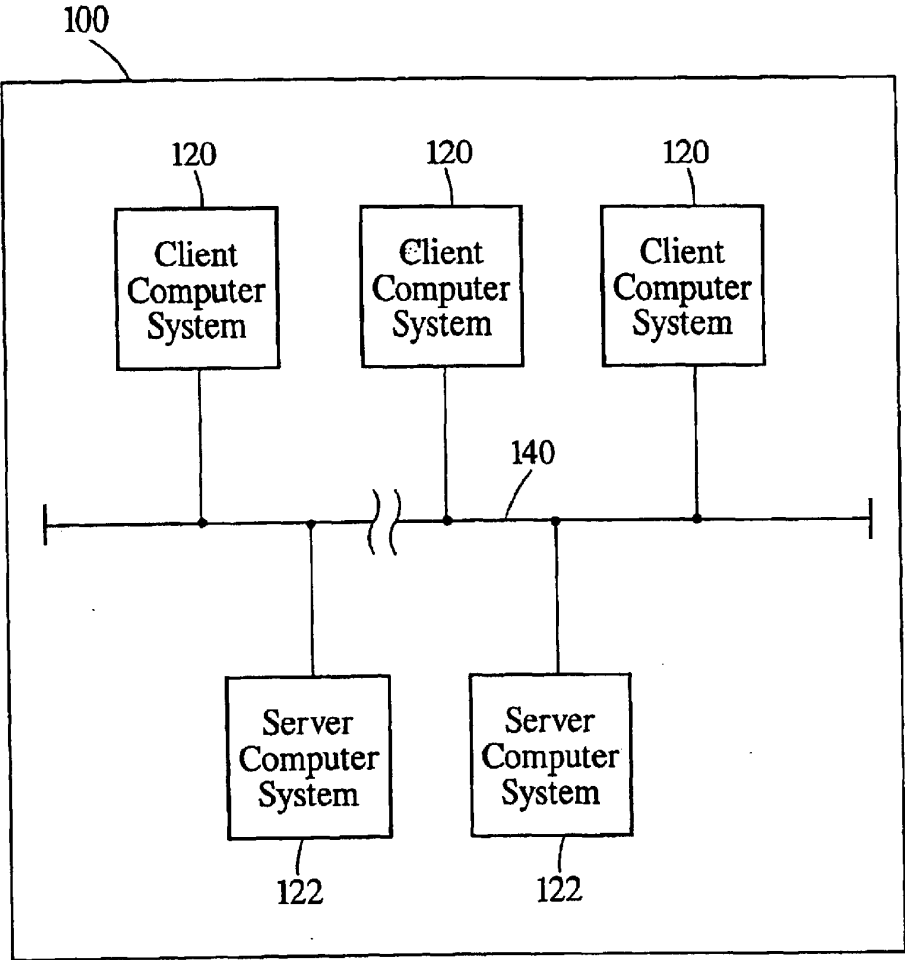


Fig. 1  
(Prior Art)

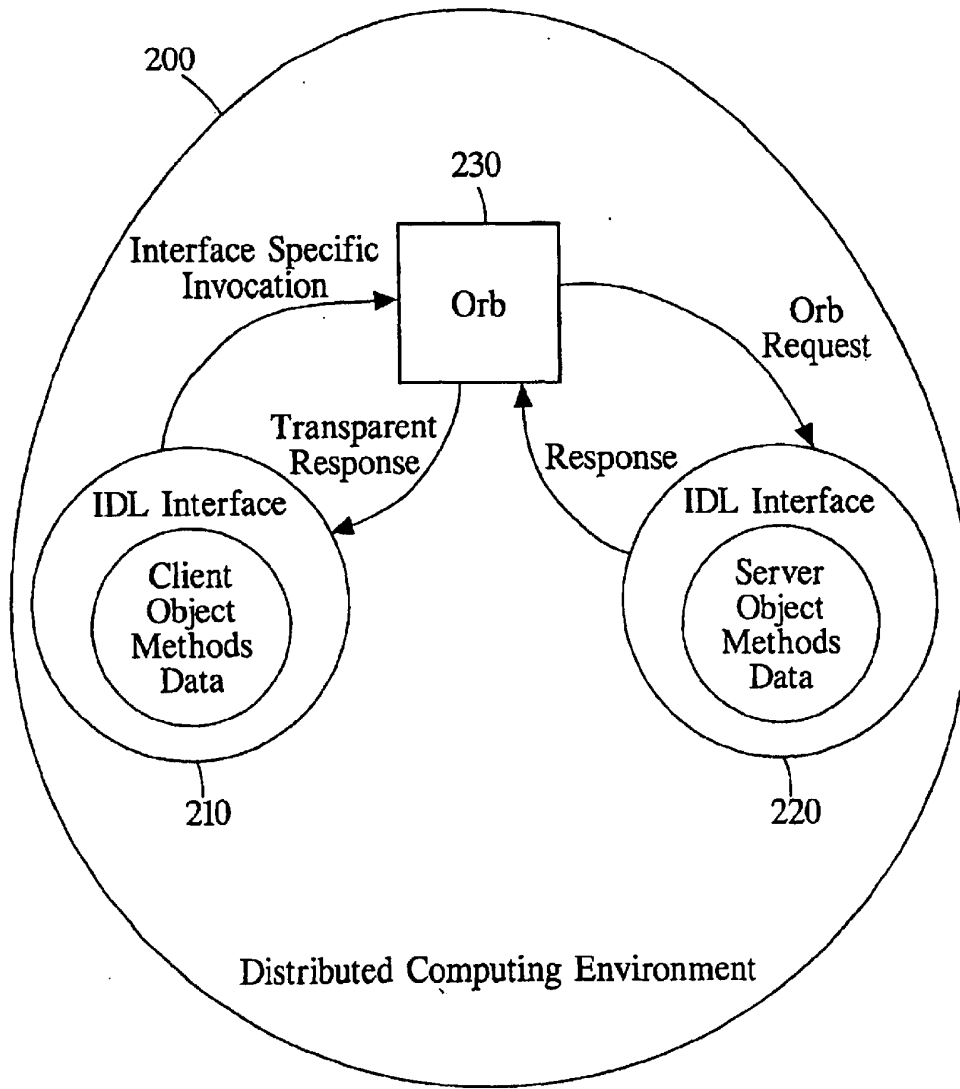


Fig. 2  
(Prior Art)

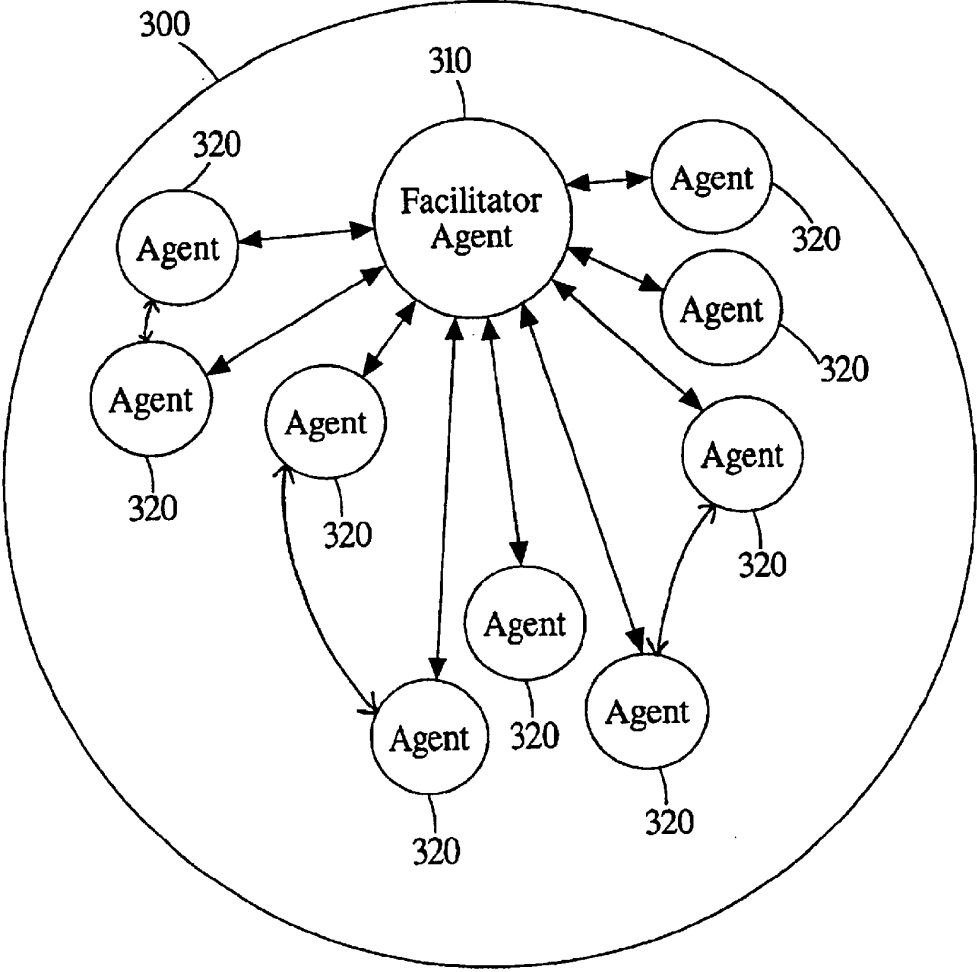


Fig. 3

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