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(54) Title: SERVICE PROVISION SYSTEM FOR USE IN DISTRIBUTED PROCESSING ENVIRONMENTS

(57) Abstract

An agent (50) in a distributed computing environment includes a negotiation management module (NMM) (51) which is invoked when it is necessary to form a contract with another external agent for providing a particular service, a resource management module (RMM) (52) which manages resources controlled by the agent, a service/task management module (SMM) (53) which launches and controls services and tasks associated with the agent, and a communications module (CM) (56) which is the focus for both incoming and outgoing messages to and from the agent. The agent (50) is also provided with an acquaintance model (AM) (55) which provides an overall picture of services offered by other agents in the environment and a self-model (SM) (54) which maintains a representation of the services which the agent (50) can itself provide. When requested to provide a service, the NMM (51) negotiates with the requestor, via the CM (56), on the basis of information provided by the RMM (52) relating to resources available to the agent (50). When a contract is finalised, the RMM (52) oversees the management of the resources controlled by the agent and the SMM (53) controls the services and tasks required by the agent (50) to complete the contract.

