

CLAIMS

What I claim is:

1. A system for coordinating a process across at least two participants in a domain to allow interoperability of the participants that operate on different platforms, each participant having at least one resource and one agent, wherein an agent from a participant requests a resource from another participant, and said another participant provides the resource as requested, wherein the process from one participant to another participant is a sequence of resource accesses and includes process steps, the system comprising:
 - a. a process specification language identifying at least one relevant terminology for each participant, resource, agent, and process step for the domain;
 - b. a specification repository storing information of at least one participant, resource, agent, and process step using terminologies identified in said process specification language, wherein each process step is defined by at least one participant, resource and/or agent, and organized by transaction hierarchy;
 - c. a process knowledge engine identifying and tracking the relevant process steps in said specification repository for the request from the agent of one participant for the resource from another participant and the provision of the resource as requested; and
 - d. an execution engine performing the relevant process steps identified by said process knowledge engine, managing the agent requesting the resource with respect to the resource based on information stored in said specification repository for the agent and the resource, and updating the specification repository with the process steps tracked by said process knowledge engine.
2. The system of Claim 1 wherein information of the resource stored in said specification repository includes the identity and/or location of the resource.

3. The system of Claim 1 wherein information of the agent stored in said specification repository includes the credential, rights, and/or permission of the agent to have access to at least one resource.
4. The system of Claim 1 wherein said specification repository includes at least one map of the resource of the participants organized by atomic resources and/or resource hierarchy.
5. The system of Claim 1 wherein said specification repository includes at least one map of the agents of one or more participants organized by identity, role, credential, and/or agent hierarchy.
6. The system of Claim 5 wherein said process knowledge engine includes at least one map of the process steps between participants organized by a process definition layer, a relationship layer, and an object hierarchy layer.
7. The system of Claim 6 wherein said specification repository includes a knowledge / process state database for storing the update from said execution engine for the process steps tracked by said process knowledge engine using said relationship layer.
8. The system of Claim 6 wherein an agent is assigned to an agent class and a process step is assigned to a transaction class, and said relationship layer is organized by said agent class and said transaction class.
9. The system of Claim 6 wherein said process definition layer is organized by various sequencing of a plurality of process steps.
10. The system of Claim 6 wherein said object hierarchy layer is organized by transaction hierarchy and agent hierarchy.
11. The system of Claim 5 wherein said execution engine manages the agent with said credential map.

12. The system of Claim 7 wherein said execution engine manages the agent with respect to the process steps with said relationship layer.

13. The system of Claim 6 wherein the system includes a central system and a local system of at least one participant, and said local system maintains a copy of the identity map and process steps map from said central system relevant to the participant.

14. A method for coordinating a process across at least two participants in a domain to allow interoperability of the participants that operate on different platforms, each participant having at least one resource and one agent, wherein an agent from a participant requests a resource from another participant, and said another participant provides the resource as requested, wherein the process from one participant to another participant is a sequence of resource accesses and includes process steps, the method steps comprising the steps of:

- a. providing a process specification language that identifies at least one relevant terminology for each participant, resource, agent, and process step for the domain;
- b. providing a specification repository;
- c. storing information of at least one participant, resource, agent, and process step using at least one relevant terminology in said specification repository, wherein each process step is defined by at least one participant, resource and/or agent, and organized by transaction hierarchy;
- d. identifying the relevant process steps in said specification repository for the request from the agent of one participant for the resource from another participant and the provision of the resource as requested;
- e. performing the relevant process steps identified;
- f. managing the agent requesting the resource with respect to the resource based on information stored in said specification repository for the agent and the resource;
- g. tracking the relevant process steps;
- h. providing a knowledge / process state database; and
- i. updating said knowledge / process state database with the process steps tracked.

15. The method of Claim 14 wherein information of the resource stored in said specification repository includes the identity and/or location of the resource.
16. The method of Claim 14 wherein information of the agent stored in said specification repository includes the credential, rights, and/or permission of the agent to have access to at least one resource.
17. The method of Claim 14 further comprising the steps of:
 - j. organizing the resource by atomic resources and/or resource hierarchy; and
 - k. providing at least one resource map in said specification repository organized by said atomic resources and/or resource hierarchy.
18. The method of Claim 14 further comprising the steps of:
 - l. organizing the agents of one or more of the participants by identity, credential and/or agent hierarchy; and
 - m. providing at least one map in said specification repository organized by said identity, role, credential, and/or agent hierarchy.
19. The method of Claim 14 further comprising the steps of:
 - n. organizing the process steps between participants by a process definition layer, a relationship layer, and an object hierarchy layer; and
 - o. providing at least one map organized by said process definition layer, said relationship layer and said object hierarchy layer.
20. The method of Claim 19 further comprising the steps of:
 - p. assigning an agent to an agent class; and
 - q. assigning a process step to a transaction class;wherein said relationship layer is organized by said agent class and said transaction class.
21. The method of claim 19 further comprising the step of:

r. organizing various sequencing of a plurality of process steps in said process definition layer.

22. The method of claim 19 wherein said object hierarchy layer is organized by transaction hierarchy and agent hierarchy.

23. The method of Claim 19 wherein said relationship layer is used for the tracking of the relevant process steps.

24. The method of Claim 19 wherein said relationship layer is used for the managing of the agent.