

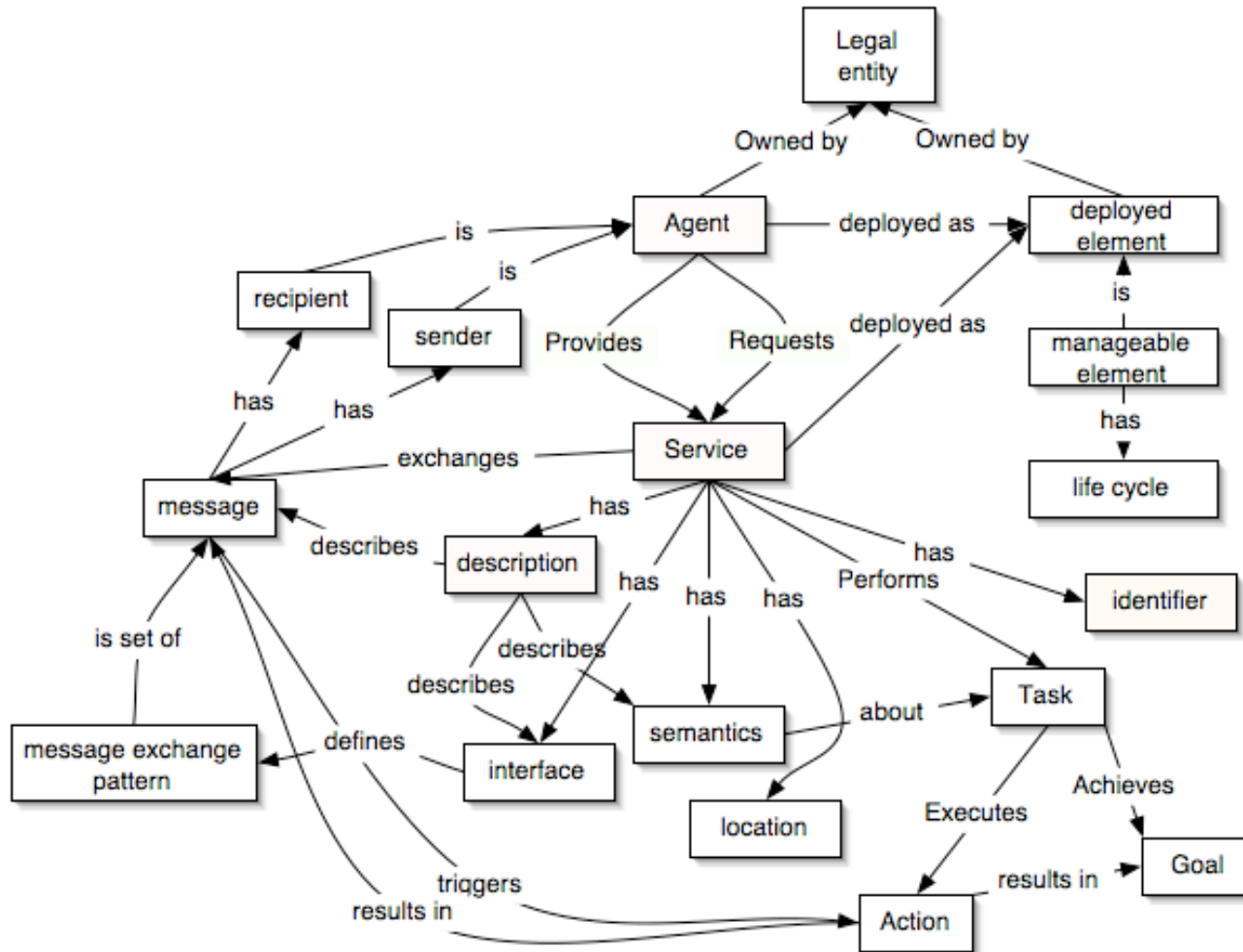
Web services choreography

Linking the World Wide service
Network

Francis G. McCabe



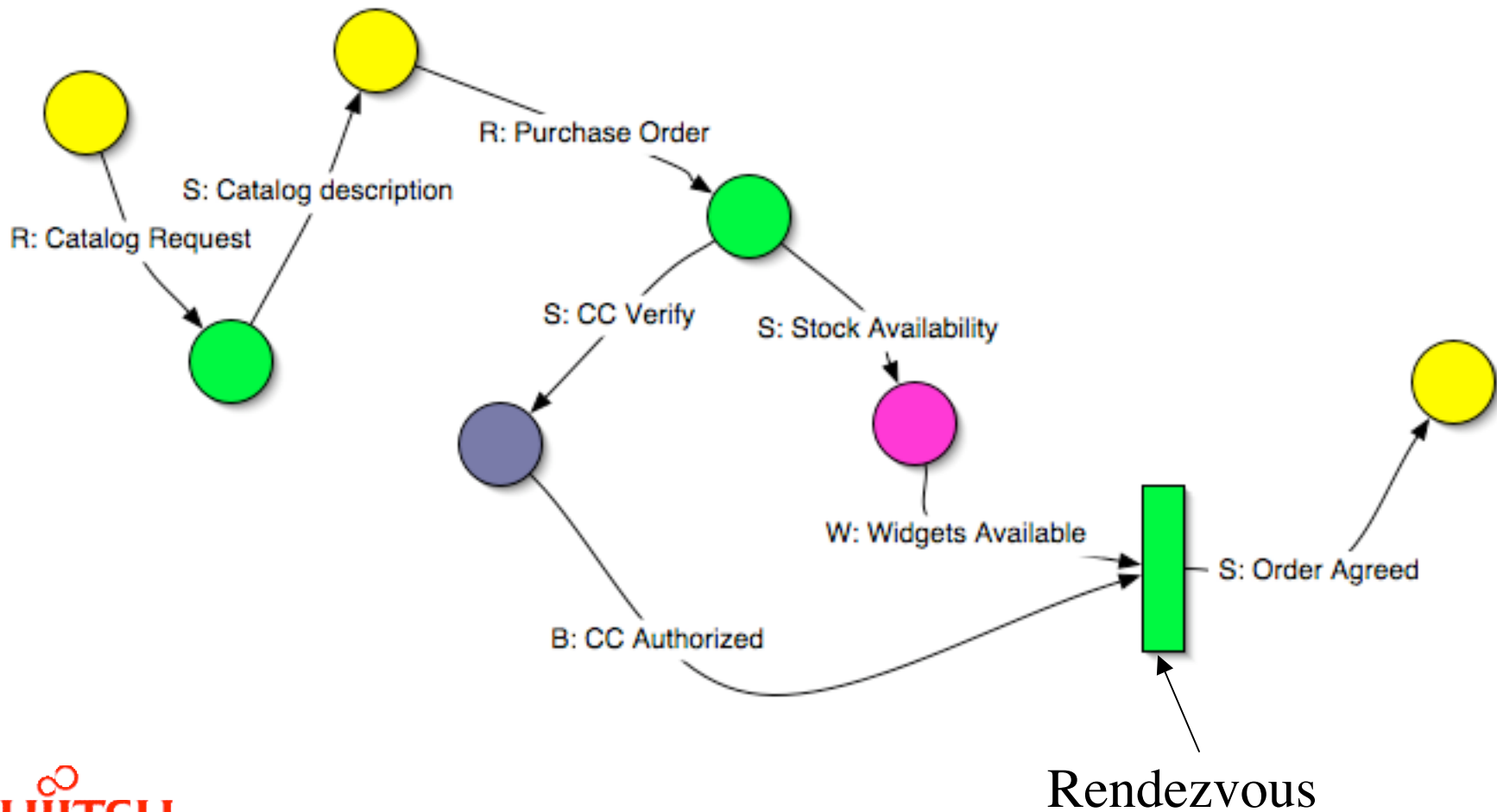
Web services



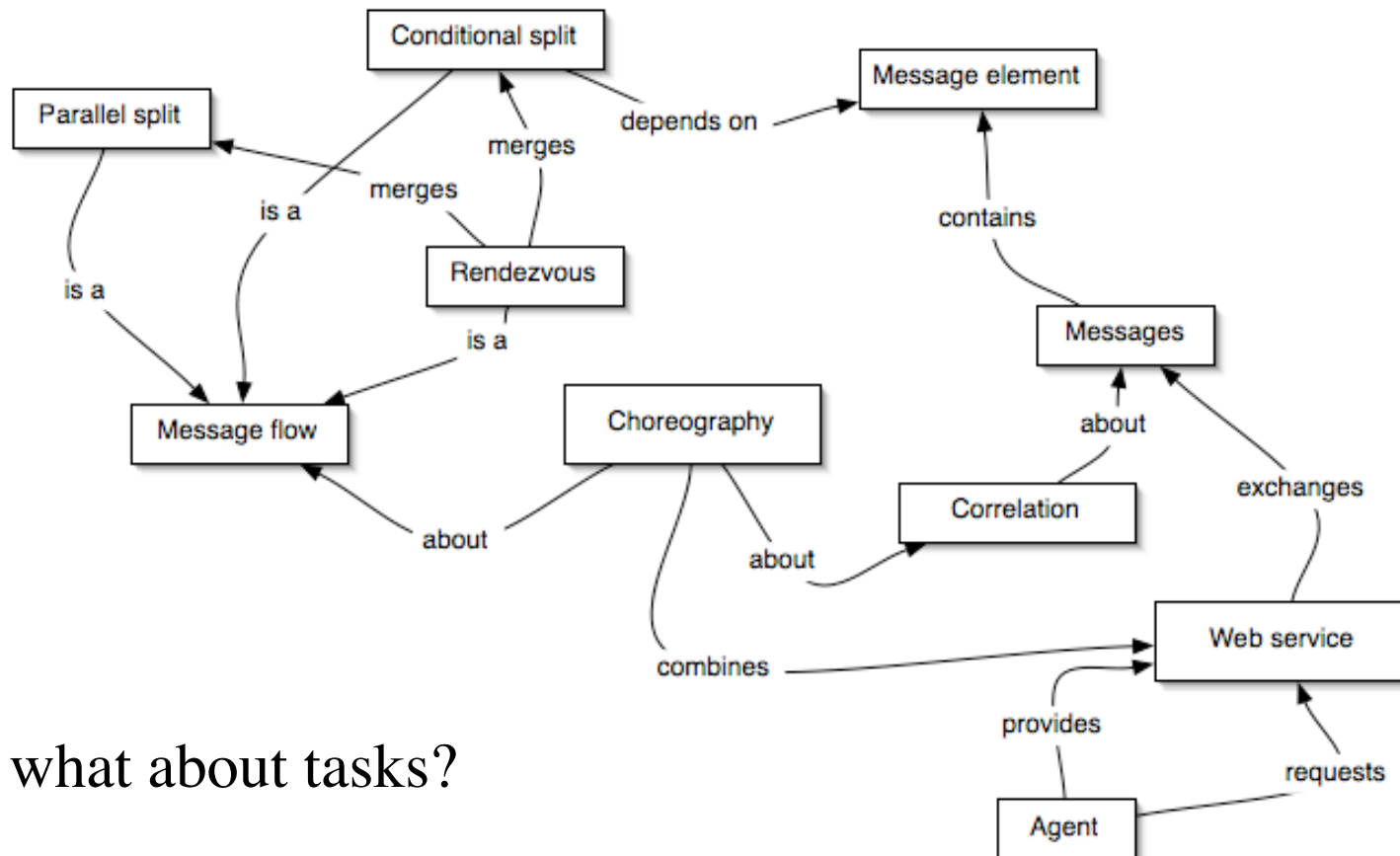
Choreography Requirements

- Combining Web services
 - Specifying the relationships
 - Specifying the expected message flows
- Documenting
 - The larger scale of Web services
- Potential for automation
 - Automatically verifying Web services
 - Automatically driving Web services

Choreography as state diagrams



Choreography concepts

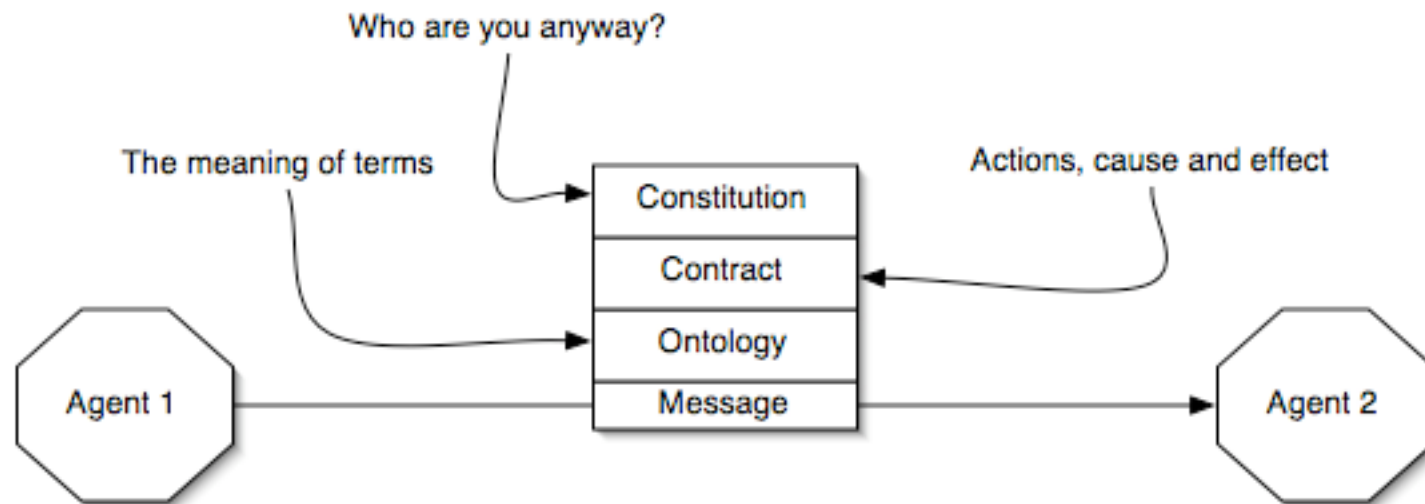


But, what about tasks?

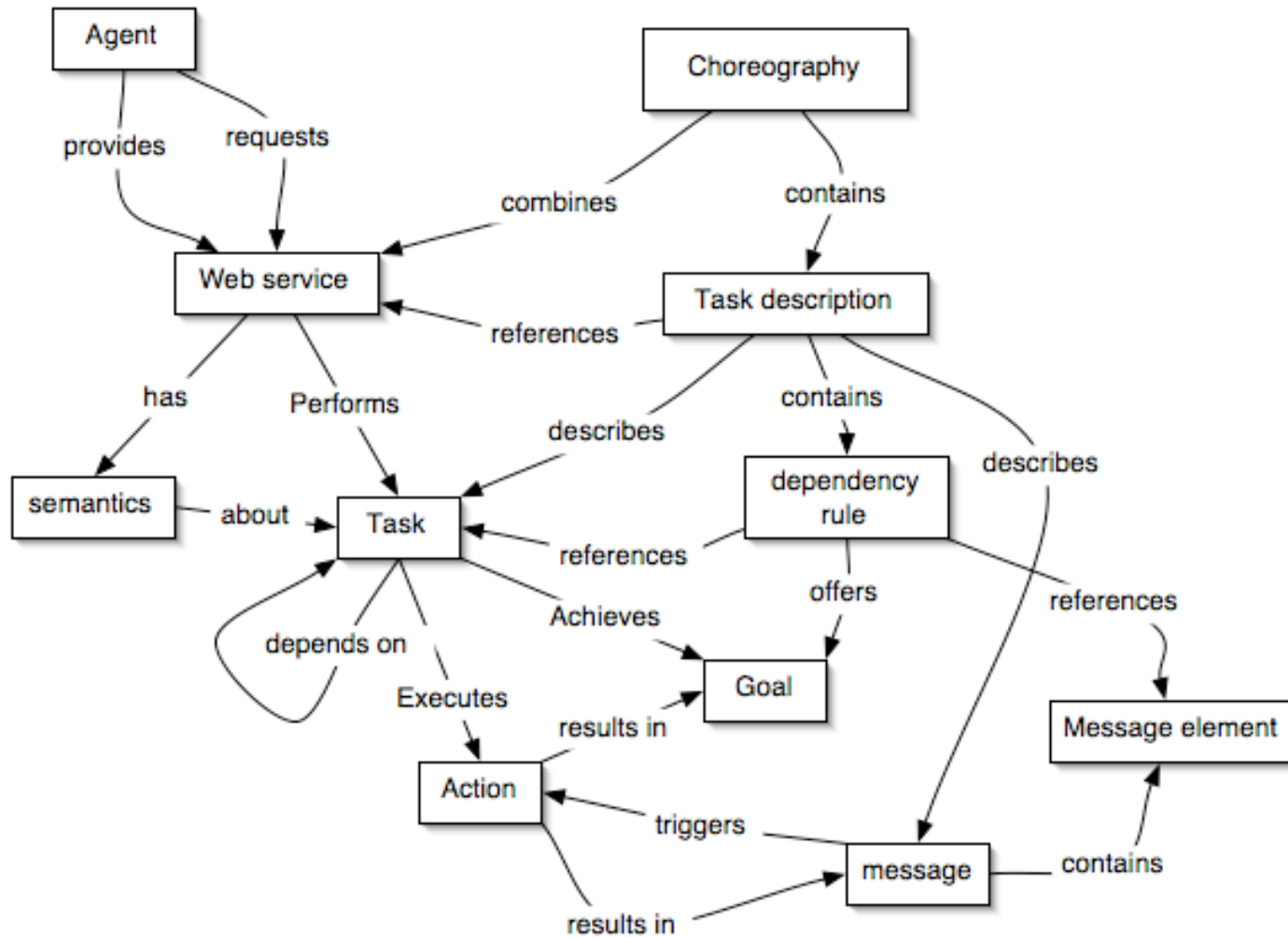
Its my system, talking to yours

- Ownership is of the essence
- We do not trust each other implicitly
 - We should not need to
 - There is no one entity that everyone trusts
- We need to collaborate to achieve our goals
- Hierarchical design impossible

Layers of meaning



Task oriented choreography



Dependency based Web services choreography

- Web services can be combined by expressing dependencies between them
- A dependency is expressed in terms of
 - goals, preconditions and message flows
- Connects to Semantic Web
 - concepts can be captured in OWL classes
- Requires rules with variables
 - To capture message flows, message element interdependencies, dependencies

Issues

- Cooperation not technology
 - Orchestration, Choreography
- Semantics
 - Goal oriented vs. process oriented
- Theorems vs development
 - Supporting the developer or the QA checker