CS690 – Week 5 Paper Summaries
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OWL-S and OWL-S Process Models

OWL-S Summary:
- An ontology built on top of Web Ontology Language by DARPA DAML, replacing DAML-S
- It is meant to describe Semantic Web Services
- Enables software agents to automatically discover, invoke, compose, and monitor web resources offering web services
- Source: http://www.w3.org/Submission/OWL-S/

OWL-S Parts:
- OWL-S has three parts:
    - Service Profile: Describes what the service does, primarily for humans
    - Process Model: Describes how a client can interact with the service
    - Service Grounding: Describes details that client needs to interact with the service, like protocols, message formats, etc.
    - Source: http://www.w3.org/Submission/OWL-S/

OWL-S Process Model Summary:
- It is organized as a workflow of processes
    - It has the following components: Inputs, Outputs, Pre-conditions, Results
- Processes in the workflow are related to each other by the following:
    - Data flow
    - Control flow
- Control flow allows specification of the temporal relation between processes. OWL-S allows for sequences, concurrency, synchronization, conditionals, etc.
- Data flow allows specification of the relation between inputs and outputs of processes.
- Source: http://www.ai.sri.com/SWS2004/final-versions/SWS2004-Ankolekar-Final.pdf

OWL-S Process Model Example – Congo:
- Congo is a business-consumer example that uses an OWL-S Process Model to describe it
- It is a fictional book selling service (i.e. Amazon)
- Two forms of the service: atomic process ExpressCongoBuy and composite process FullCongoBuy

OWL-S Process Model Example – BravoAir:
- BravoAir is an airline example that uses an OWL-S Process Model to describe it
- It is a fictional airline website service (i.e. Southwest)
- One form of the service: BravoAirProcess, which is a composite process composed of GetDesiredFlightDetails, SelectAvailableFlights, and BookFlight (also composite)