D26v0.1 WSMX Grounding

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1. Introduction

Grounding describes how WSMX handles the translation to and from WSML to other data representations at the boundary of the environment. For example, for WSMX to be able to interact with the Web Services published by Amazon, it must be able to get from the WSML representation of data required by the service to an XML representation of the data as described in the WSDL document.

2. Possible Approaches to Grounding

Two approaches to Grounding have been considered by the WSMO and WSMX working groups so far:

- XSLT at the syntactic level
- Semantic Mapping and Lowering

2.1 XSLT at the syntactic level

Translation to and from WSML-XML to the XML schema used by the Web Service

Advantages

Disadvantages

2.2 Semantic Mapping and Lowering

At design-time, an ad-hoc WSMO ontology is created to represent the XML schema used by the Web Service. Mappings are then created between the ontology used by the service provider and the ad-hoc ontology created from the WSDL document. At run-time, these mappings are executed to map to the ad-hoc ontology and then translate this to the XML representation.

Advantages

Disadvantages

3. Current Approach for WSMX

4. Related work on grounding

Grounding in OWL-S

5. Conclusions and Future Work

References

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