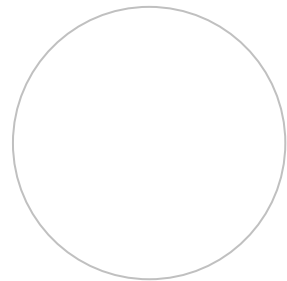
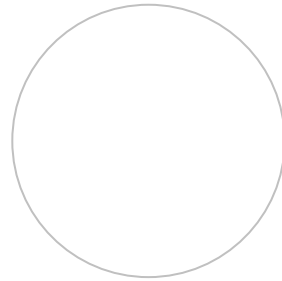


Semantic Annotation for WSDL

overview and status of the W3C working group

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- Charter
- Members
- The Spec
- Examples



- SAWSDL Working Group is **not** chartered to:
 - build a full-featured Semantic Web Services framework
 - add semantics for components that WSDL 2.0 does not define in its component model.
 - discuss expression of Web services constraints and capabilities, including precondition and effect.
 - define a new semantic data model or format for externally defined semantics.
- What remains?
 - Definition of how to link from WSDL to some semantic annotations!

- DERI Galway (2)
- DERI Innsbruck (2)
- Fortent (1 + observer)
- IBM Corporation (2)
- ILOG, S.A. (2)
- Open University (2)
- Telecom Italia (2)
- inactive:
 - Chinese Academy of Sciences (1)
 - MINDLAB at UMD (1)
 - University of Southampton (2)

- **Specification**

- How to reference a „semantic model“ from WSDL components:
 - Interface (group of operations)
 - Operation, Fault
 - Types (XSD)
- How to reference a mapping definition between XML message and its ontological representation and vice versa
- RDF Mapping and WSDL1.1 Support

- **Usage Guide**

- Illustrates possible usage of SAWSDL for
 - Matching
 - Composition
 - Execution
 - [...]

```
[...]  
<xs:simpleType name="UPCode"  
sawSDL:modelReference="&RetailOntology;#UPCCode">  
  <xs:restriction base="xs:string"/>  
</xs:simpleType>  
[...]
```

```
<owl:Class rdf:ID="UPCCode">  
  <rdfs:subClassOf rdf:resource="#ProductCode" /> </owl:Class>  
<owl:Class rdf:ID="ProductCode">  
  <rdfs:subClassOf rdf:resource="#Identifier" /> </owl:Class>
```

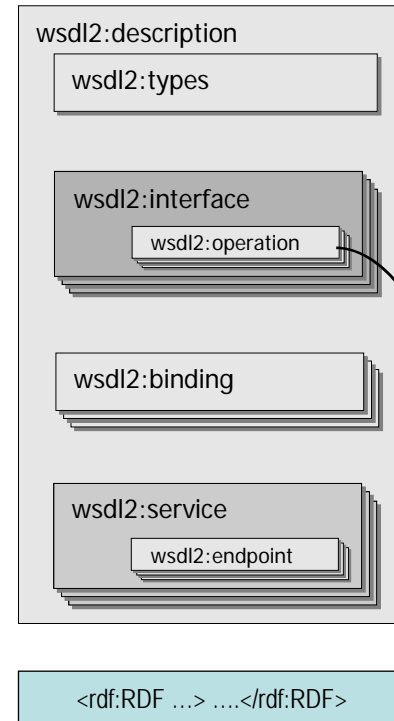
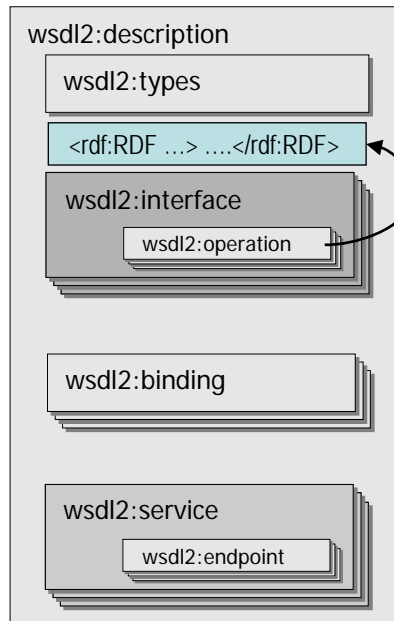
- Lowering

- some agent has ontological data and wants to invoke given web service (loweringSchemaMapping)
 - URI refers to some mapping file, e.g. custom format that contains SPARQL Query + XSLT transformation

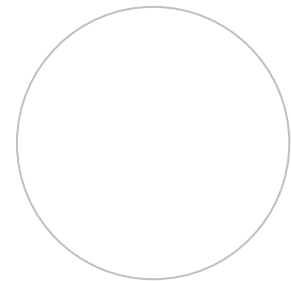
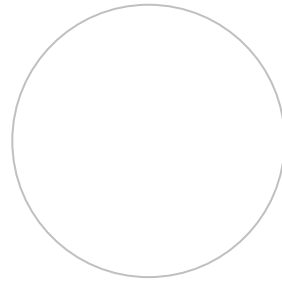
- Lifting

- some agent wants to be able to understand the response of a particular service (liftingSchemaMapping)
 - URI refers to some mapping file, e.g. XSLT or XQuery

How can some agent obtain semantic data?



- Grounding for semantic clients (model reference + schema mappings)
- Discovery of WSMO description (model reference)
- Ontology-based mediation for syntactic clients



- Working group home page
<http://www.w3.org/2002/ws/sawSDL/>
- Working draft:
 - Spec: <http://www.w3.org/TR/sawSDL/>
- Editors copies:
 - Spec: <http://www.w3.org/2002/ws/sawSDL/spec/SAWSDL.html>
 - Usage Guide: <http://www.w3.org/2002/ws/sawSDL/spec/examples/>