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SAWSDL
Status and relation to WSMO

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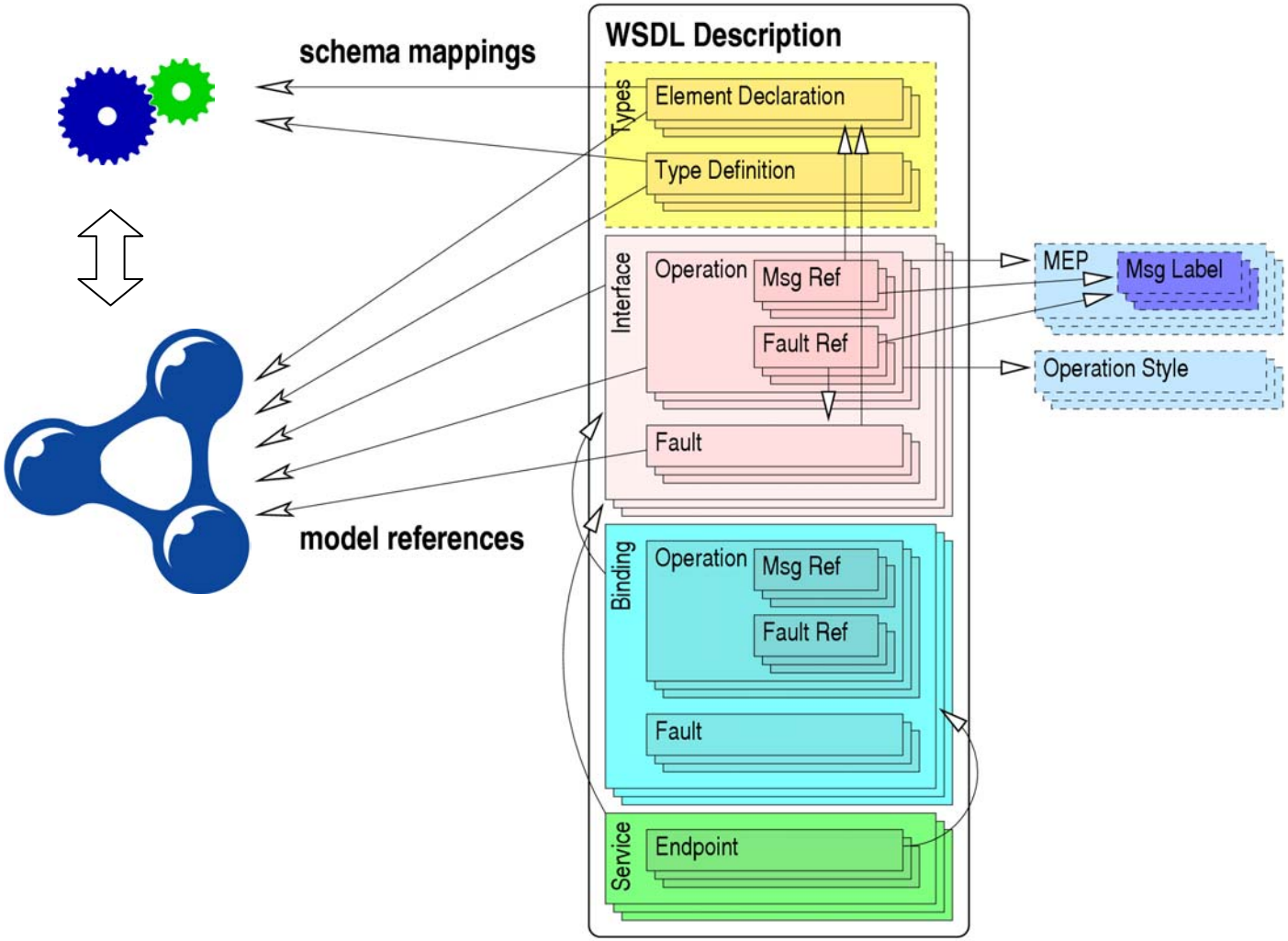
making semantics **real.**

Overview

- Semantic Annotations for WSDL and XML Schema

- SAWSDL annotations
- Brief history and status info
- SAWSDL in WSMO
  - WSMO grounding
  - Splitting up WSMO?

SAWSDL In a Picture



SAWSDL Annotations

- modelReference
  - points to a concept in a semantic model
- loweringSchemaMapping
- liftingSchemaMapping
  - point to data mapping transformation for data grounding

SAWSDL Model Reference

- On XML Schema types, elements and attributes
  - To indicate correspondence between XML data and the semantic model
- On WSDL Interface
  - Categorization
- On WSDL Operation
  - Closer categorization, indicating functionality
- On WSDL Fault
  - Meaning of the fault

SAWSDL Schema Mappings

- *Lifting* – from XML to semantic data
- *Lowering* – from semantic data to XML

- On XML Schema global elements and types
  - Mappings apply to whole messages

Minor SAWSDL Features

- attrExtensions element
  - For annotating where attributes are not allowed
- Embedding semantic models
  - E.g. OWL in RDF/XML inside WSDL
- External annotations
  - Not directly supported by SAWSDL
  - Two suggestions:
    - XSLT pre-processing
    - RDF form of the annotations, with component URIs

Brief History and Status

- WSDL-S created by IBM/LSDIS
  - WSDL-S only point of agreement in SWS workshop
  - Had preconds/effects, dropped due to contention
- W3C started SAWSDL WG
  - SAWSDL now called “Semantic Annotations for WSDL and XML Schema” to get better visibility
  - Members: DERI Ibk, Gwy, IBM, UGA/Wright, ILOG, OpenU, TelecomItalia
- Status: W3C Candidate Recommendation
  - Gathering implementation reports, feedback
  - Should be sucessfully finished in April, Rec in May

SAWSDL In WSMO

- Current grounding has links from WSMO to WSDL
- SAWSDL can reverse the direction
  - For us, functionality doesn't change
  - For others, it's easier to understand the WSDL with attached WSMO things
- WSMO can be split into smaller parts to be attached to various WSDL components

SAWSDL WSMO Grounding

- modelReference on elements or types
  - Pointing to in/out/shared choreography concepts
- modelReference on WSDL service
  - Pointing to WSMO webService
  - To provide endpoint and binding information
  - Btw, outside of SAWSDL scope (but possible)
- Any lifting and lowering schema mappings
  - Currently unhandled in WSMO

- To be specified by the end of March in D24.2

Splitting up WSMO? (1)

- modelReference from WSDL interface to capability
  - "Abstract" capability
  - mRef from service to concrete capability
- modelReference from interface to choreography
  - Or multiple choreographies
  - mRef from service to concrete choreography(ies)
- modelReference from operation to capability?
  - Operation preconds/efects?
  - Instead of choreography

Splitting up WSMO? (2)

- Only splits WSMO webService into capability and choreography
  - Orchestration ignored in SAWSDL
- Need distinction between abstract and concrete capabilities and choreographies

Next Steps

1. D24.2 – add overview of SAWSDL, WSMO grounding using SAWSDL

2. The coarse-grained split-up of WSMO to SAWSDL-friendly parts

3. Proposing pieces of that for standardization?
   - Preconds/effects should be accepted easily, but on operation?
   - Choreography, interface capability may be harder

Thanks

- Questions?

- Because I need slide no. 14