

*Advanced Topics in the
Semantic Web:
Semantic Services for Business
Process Management*
- Overview -

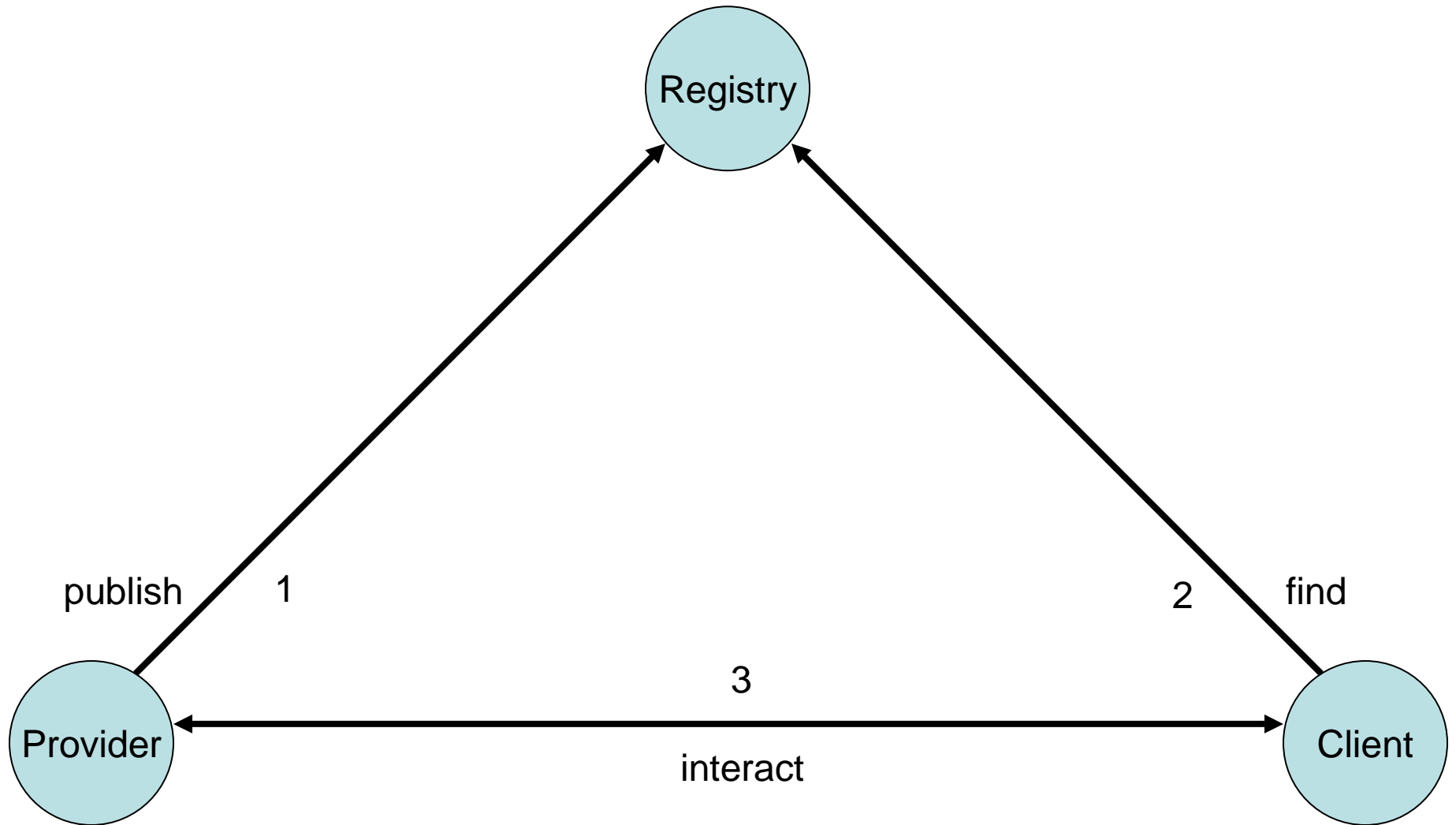
[Harold Boley](#)

Semantic Web Laboratory
NRC-IIT and UNB-CS
Fredericton, NB, Canada

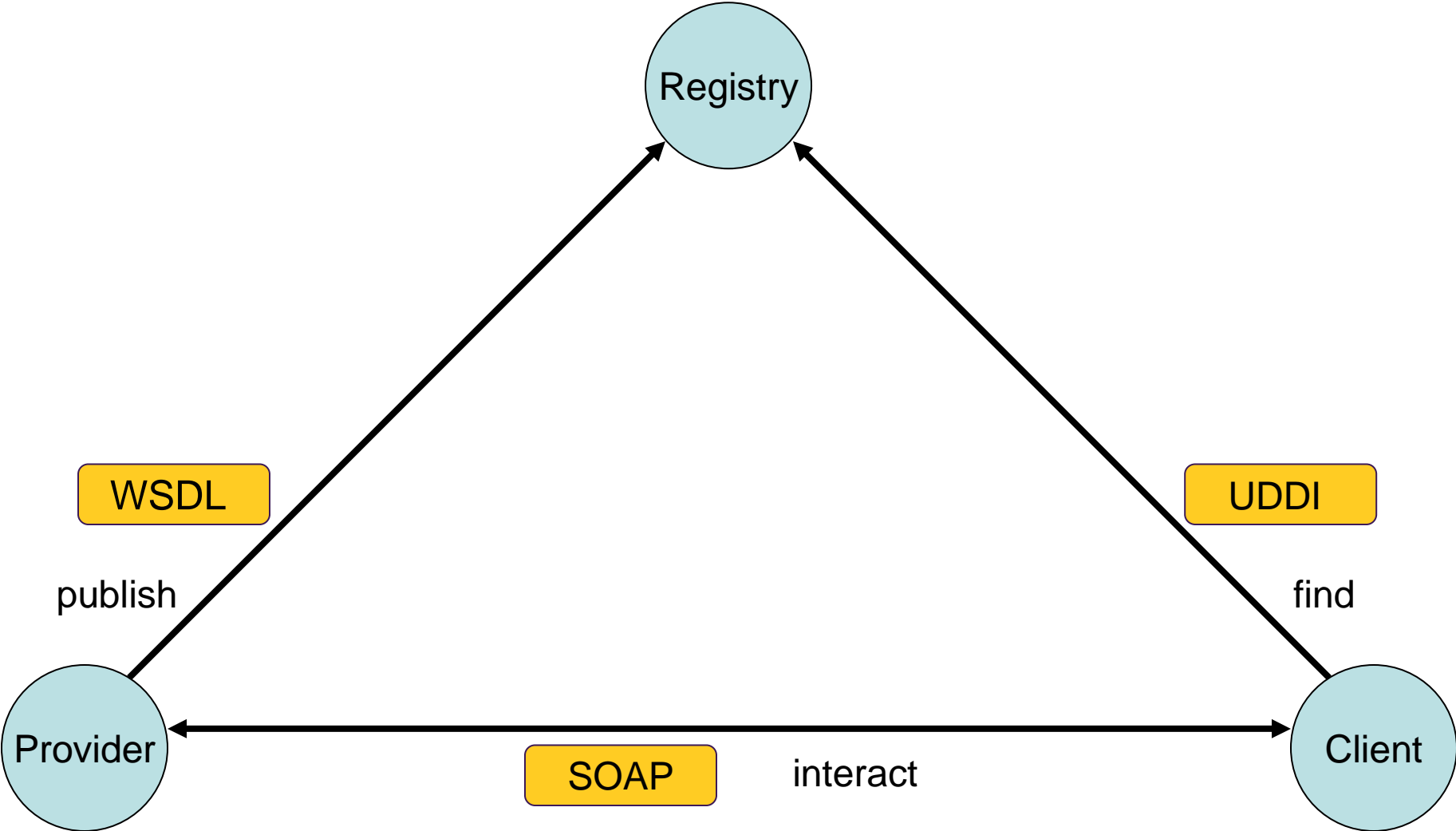
Course at the University of Vienna

11-15 June 2007

Web Service Triangle: Roles



Web Service Triangle: Roles and Core Languages



Web Service Stack: Layers

Business
Processes

Description

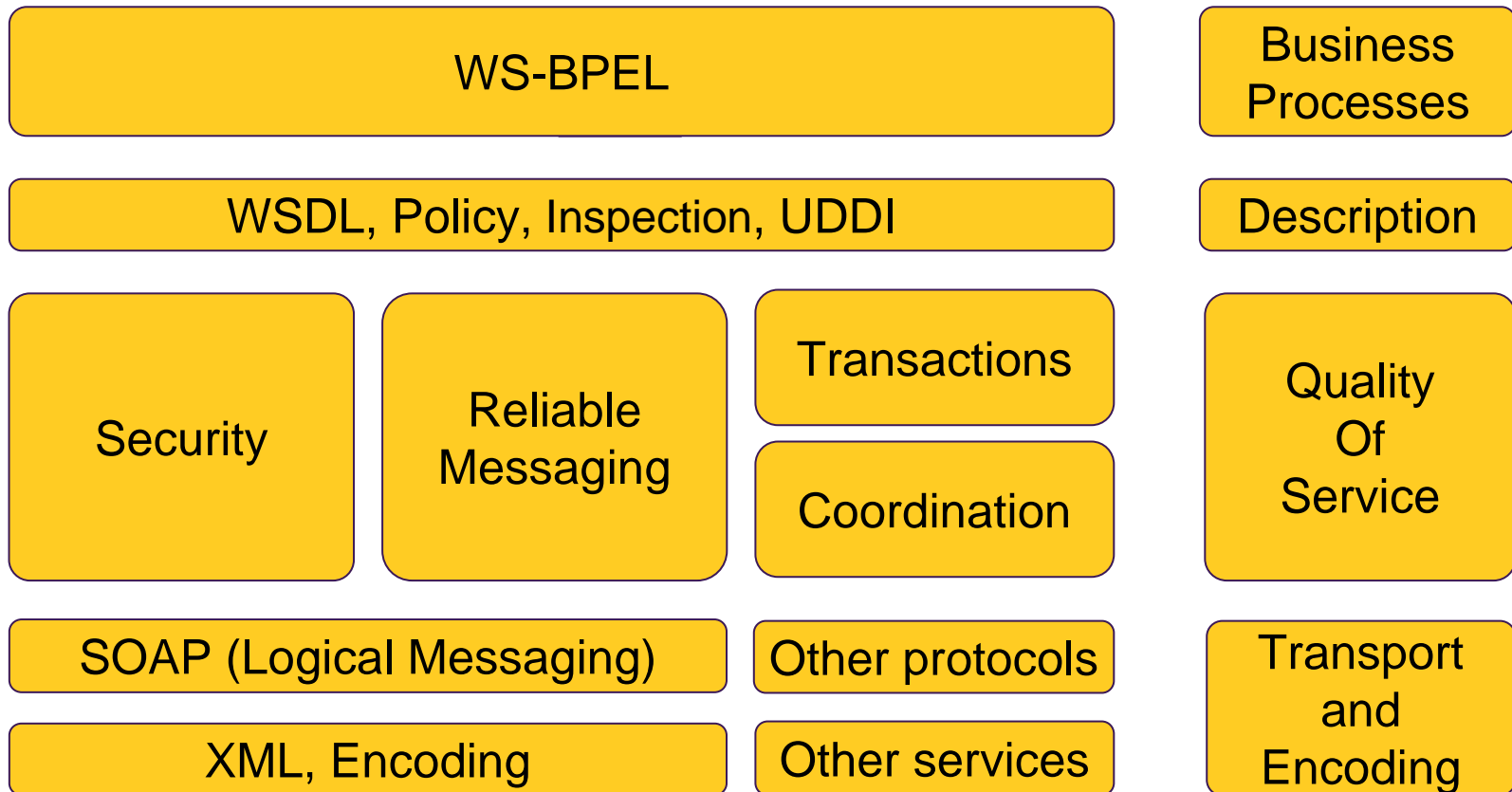
Quality
Of
Service

Transport
and
Encoding

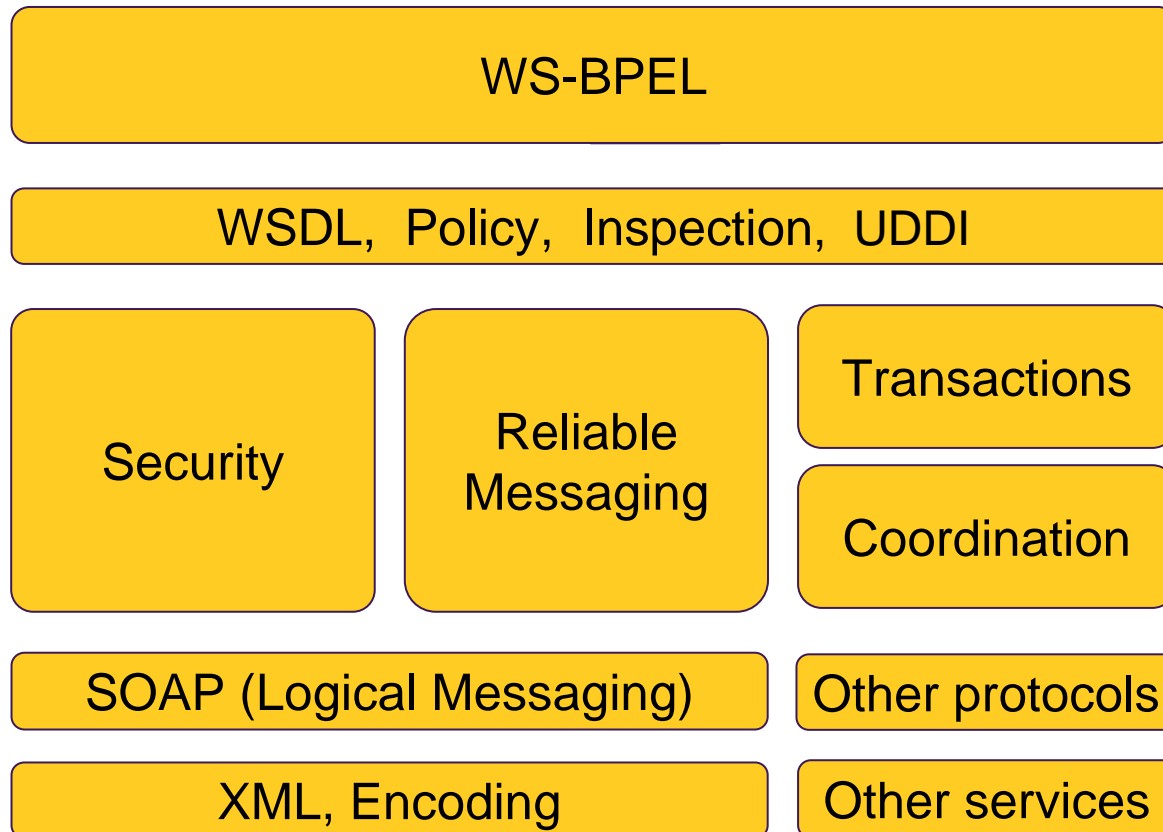
Web Service Stack: Language Standards for Layers

Adapted from OASIS Open Standards Day Talk by Dieter König, IBM:
Web Services Business Process Execution Language (WS-BPEL)

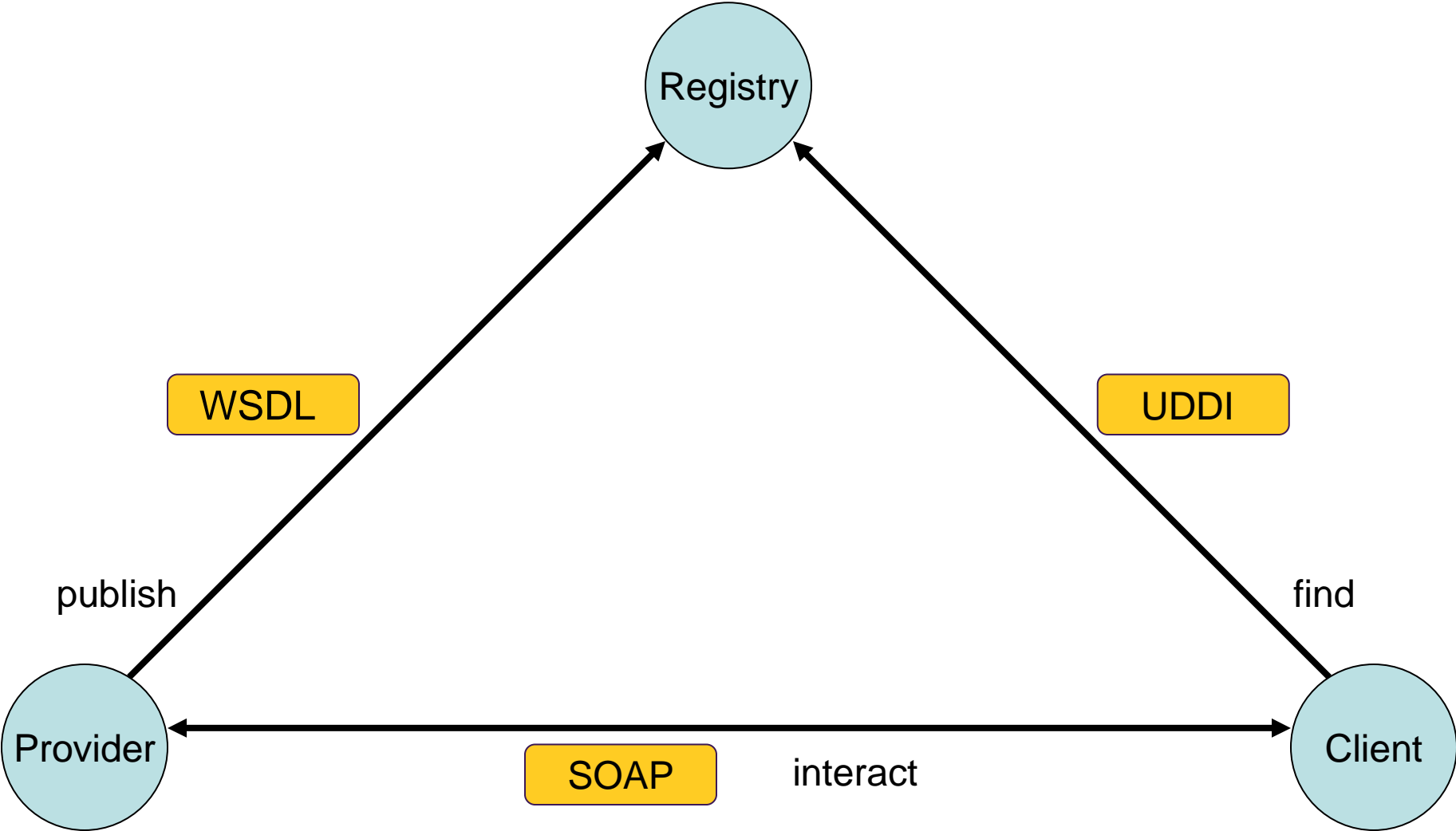
www.oasis-open.org/committees/download.php/13044/Xtech%20bpel%20presentation%20May%202024%202005.ppt



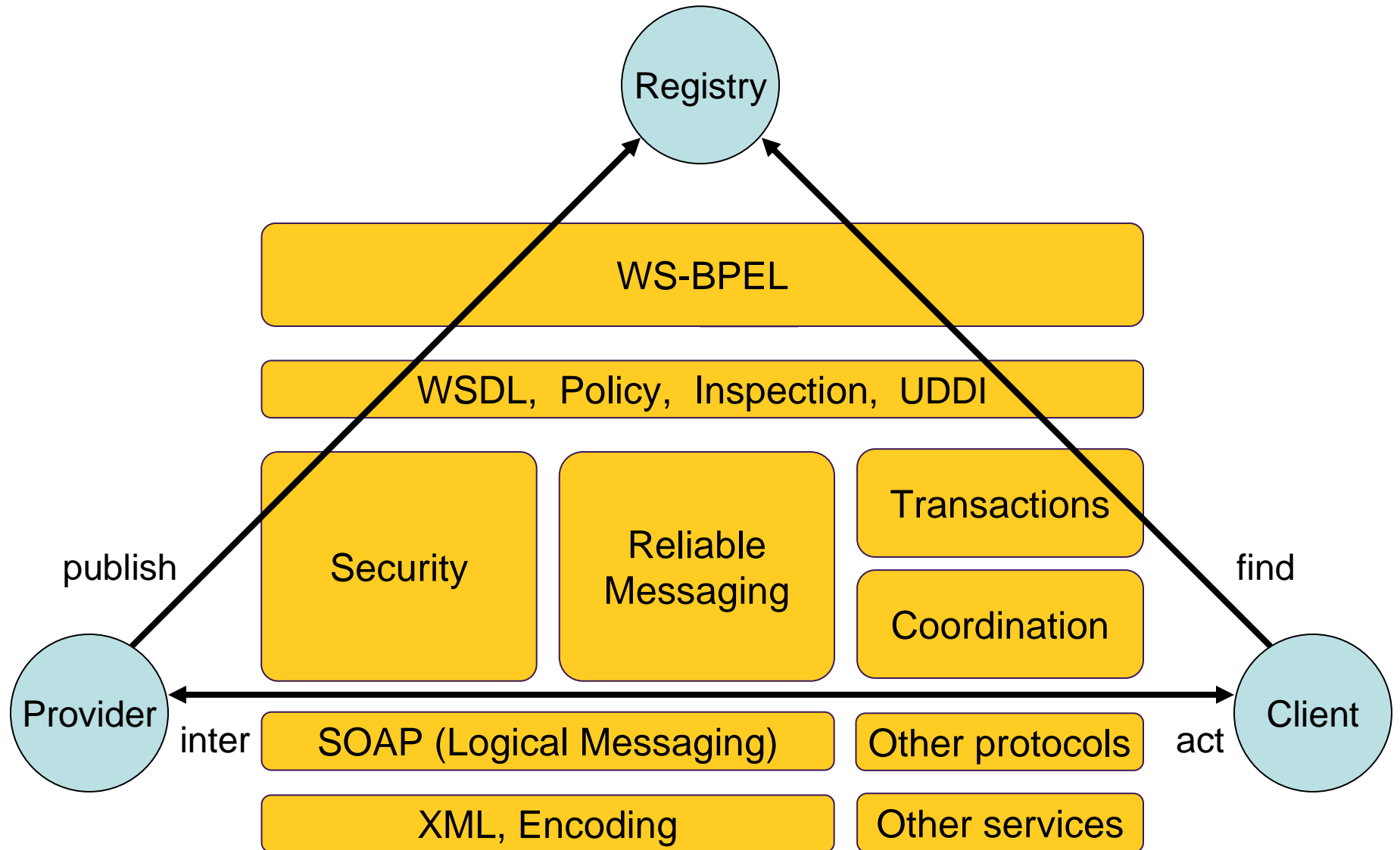
Web Service Stack: Languages



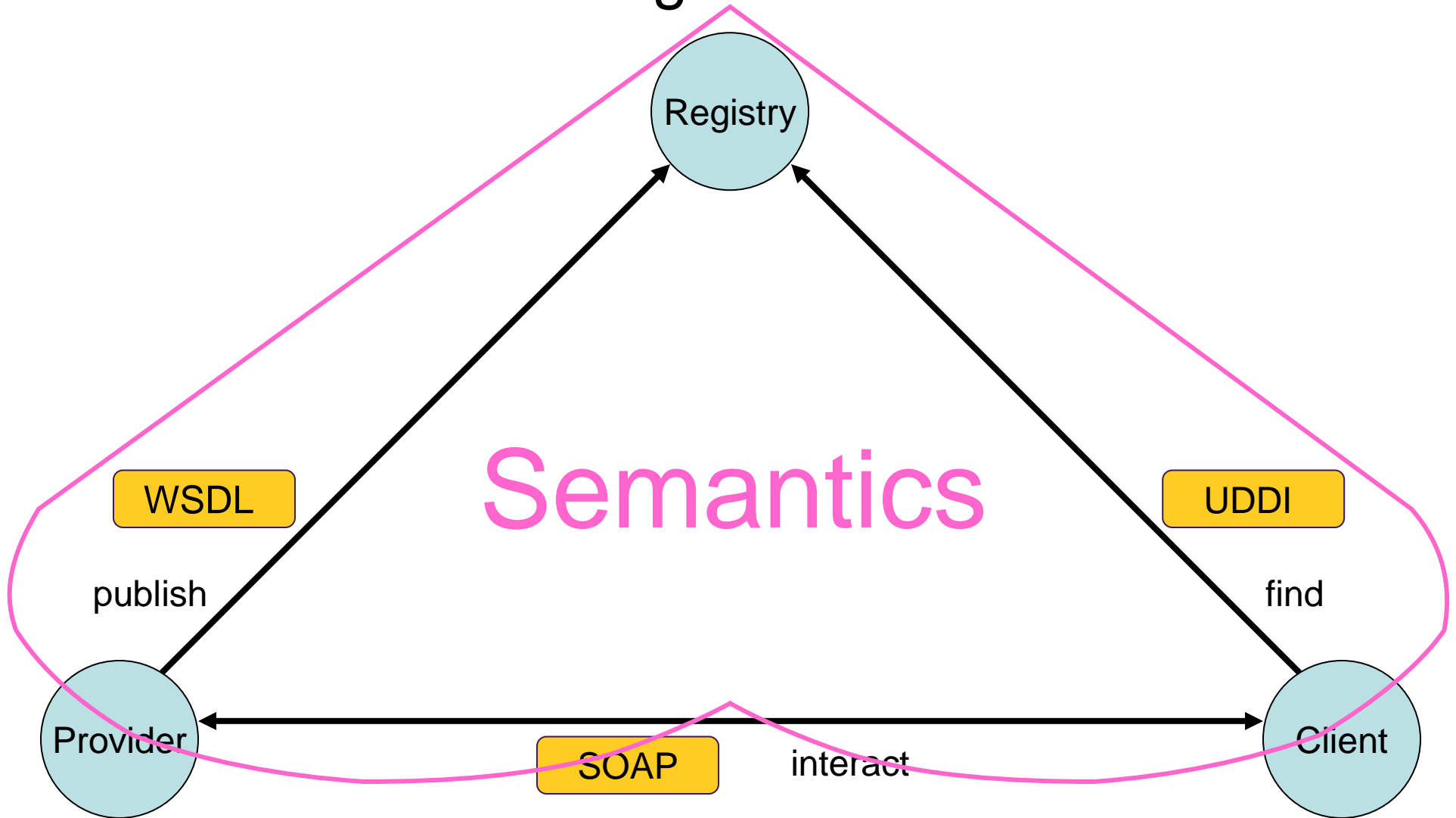
Web Service Triangle: Roles and Core Languages



Web Services: Roles and Languages

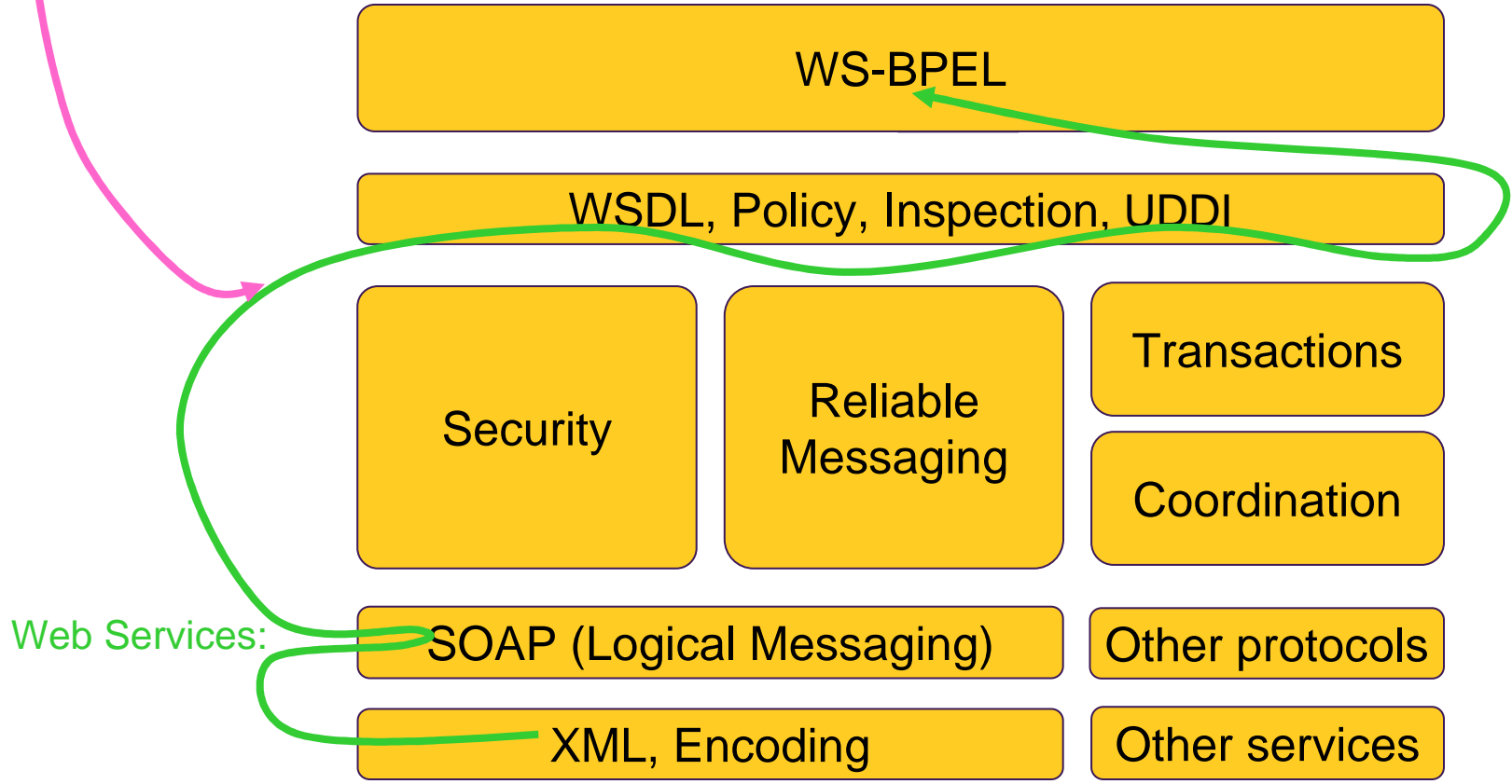


Web Service Triangle: Need for Semantics



Course: Towards Semantic Web Services

Semantic Web:
RDF, OWL
RIF, RuleML



Course: Day 1

- **Overview: *These slides***
- Semantic Web Techniques (*parts on XML and on XML Namespaces*)
<http://www.cs.unb.ca/~bspencer/cs6795swt/cs6795swt.ppt>
- Simple Object Access Protocol (SOAP)
http://colab.cim3.net/file/work/SOACoP/2007_05_0102/Tutorial2/08-SOAP.ppt
- **The Semantic Web in 10 Passages** (*parts on taxonomies' and on rules*)
<http://www.dfki.uni-kl.de/~boley/sw10pass/sw10pass-en.htm>
- The RuleML Family of Web Rule Languages
<http://www.ruleml.org/talks/RuleML-Family-PPSWR06-talk-up.ppt>

Course: Day 2

- WSDL 2.0
www.ict.csiro.au/staff/Paul.Brebner/WSDL2.ppt
- **Semantic Annotation for WSDL**
<http://knoesis.wright.edu/library/presentations/SAWSDL-STC07-May21.ppt>
- **Practicing Business Rules in RuleML
(Controlled English or XML or Prolog-like Syntax)**
<http://www.ruleml.org/0.91/exa/Datalog/discount.ruleml>

Course: Day 3

- UDDI:
http://colab.cim3.net/file/work/SOACoP/2007_05_0102/Tutorial2/09-UDDI.ppt
- **Semantic Web Services**
<http://icec06.net/WorkshopsAndTutorials/SOATutorial/ICEC06-Tutorial-Semantic-Web-Services.pdf>
 - **Web++**
 - **RDF**
 - **Description Logic**
 - **OWL**
 - **OWL-S**
 - **WSMO**

Course: Day 4

- **Practicing Business Ontologies in OWL Description Logic (Visual Syntax only)**
- **Web Services Business Process Execution Language (WS-BPEL)**
www.oasis-open.org/committees/download.php/13044/Xtech%20bpel%20presentation%20May%2024%202005.ppt
- **Service-Oriented Processes: An Introduction to BPEL**
<http://dme.uma.pt/jcardoso/Books/IDEA-SWTTA/Slides/Chap-08-Service-Oriented%20Processes%20An%20Introduction%20to%20BPEL.ppt>
- **Practicing XML Data Specification (EBNF or DTD or XML Schema Syntax)**

Course: Day 5

- Recap / Question & Answer Session
- **Practicing OWL ABox and RDF Queries**
- Congo.com Example: Online Bookstore Web Service in OWL-S
<http://www.sitepoint.com/article/semantic-web-services>
- Reaction RuleML: Active Rules for Semantic Web Services
<http://2006.ruleml.org/slides/reaction-ruleml.pdf>
- Rule Responder: Distributed Querying over Enterprise Service Bus (with Online Demo)
<http://responder.ruleml.org>