TAVERNA 3.0
bioswr-perspective

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Cartoons history of Web Services

For any complex problem there is a simple solution that doesn't work...

- In 90s distributed computing was HARD (CORBA, DCOM)
- Sun Microsystems made a lot of efforts to make it simple... for Java (RMI)
- Failed to compete with Java, Microsoft came with a “simple” solution – SOAP.
- “SOAP is just another protocol along RMI, CORBA, etc. that we are going to support in Java” Sun Microsystems.
• Extremely simple XML document tree model based on provided XML Schema(s).
• Initialization with a valid (consistent with XML Schema) XML Document.
• Serialization to the XML Document.
• XPath for the model nodes.
• Java Tree Model for manual XML document editing.
**Semantic Web Registry for Bioinformatics**

- **Simple “one-page” AJAX-based Web interface**
- **Simple REST-based API for Web services management**
- **SPARQL protocol for Web services querying and annotation**
- **Based on W3C WSDL 2.0 ontology for Web services**
- **Supports WSDL 1.1 and WSDL 2.0 with automatic conversion**
- **Automatic WADL generation for WSDL HTTP bindings (RESTful services)**
- **BioMoby services as semantically enriched (myGrid ontology) WSDL 2.0 descriptions**
- **EDAM ontology as a source of SAWSDL annotations**
TAVERNA 3.0 BioSWR perspective

http://edamontology.org/operation_0352
This includes tools based on the Smith-Waterman algorithm or FASTA.
String update = "PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> " +
  "PREFIX sawsdl: <http://www.w3.org/ns/sawsdl#> "
  "INSERT DATA " +
  "{<urn:lsid:inb.bsc.es#wsdl.interface(getEntryFromPDB)> " +
  "sawsdl:modelReference 'http://example.com' }");

URI uri = URI.create("http://inb.bsc.es/BioSWR/rest/sparql/");
HttpURLConnection connection = (HttpURLConnection) uri.toURL().openConnection();

String credentials = "name:password";
connection.setRequestProperty("Authorization",
  "Basic " + DatatypeConverter.printBase64Binary(credentials.getBytes()));
connection.setRequestMethod("POST");
connection.addRequestProperty("Content-Type", "application/sparql-update");
connection.setDoOutput(true);
connection.getOutputStream().write(update.getBytes());