OntologySummit2009: Toward Ontology-based Standards - A Synthesis

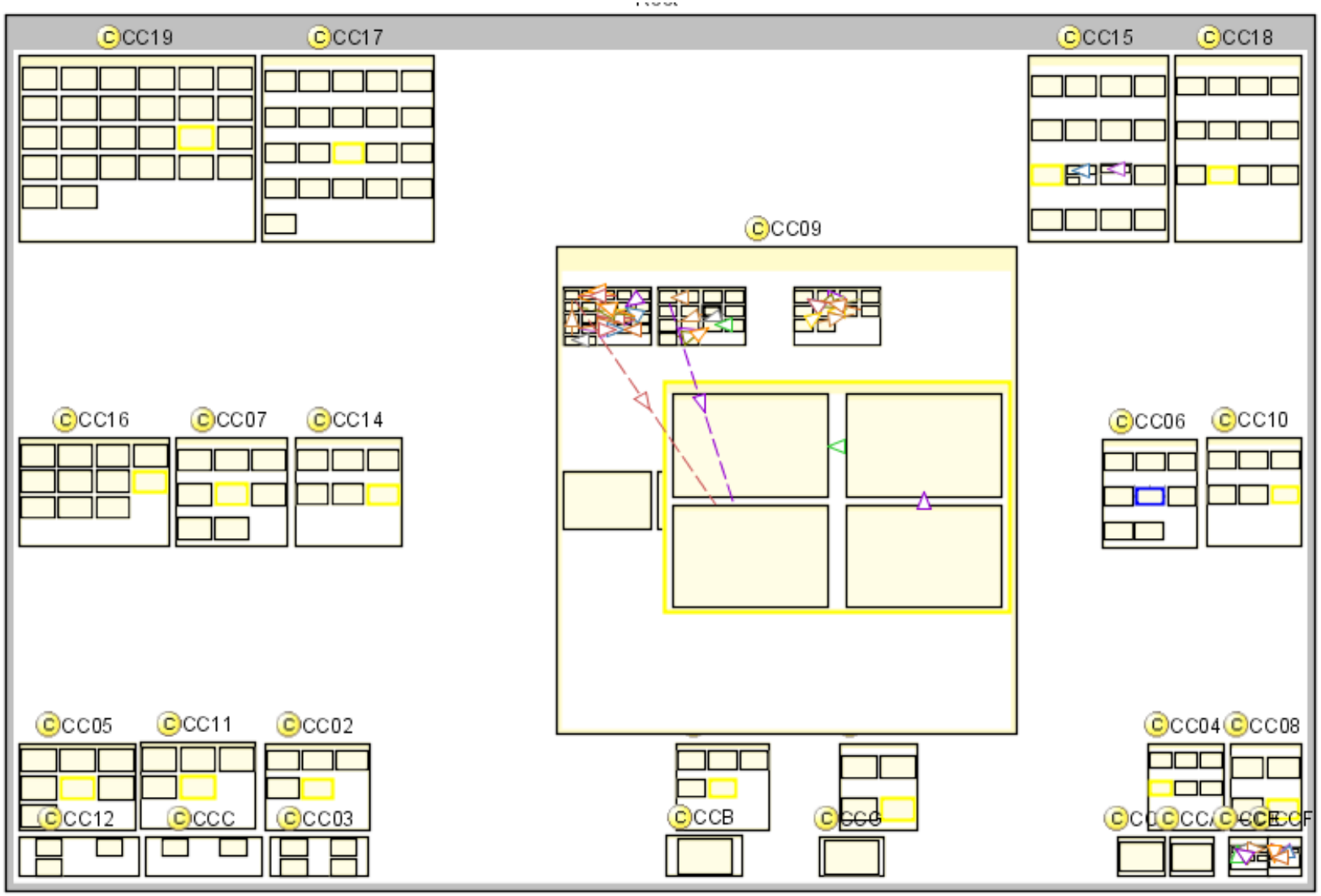
EADS inputs based on Inputs from research activities performed by EADS and LIRIS
Presented by Nicolas Figay, EADS IW - Parisa Ghodous LIRIS

Idea: STEP APs formalization in OWL

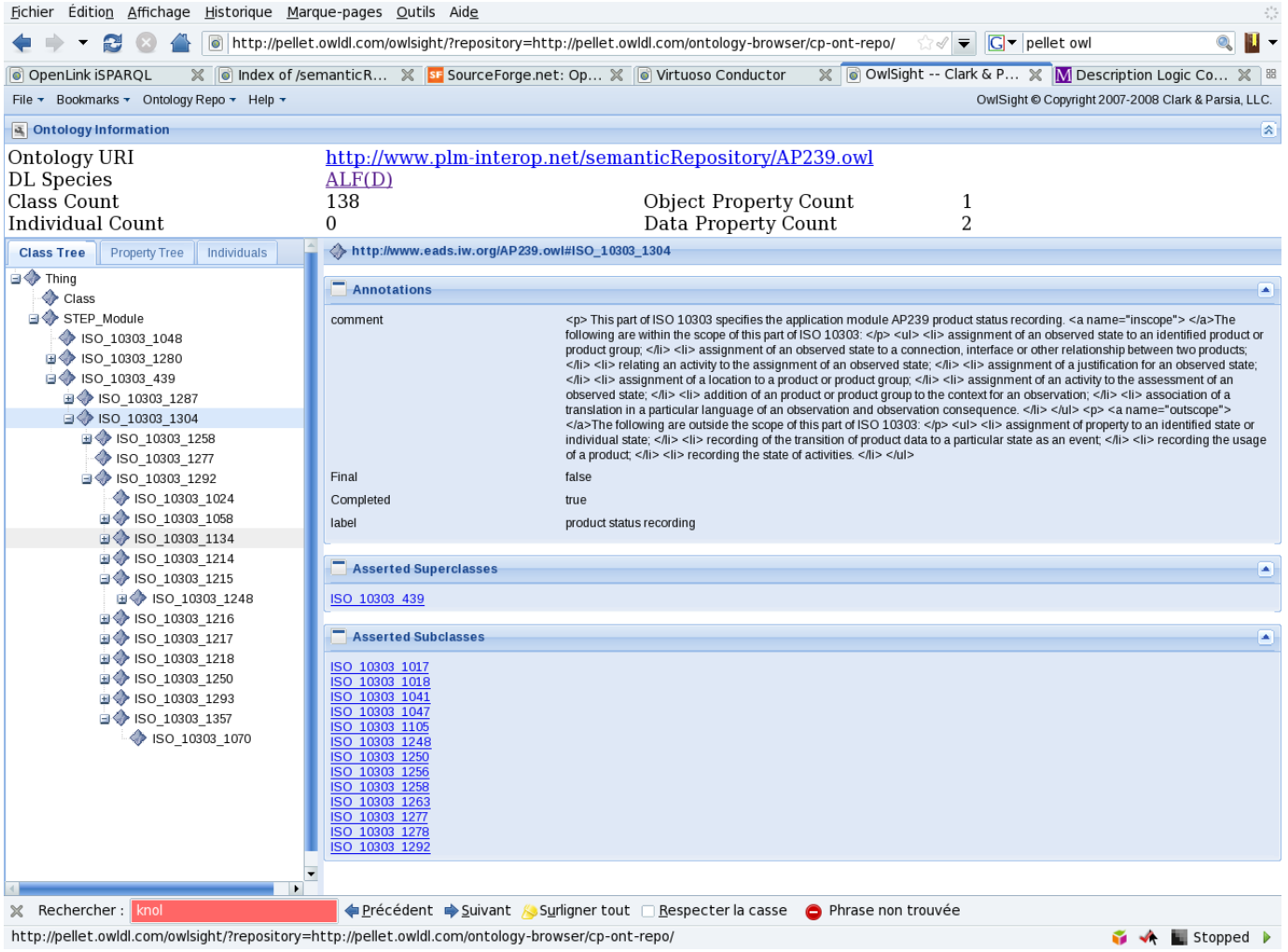
- Including
  - ARM
  - AIM
  - ARM AIM mapping
  - UoF
  - Conformance Classes
  - Modules

- For a semantic Repository
  - Useable with reasoning engines (e.g. with OWLSight)
  - Useable with SparQL engines (e.g. Virtuoso)

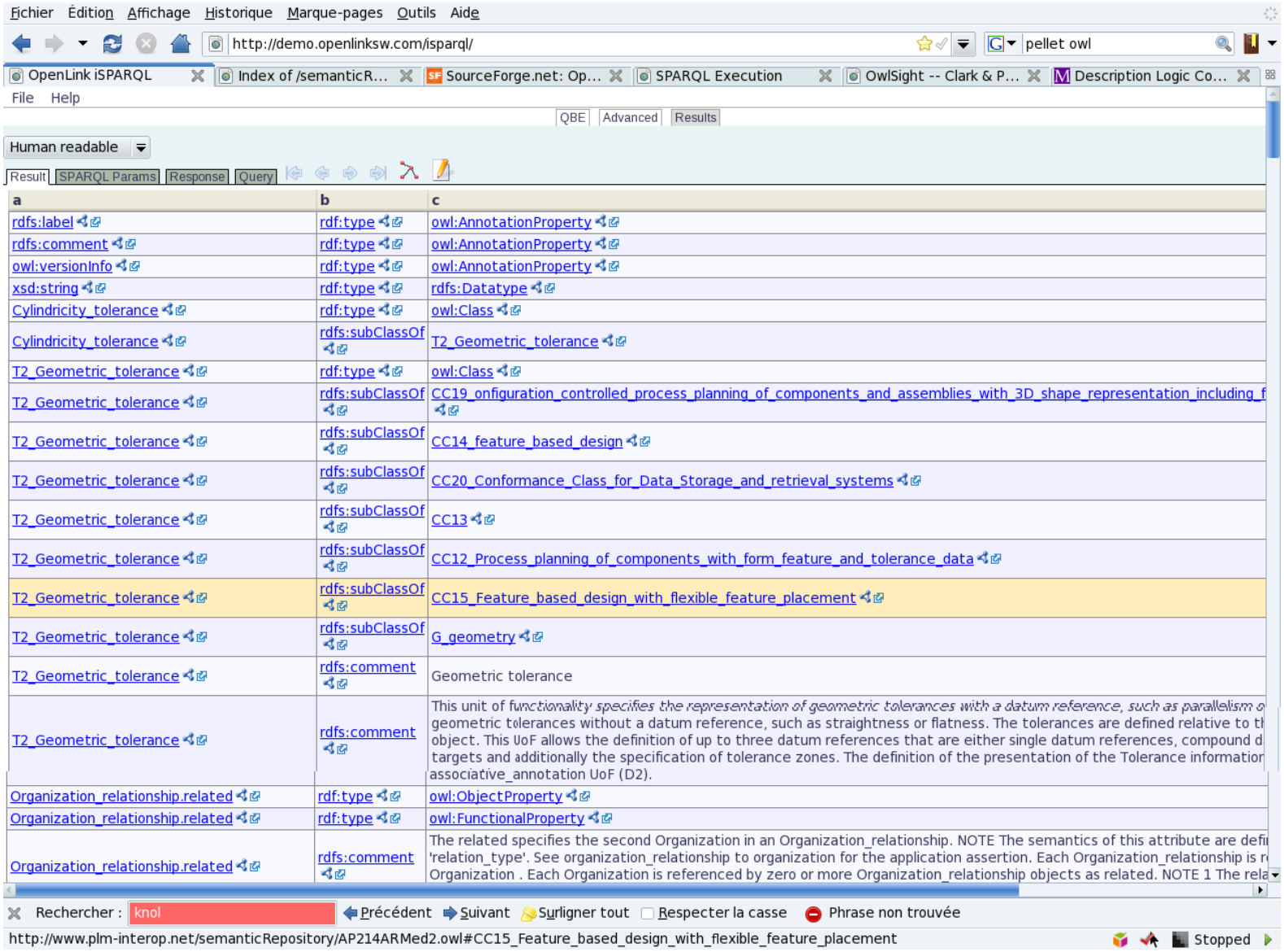
Example of AP233 PAS formalization with CC and UoF



Semantic Repository
Usage of OWLSight reasoning engine with AP239 modules



Semantic Repository
SparQL querying with Virtuoso



a	b	c
rdfs:label	rdf:type	owl:AnnotationProperty
rdfs:comment	rdf:type	owl:AnnotationProperty
owl:versionInfo	rdf:type	owl:AnnotationProperty
xsd:string	rdf:type	rdfs:Datatype
Cylindricity_tolerance	rdf:type	owl:Class
Cylindricity_tolerance	rdfs:subClassOf	T2_Geometric_tolerance
T2_Geometric_tolerance	rdf:type	owl:Class
T2_Geometric_tolerance	rdfs:subClassOf	CC19_onfiguration_controlled_process_planning_of_components_and_assemblies_with_3D_shape_representation_including_f
T2_Geometric_tolerance	rdfs:subClassOf	CC14_feature_based_design
T2_Geometric_tolerance	rdfs:subClassOf	CC20_Conformance_Class_for_Data_Storage_and_retrieval_systems
T2_Geometric_tolerance	rdfs:subClassOf	CC13
T2_Geometric_tolerance	rdfs:subClassOf	CC12_Process_planning_of_components_with_form_feature_and_tolerance_data
T2_Geometric_tolerance	rdfs:subClassOf	CC15_Feature_based_design_with_flexible_feature_placement
T2_Geometric_tolerance	rdfs:subClassOf	G_geometry
T2_Geometric_tolerance	rdfs:comment	Geometric tolerance
T2_Geometric_tolerance	rdfs:comment	This unit of functionality specifies the representation of geometric tolerances with a datum reference, such as parallelism o geometric tolerances without a datum reference, such as straightness or flatness. The tolerances are defined relative to th object. This UoF allows the definition of up to three datum references that are either single datum references, compound d targets and additionally the specification of tolerance zones. The definition of the presentation of the Tolerance information associative_annotation UoF (D2).
Organization_relationship.related	rdf:type	owl:ObjectProperty
Organization_relationship.related	rdf:type	owl:FunctionalProperty
Organization_relationship.related	rdfs:comment	The related specifies the second Organization in an Organization_relationship. NOTE The semantics of this attribute are defi 'relation_type'. See organization_relationship to organization for the application assertion. Each Organization_relationship is r Organization . Each Organization is referenced by zero or more Organization_relationship objects as related. NOTE 1 The rela