An Ontology for the Expression of Intellectual Property Entities and Relations

Víctor Rodríguez

Marc Gauvin, Jaime Delgado

DMAG

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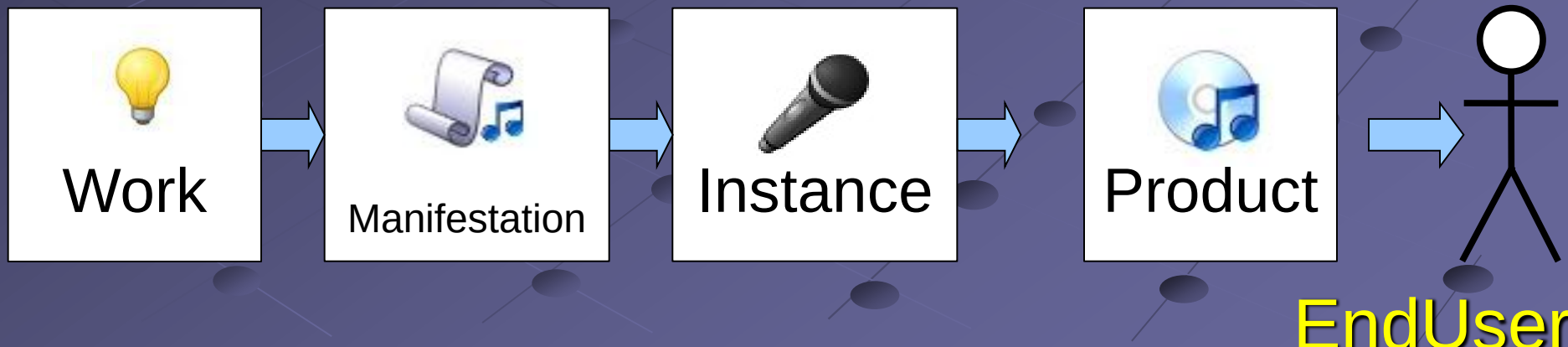
Intellectual Property Value Chain

Creator Instantiator Producer Distributor

CreateWork MakeInstance MakeProduct Distribute

MakeManifestation



EndUser

Computer Ontologies

- “An Ontology is an explicit specification of a conceptualization” (Gruber).
- (‘Οντος / λογία).
  - “To be” with attributive meaning
    - (Theory of objects and their relations)
  - “To be” with existence meaning
    - (Account of existing individuals)
- OWL (Ontology Web Language) is the standard promoted by W3C

What is a Computer Ontology (2)?

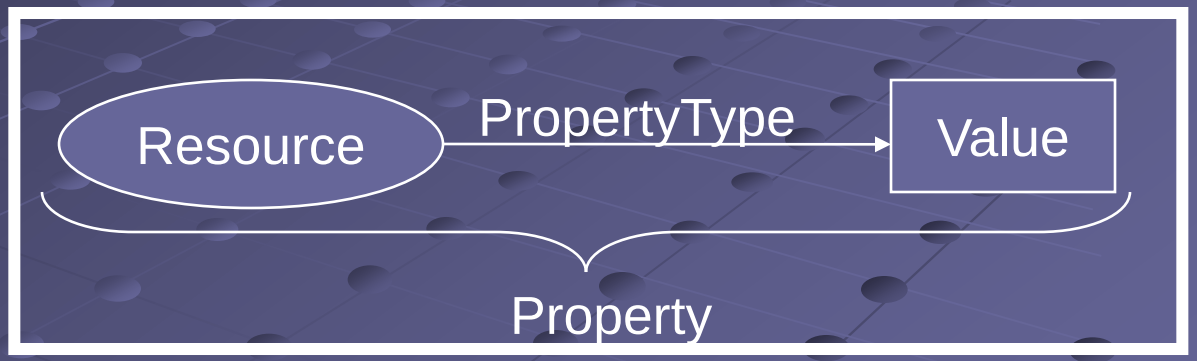
An **Ontology:** Data model, representation of knowledge, allowing to reason about the objects in that domain and the relations between them.

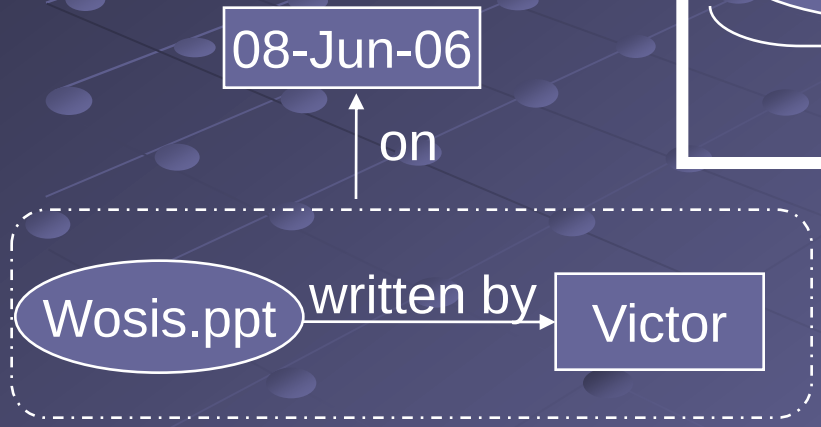
CONCEPTS:

- **Classes**: sets, collections, or types of objects. *E.g. "Work"*
- **Attributes**: properties, features, characteristics, or parameters that objects can have and share. *E.g. "Work" has a title*
- **Relations**: ways that objects can be related to one another. *E.g. "Adaptation **derivesFrom** Work"*
- **Individuals**: the ground level objects. *E.g. "Les miserables"*

RDF Data Model

- OWL derives from RDF





Resource	**has property**	**value**
Wosis.ppt	written-by	Victor

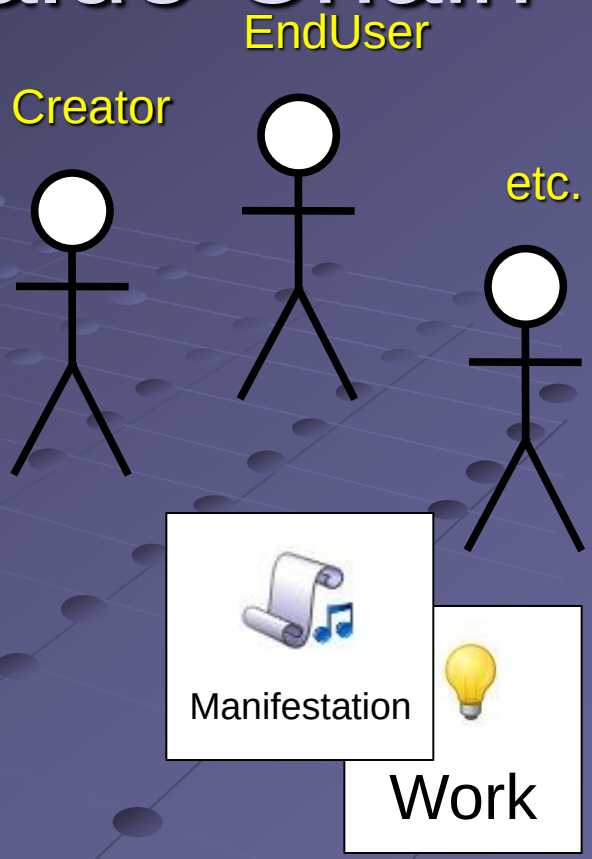
Known as *triples* or *tuples*

Ontology of the IP Value Chain

Roles

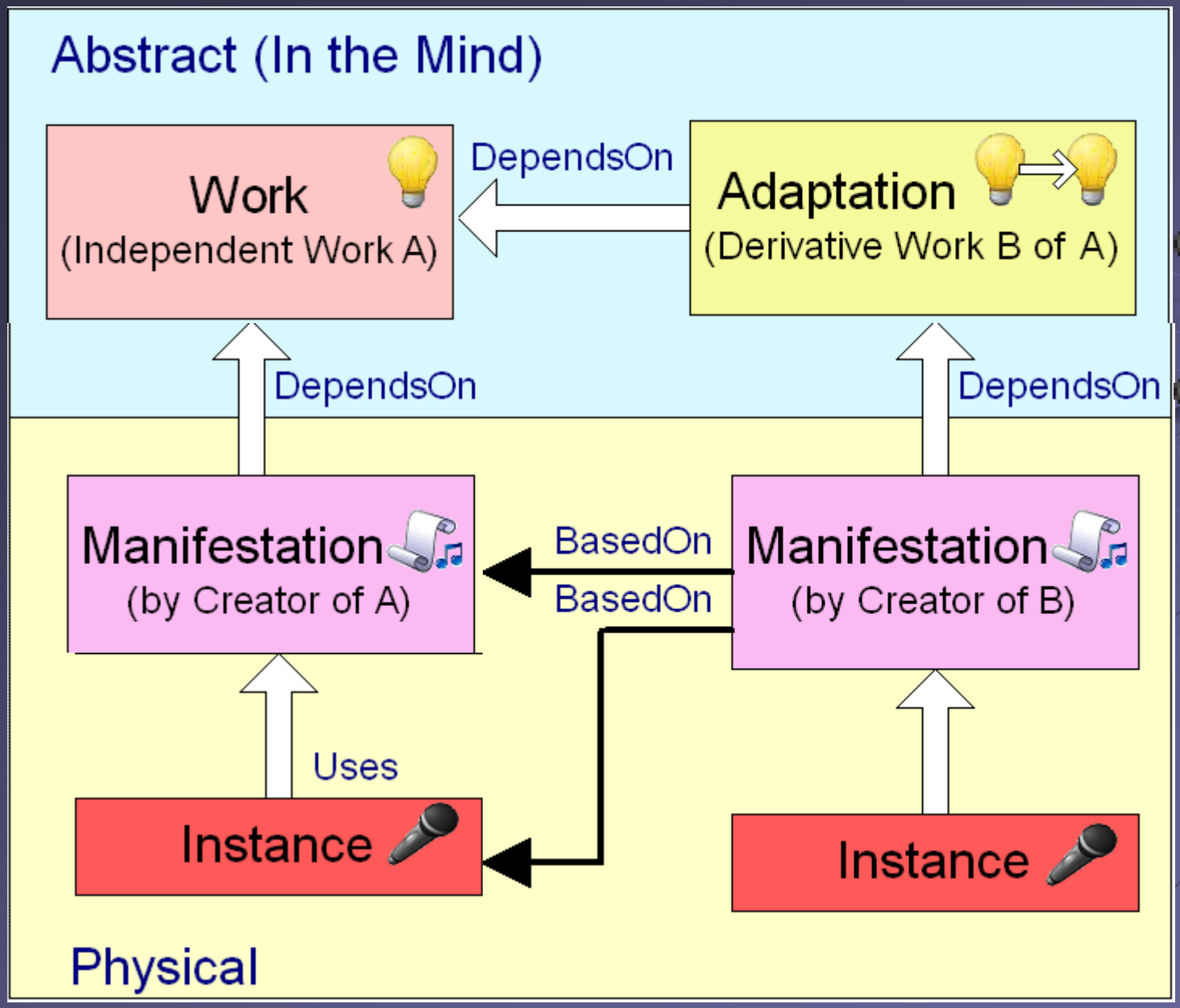
IP Objects

Actions



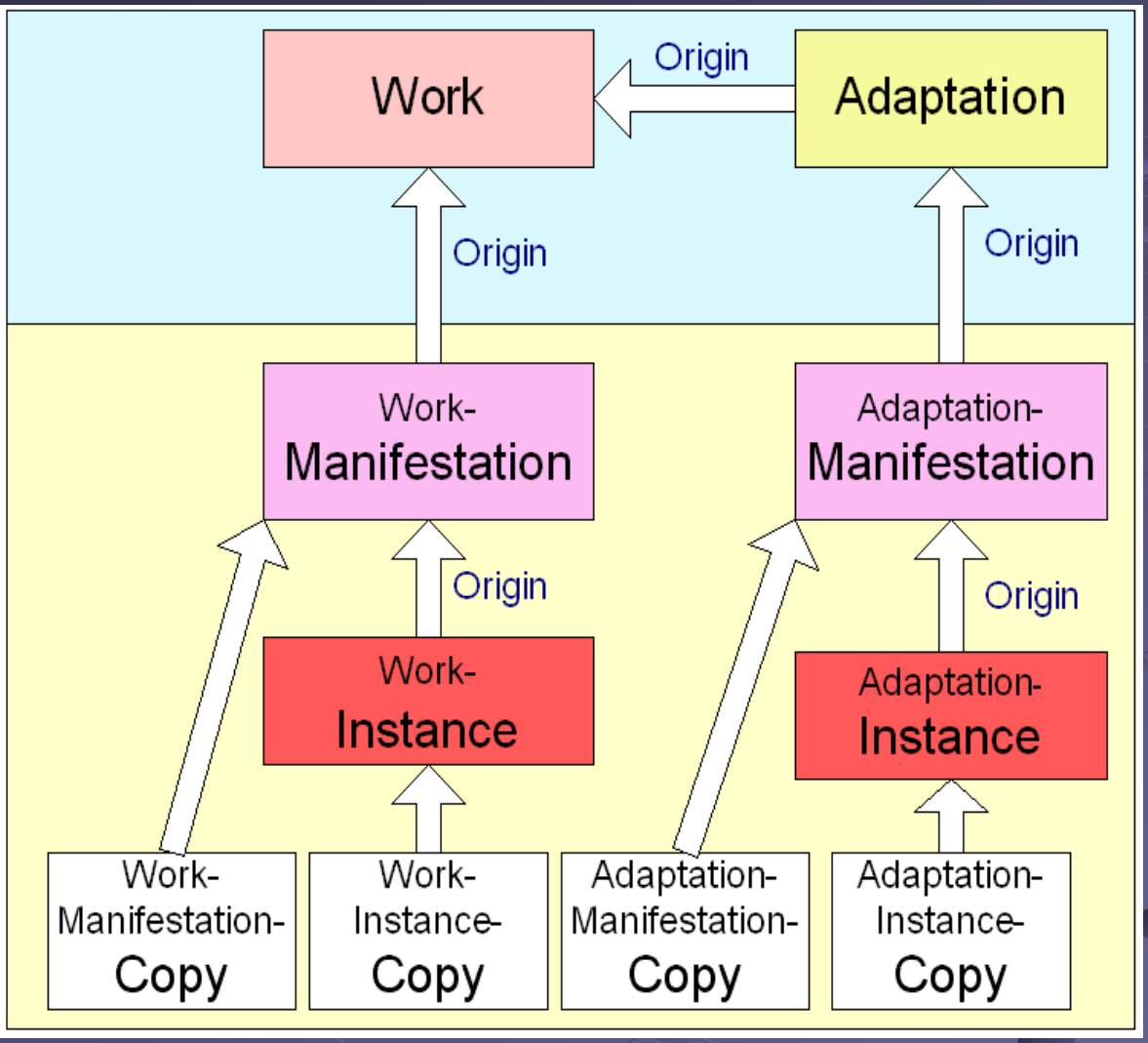
CreateWork
Distribute
MakeProduct

IP Entities (1)



- "Blocks" ➔
  - Classes
- "Arrows" ➔
  - Relations

IP Entities (2)



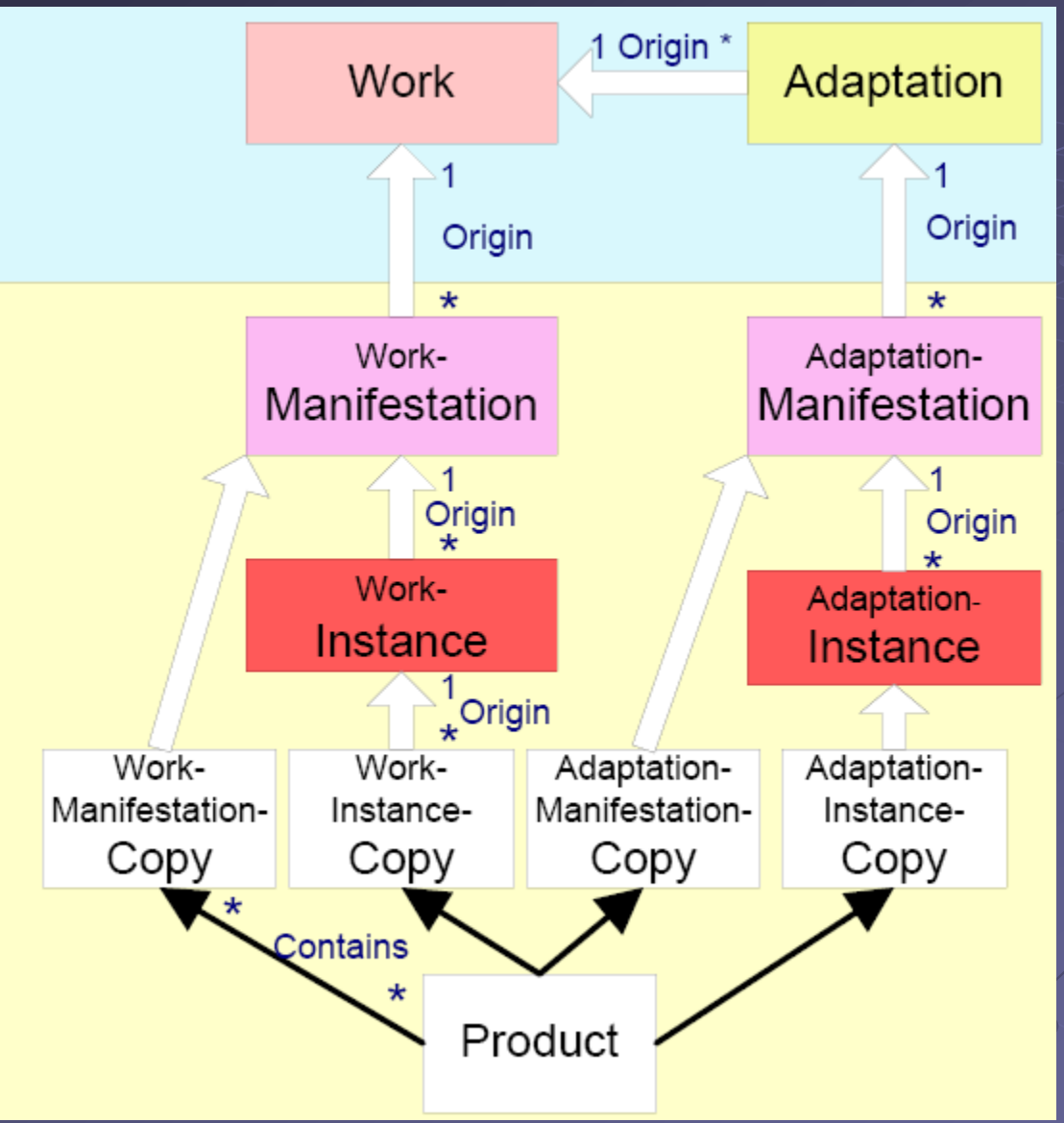
In the Ontology

- Hierarchies. Ej:

  Manifestation

  - *WorkManifestation*
  - *AdaptationManifestatio*

IP Entities (3)



In the Ontology

- Relations:

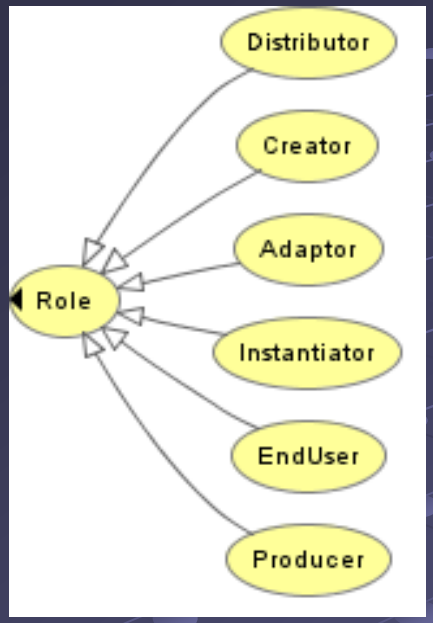
  1 – M, 1 – 1, M—M ...

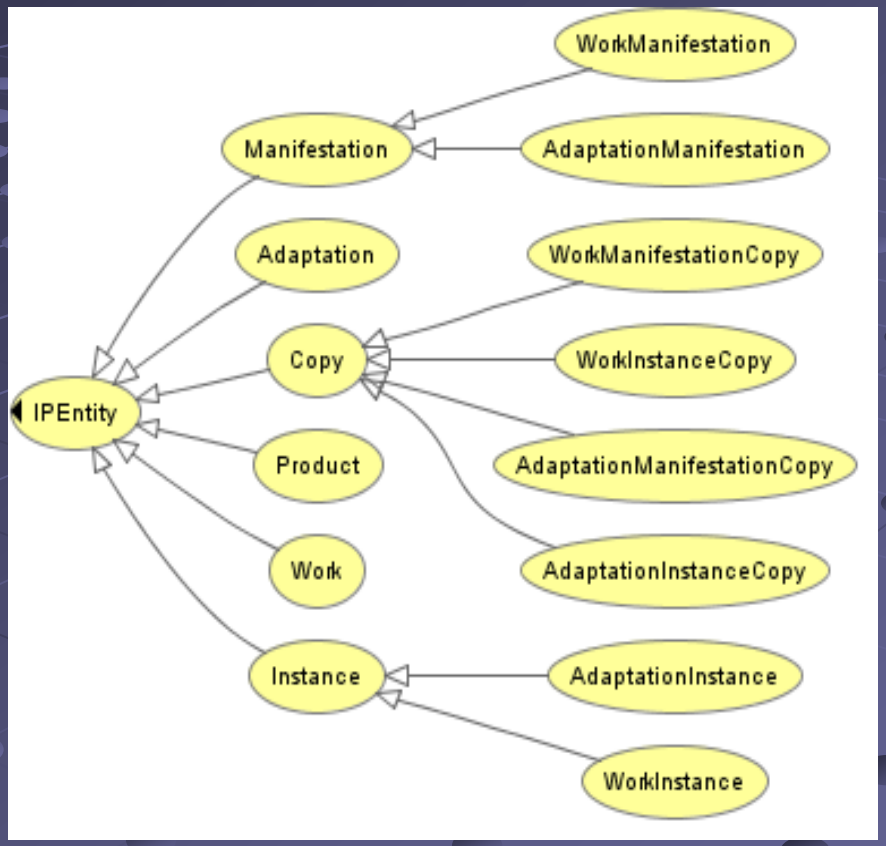
  Which are transitive,

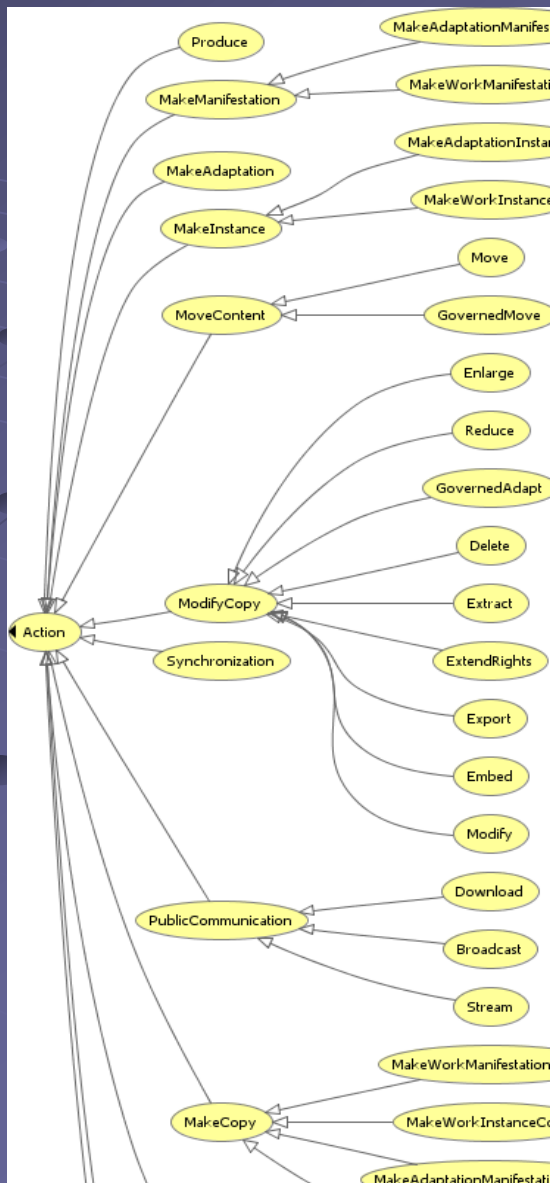
  Which are symmetric,

  Which are inverse...

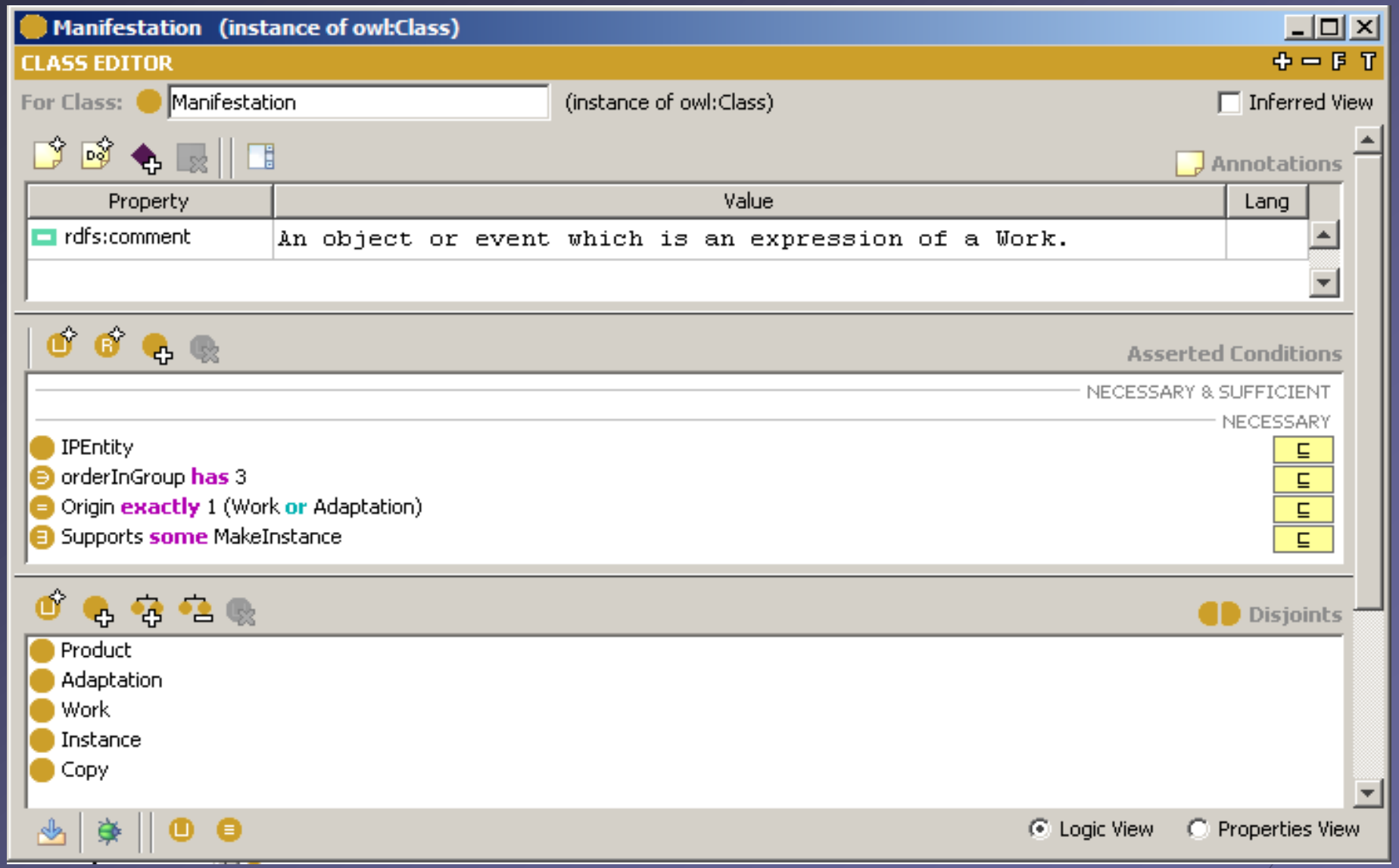
Main Classes



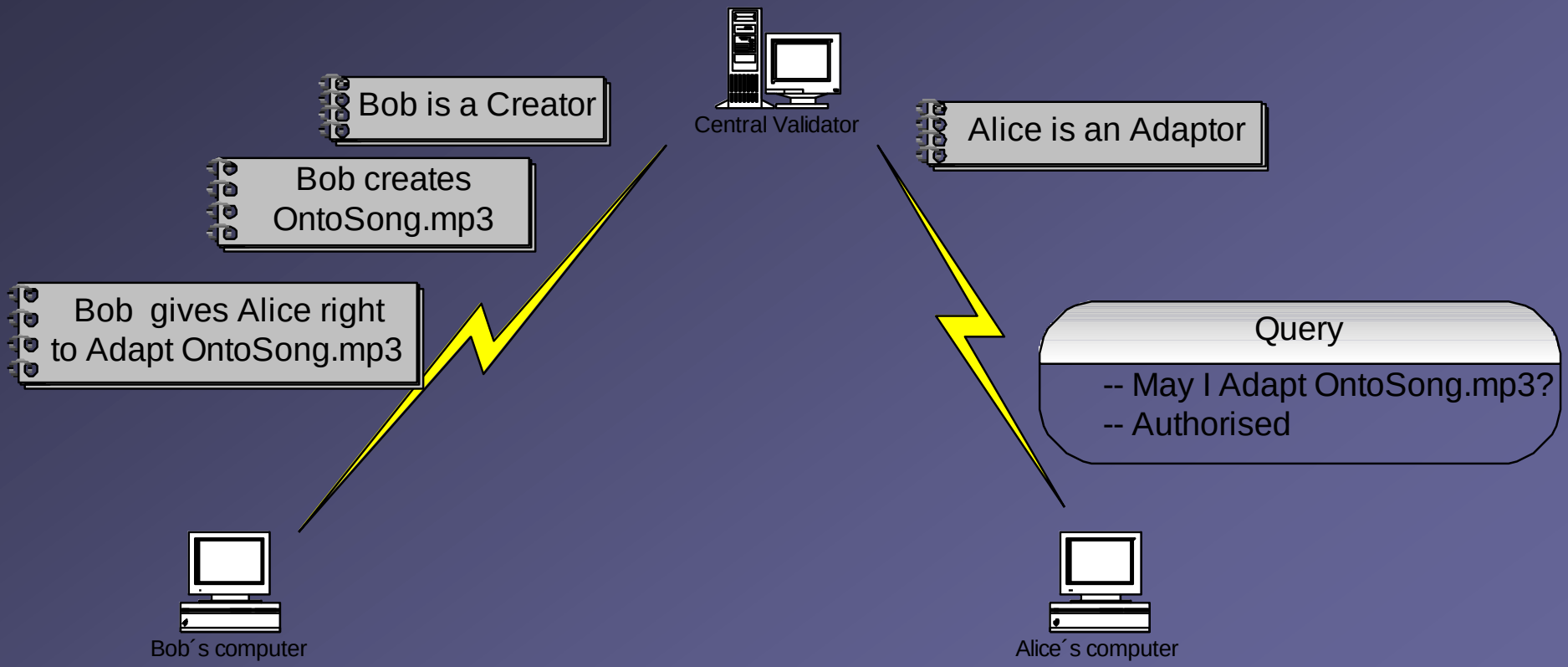




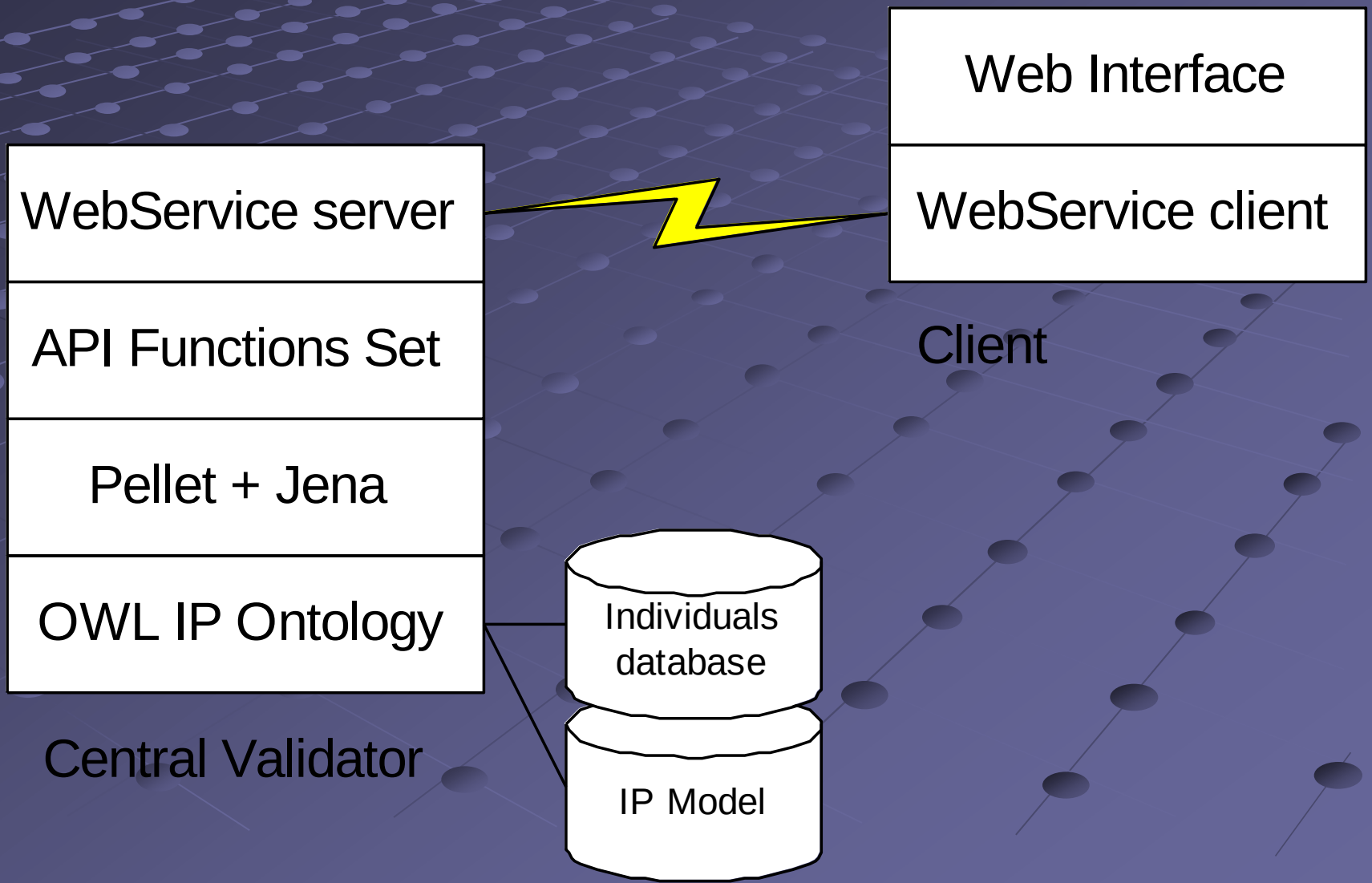
Editing the RRD Ontology...



Validation of Actions According to the Value Chain



Architecture of an Application OWL Reasoning Based



Conclusions

- Ontologies represent models and knowledge.
- Roles, Actions and IP objects along all its transformations are represented in a model.
- Provenance as the rule for transferring rights
- Class individuals as representation of real agents, real works etc.
- Reasoning and validation
- Neutral representation of the model, different possible applications on top of the OWL.
- A Java API to facilitate programming.
- Digital Media Project, Axmedis.

Questions!