



# SimDB and semantics

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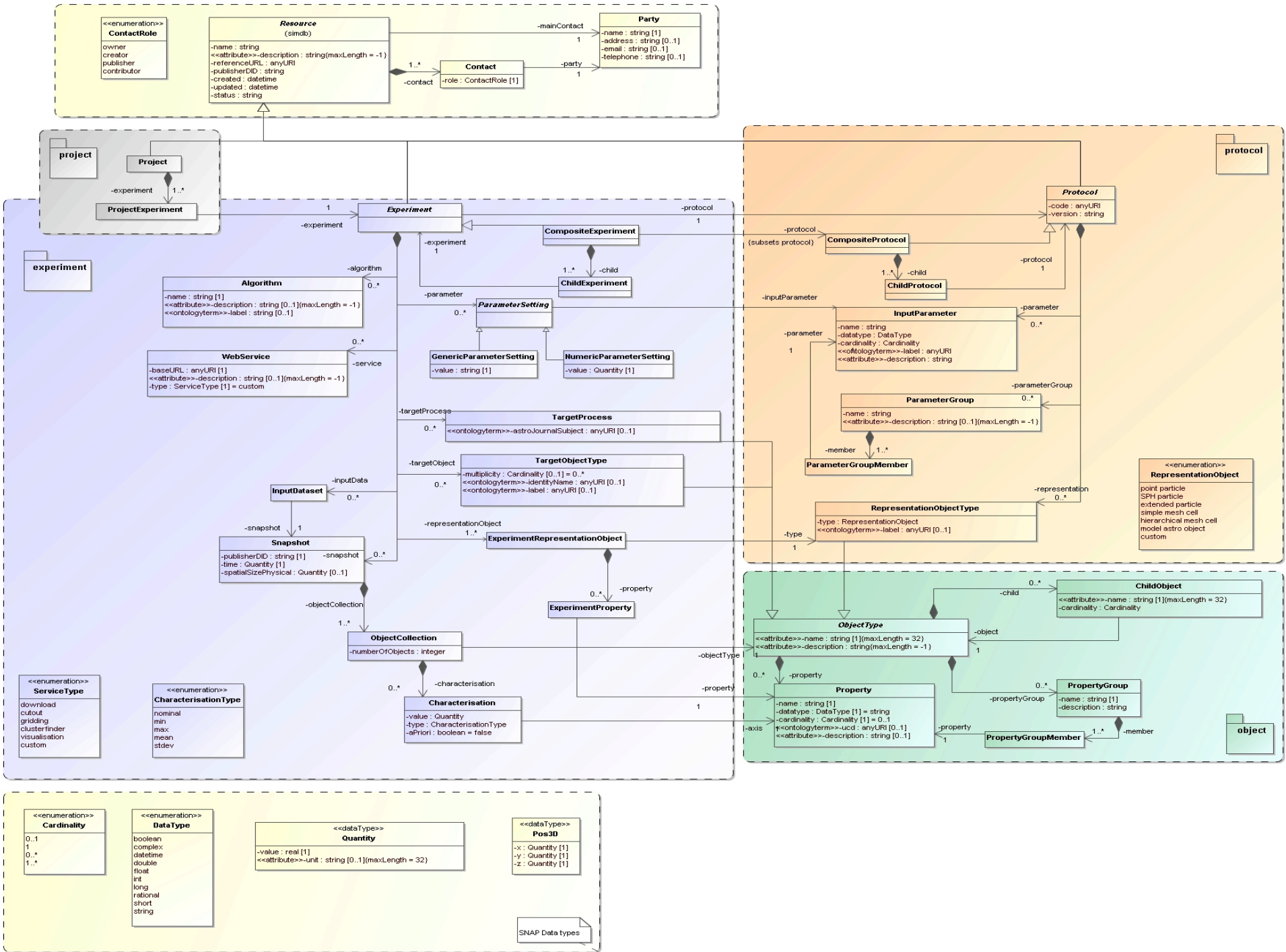
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# SimDB

- Specification for a Simulation (meta-)Database with protocols for accessing/querying it.
- Based on a (logical) data model, fully specified in UML.
- Physical models for use in their respective contexts:
  - Relational data model, for ADQL-based access protocol. Corresponding TAP metadata...
  - XML schema
  - UTYPEs.
- Fully automated translation using XSLT from UML/XMI
  - UML profile+pre-defined mapping rules (DM WG?)

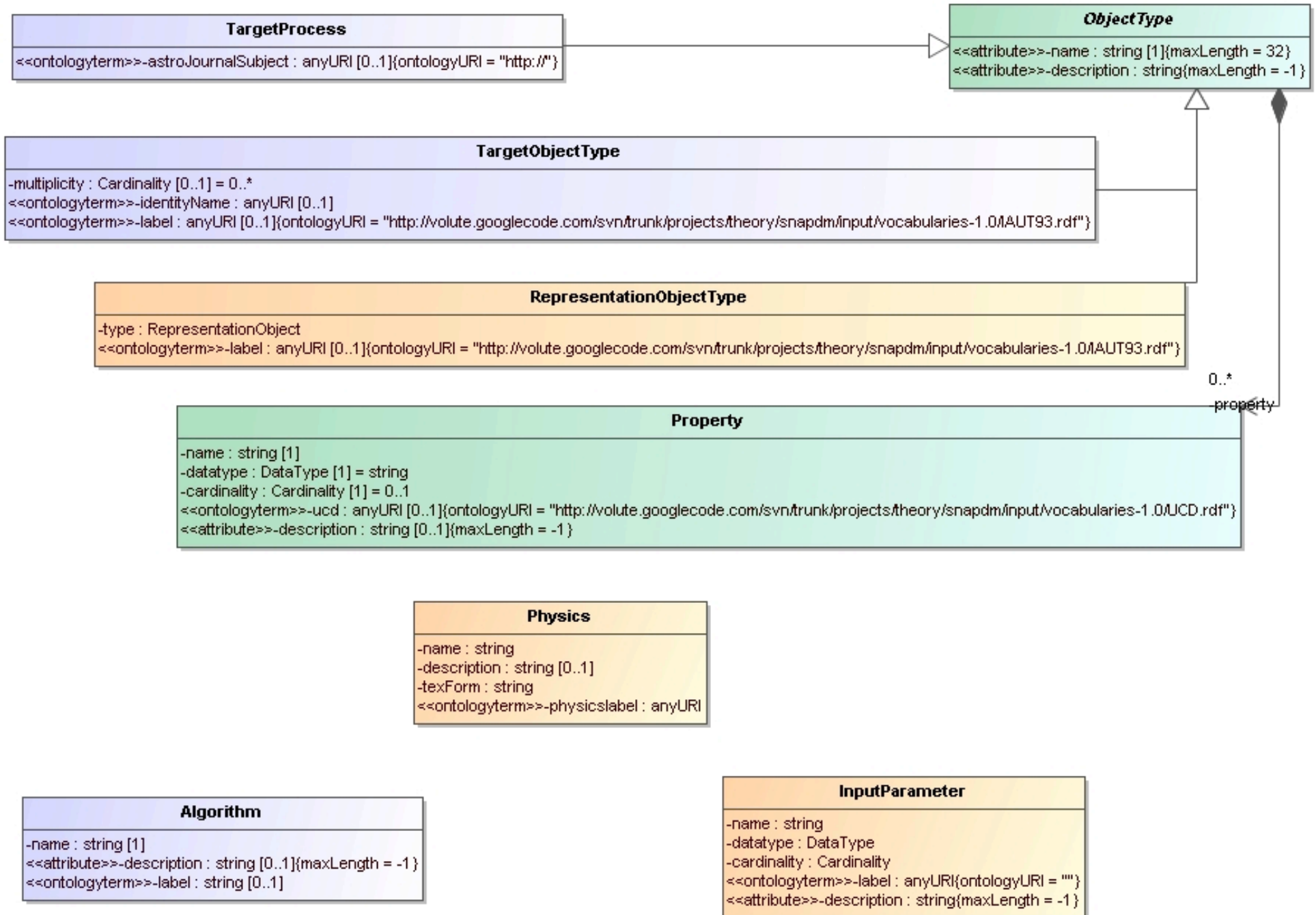




## <<ontologyterm>>

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- Valid values obtained from ontology/vocabulary
- Indicated by Tag: ontology
- Assumed to be a machine readable document (spec-d by Semantics, RDF/XML?)
  - use Accept:application/rdf ??





# Semantics in SimDB

- We need a common vocabulary for describing contents of simulations
- "label" attributes on:
  - TargetObjectType: identity, label
  - TargetProcess: label
  - RepresentatonObjectType: type (yet an enumeration, but ...)
  - Property (child of object types): ucd
  - Algorithm: label
  - InputParameter: label
  - Physics: physicsLabel
- Units?



# Issues for discussion

- Valid values for <<ontologyterm>>: URI or name
  - other name for <<ontologyterm>> and "ontologyURI" TAG
- Which vocabularies?
  - Semantics WG
    - IAU93,...
    - journal keywords familiar.
  - Other?
    - to be proposed this group
- Can we/do we want to use narrower/broader in ADQL?
  - needs loading vocabularies in RDB(?)



# SimDB for micro-physics?

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# SimDB/DM

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- SimDB/DM generic
- Explicit statements about observables, parameters, properties etc.
- Applicable to other types of simulations.



# Possible issue(s)

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- DM contents
  - Snapshot only *Result* type
    - implies time
    - implies spatial extent
  - others??
- Are use cases the same?
  - microphysics only wants to have discovery?
  - might do more, not covered by SimDB.