



SIMDAL STATUS AND QUESTIONS

2012 may 23

DAL/Theory/Registry session



Flashback: Agenda of Poona DAL/Theory session

Goals

- ✓ explore the current ideas on what SimDAL must/should do to allow discovery and access all theoretical data
- discuss which part of the SimDM could be registered
- ✓ discuss the specific way TAP could be implemented in SimDAL and which tables has to be provided



TAP implementation in SimDAL


- SimDM is a logical model
- tables and columns names cannot be specified by the standard
 - no possible equivalent of ObsCoreDM
 - depends on the Protocol (the code, the way to use the code)
 - Input parameters name and meaning, as well as outcomes depend on the Protocol.

Discovery

Principle : protocol

based on the TAP_SCHEMA idea

Pivoted Table : protocol input parameter



| experimentID | proto_param1 | proto_param2 | proto_param3 |
|--------------|--------------|--------------|--------------|
| expp1 | 1.2 | 2.23E+05 | sugra |
| expp2 | 1.6 | 1.00E+04 | lambda |
| expp3 | 1 | 3.67E+04 | lambda |

Metadata Table : input parameter meaning

| col_name | datatype | unit | utype | ucd |
|--------------|----------|------|---|-----|
| proto_param1 | float | msun | SimDM:/resource/protocol/InputParameter | |
| proto_param2 | float | m/s | SimDM:/resource/protocol/InputParameter | |
| proto_param3 | string | ... | SimDM:/resource/protocol/InputParameter | ... |



TAP implementation in SimDAL

- Poona: SimDAL has to define a set of rules to make the transformation: Parameters -> name of columns
 - Gerard's talk
- Discussion yesterday: is there a need for making ADQL queries on:
 - group of parameters for simulations with hundreds of parameters (SimDM:/resource/protocol/ParameterGroup)
 - SKOSconcepts

Discovery

- Example : PDR code (microphysics)

Pivoted Table : protocol input parameter

| experimentPID | nH | Rad |
|-----------------|----------|-----|
| pdr_H2_20120312 | 1.00E+03 | 1.0 |
| pdr_H2_20120313 | 1.00E+03 | 3.0 |

Metadata Table : input parameter meaning

| col_name | datatype | unit | utype | group | skos |
|----------|----------|------------------|---|------------------|------|
| nH | double | cm ⁻³ | SimDM:/resource/protocol/InputParameter | Cloud Properties | ... |
| Rad | double | Habing | SimDM:/resource/protocol/InputParameter | Cloud Properties | ... |



TAP implementation in SimDAL

with TAP evolution?

- Evolution of TAP_SCHEMA allowing for additional columns:
- table_name, column_name, description, unit, ucd, utype, datatype, size, principal, indexed, std
 - **skos** for SKOSConcept (or enlarge ucd meaning ?)
 - **group** for parameter grouping
 - timescale ?
- what could be the timescale for such an update?

with current TAP

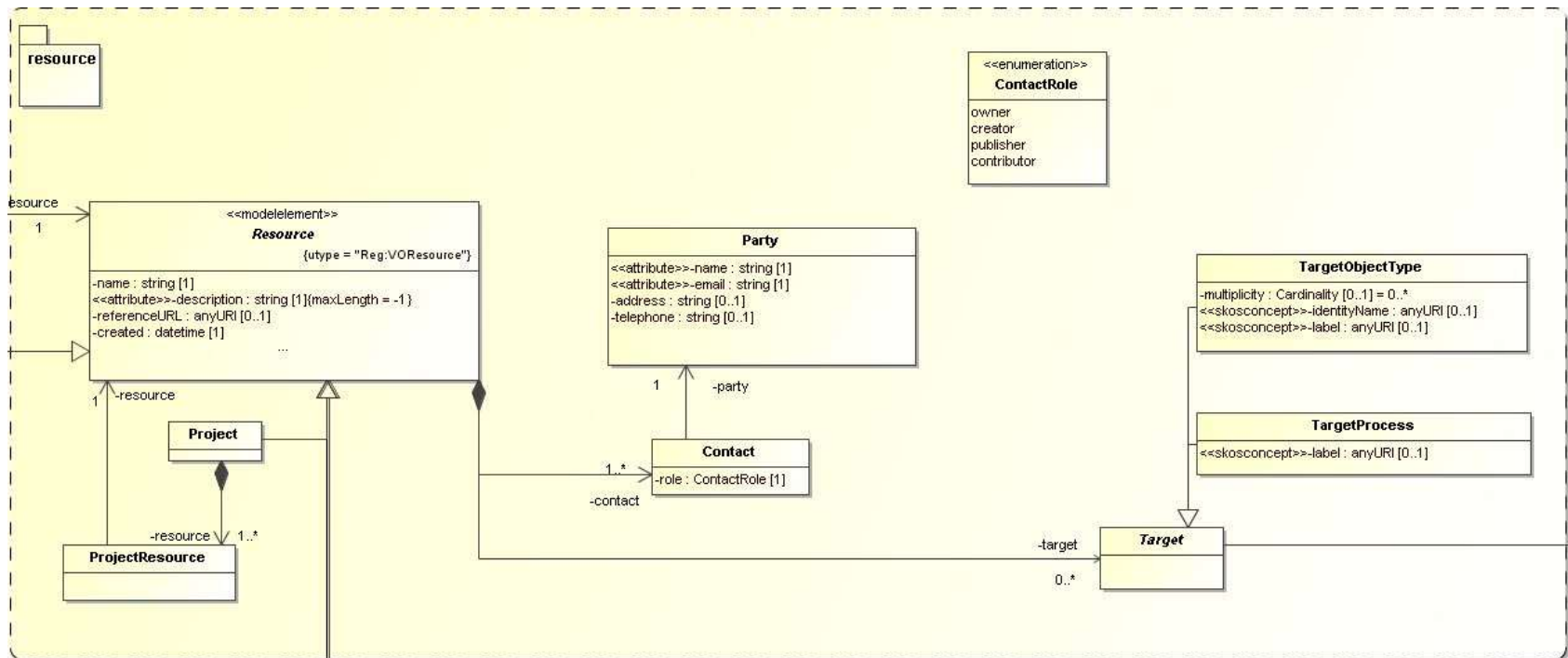
- standard TAP_SCHEMA
- need a mapping between query-able parameters and skosConcepts
- or
- extend the meaning of ucd to SKOSconcept
 - relax the UCD syntax



QUESTIONS FOR REGISTRY

Questions for Registry

- registering of SimDM/resource is mandatory



Questions for Registry

- How SimDM/Protocol (i.e. Protocol.xml) can be registered?

or

- Could it be registered?

- Can we be able to make discovery queries, user oriented, maybe using SKOSconcept?

(not only querying for 'SimDAL services')

