

The Observation Core Components Model

DM 2

Monday Nov 9th a-m

Time line

- Started in the context of the **OBS/TAP** project
 - Use cases gathered for Data Discovery (Uptake Committee)
- List the relevant observation metadata items for these use-cases
- Check their availability in data centers
- Select TAP/QL protocol as a target for implementation
- With these restrictions :

Build up a conception data model

Modeling Strategy / Scope

- Consider the specific context of **OBS/TAP** to define a set of **Core Components** classes
- Re-use classes from **Spectrum** and **Characterisation Data** model
- The **Full Observation** data model should offer an exhaustive general view on the observation metadata
- **ObsCoreComponentsDM** is a conception view from this more abstract model, derived for the **OBS/TAP** project
- **Foot Print** representation can also be derived from the **Full Observation DM** (Greene, Budavari, Bonnarel) and produce XML or VOTable serialisation
- Consistency between these models is essential for the VO.

Use-case synthesis

- Use-cases
 - [FirstScienceUseCasesv6withUtypes2Oct19.pdf](#)
- Aim at data discovery → set of archive queries
- Most queries focus on physical axis description
 - Concepts covered in the IVOA Characterisation DM
- Multi-wavelength search
 - The spectral coverage should be hierarchical
 - Waveband
 - Filter band name
 - Spectral bounds
- Search on a 'data product type' → to be defined

Required parameters for OBS/TAP

- The mandatory list for OBS/TAP implementation is converging
- Should adjust the strategy to provide a list which is
 - Understandable for the user formulating a query
 - Flexible enough to accommodate all regimes
 - Present in most of data archives
 - supported for every DBMS system (short names)
- See [ObsCorelistMandatory-v1.3Table.pdf](#) on the wiki
<http://www.ivoa.net/internal/IVOA/ObsDMCoreComponents/>
- optionalObstap-v1.2tab.pdf

Topics to discuss

- Observation Calibration Level

- Suggestion

- 0 - raw telemetry, raw data stream

- 1 - formatted, uncalibrated

- 2 - calibrated, instrument signature removed

- 3 - higher-level product, combination, or optimally reprocessed

- Using a digit allows the meaning to be explained via phrases like the above rather than trying to express it all in one word

- Data product type

- Several attempts suggested

- Combined type (Alberto, Mireille)

- Axis oriented classification (François B)

- Dimension and axis types classification (Pat, Doug)

- Should we restrict ourselves to 6 max categories?

- Pass it to Semantics group for a real classification /vocabulary

Conclusion

- Item/Utype List to get stabilised
- A test set of queries to be written from the use cases document and tested by data centers.
- **Observation CoreComponents** Model working draft currently written , to be issued by end of November
- Implementation discussion in DAL2 on Wed, 11
- Splinter meeting on Fri, 13 morning