IVOA Exec summary – Complements for Data models – M. Louys

Here is a list of the various work packages developed in the DM WG.
The very right column lists our expectations for these meetings.

WP Name	Goal	Domain	WP Lead	Wish list for this meeting
Specifications				
Spectral Lines Data Models	Emission/ absorption lines in all wavelength- calibrated spectral data	Spectral Observation Atomic and Molecular physics	J.Salgado /ESAC ML.Dubernet / Obs Paris	Discuss on a strategy for a consensus for a core model to which SLAP protocol can refer.
Observation DM **Provenance & Characterisation advanced levels**	- Re-assemble existing concepts (Spectrum) - Define metadata for transmission curves, etc. -Describe complex observations - extend to other physical axes: polarimetry, visibility data	All kind of observations Variability, sensitivity	F. Bonnarel / CDS Anita Richards/ ASTROGRID	- Poll for more use-cases. - Define modeling for transmission curves - Discuss the Observation model structure (reuse strategy).
Photometry	Data model for photometry calibration , SED-construction case, aperture mapping	Observations	J. McDowell / CFA + ??	Use-cases discussion
Management				
From UML to serialisation	define an automated process to produce DM products UML → XML schema, documentations , data base bindings, utypes	- Rationalise and improve methods - Propose UML good style for next models and easy XML translation	G. Lemson, M.Louys	Sketch out and discuss the process
Dissemination	Improve models uptake	Tutorials , on line documentation, more examples	?	Poll the community and discuss API developments
Utype Syntax	Examine Utypes usage and define how to encode Utypes	Simplify utypes and define re-using rules for embedded models	M.Louys	- Select and adopt a syntax. - Prepare an IVOA Note
Units Syntax	Define a simple Unit DM to describe units and apply conversion for physical quantities	Syntax definition Summarize existing solutions	Anita Richards	Discuss and adopt one syntax for labels. Discuss the proposed data model
Utypes for STC	Referencing STC elements in VOTables	Define the mechanism	F. Ochsenbein (VOtable WG)	Validation by the DM group

Detailed description:

Spectral Line Model
- Version 0.7 of the AML data model is delayed. 2 possible schemata have been issued beginning of September but no documentation is provided.
- It is delaying the SLAP. A new strategy to be discussed: SLAP to be proposed first, with a core DM.

Observation Data model
- The model integrates and generalizes existing classes from *Spectrum* and *Characterisation*.
- It describes a *Provenance* container and an *Access* container as defined in SSA protocol.
- First example XML documents to appear for this meeting, requirements for NVO footprint service.
- Various examples of transmission curves to be modeled and attached under the Characterisation level4 (Sensitivity- Variability).

Characterisation DM extension: polarization data

An example of characterization for polarization data will be presented at this interop meeting.

Syntax definition of UTypes

Define syntax and illustrate various usages of Utypes: metadata publication, mapping of data base columns, utype-based queries, processing validation, etc...

A note will be summarise the decisions after the meeting.

Improvements:
- Shorten the names in order to speed up parsing of large documents.
- Semi-Automatic generation of Utypes from the Xml schema of a DM.
- Dissemination via simple services :
  - An interactive mapper from data base columns to Characterisation Utypes in the case of ad hoc heterogeneous data sets. (SAADA)
  - Interactive and trained mapping for data collections (CDS internship)

Units

Syntax recommendation and practice.

IVOA Note in preparation.

Distinguish units labels and units transformations bound to quantities.