Data Model Working Group

Opening Session

Chair: Mark Cresitello-Dittmar
Vice-Chair: Mathieu Servillat

Roadmap

- **Primary:**
  - Transform 1.0
    - Prepare for RFC
  - Mango 1.0
    - Deliver working draft
  - ObsCore Extension for Radio
    - Resolve open issues, prep. for RFC
  - CAOM
    - Integrate ObsCore Radio extensions
    - Deliver working draft
    - Discuss integration into DM ecosystem
  - Modeling High Energy Datasets
    - Deliver Note; support HEIG formation
- **New: (Sydney inspired)**
  - Shape model
    - Reconcile recurring concept
      - STC (Region), FoV (Shape), Dali (dtypes)
  - VODML 1.1
    - Deliver working draft of proposed enh.
  - VOEvent – cast as VODML compliant model
    - Separate model from transport protocol
  - Updates to DM working group twiki

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DM Session 1

Data Model Session 1: Saturday November 16, 2024 @ 11:00-12:30; Room Aula Magna	
Speaker	**Title**
Bruno Khelifi	**Data Model for VHE gamma-ray data and relations with IVOA standards**
Ian Evans	**An X-ray Astrophysicist Looks at ObsCore** Data discovery in the Virtual Observatory is supported by the ObsCore data model, which identifies key observation metadata that can be queried to search for data products of interest to the end user. I review the current ObsCore documents and definitions from the perspective of an X-ray astrophysicist who wants to use ObsCore to support data discovery of the scientifically rich Chandra X-ray Observatory data archive and specifically the numerous Chandra Source Catalog data products. I discuss which ObsCore components appear to work well for high-energy astrophysics data, what could be improved, and what appears to be missing.
Paul Harrison	**VO-DML 1.1 candidates** The VO-DML tooling has been extended to include robust Java and Python code generation that enables XML and JSON serialization as well as ORM to databases for arbitrary data models (first reported on in the Nov 2021 Interop, with ongoing progress reported subsequently). This work has highlighed some areas where the VO-DML standard should be clarified, as well as some ideas for extensions to the standard. These ideas have mainly been managed as GitHub issues so far, and this talk is an invitation for people to contribute to the VO-DML 1.1 standardization process. The suggestions so far will be summarized as well as the progress on actually updating the standard document.
Laurent Michel	**MANGO model updates** After being delayed due to the MIVOT recommendation process, the MANGO data model is now a VO working draft. The purpose of MANGO, which stands for MO-del for AN-notating G-enericO-objects, is to add an upper level of description to the tabular data of query responses. It allows metadata to be extended, complex quantities to be reconstructed from multipl column values and properties to be linked together. It also allows to specify the origin of the data. I'll give an overview of the model and the tools available to exercise it. This talk is an invitation for people to contribute to the REC process.
Mark Cresitello-Dittmar	**Follow-up from Sydney Joint session** As the IVOA Data Model landscape becomes fuller, we are introducing models which serve overlap in domain space with other models, but are represented at a level appropriate for their target usage. For example, CAOM for archives overlaps with content in Dataset, Characterisation, Cube, etc which are more data product oriented. MANGO introduces an EpochPosition which consolidates elements from the Coordinates model into a compact object suitable for application workflow. This talk is an update on an effort to define a mechanism to formally map the relation between models with overlapping content. The goal is to minimize the effort needed to ensure the consistency of this content.

APPS/DM Split Session

Applications/Data Model Session 2: Saturday November 16, 2024 @ 16:00-17:30; Room 103			
Speaker	**Title**	**Materials**	**Time**
Applications Segment			60'
	see Apps schedule		
DataModel Segment			
Pat Dowler	**CAOM - integration status and discussion**		30'

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- Move model enhancements forward
- Make headway on how to integrate/define models at different levels for different clients

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This will influence HOW we generate data models going forward.