

Source DM Session #2

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Source Model In the VO

- **No Model but Great Expectations: A Paradox**
 - No VO model for the most used quantity in the Astronomy
 - Lots of people complained about this in the VO
 - This lack becomes obvious in Victoria (2018) when mapping tools were presented whereas there was no source model to map.
- **Some former proposals**
 - Models
 - 2006 P. Osuna et al.
 - 2016 G. Lemson et al.
 - 2016 J. Salgado et al.
 - Annotation mechanisms
 - 2010 M. Demleitner
 - 2011 S. Derriere et al.
- **Never Completed**
 - No DALservice to exercise the model?
 - No mapping syntax?



The Source Case

- **No consensus on a source definition**
 - Astronomer:
 - Something in the sky emitting signals I can measure
 - The basic brick of my studies
 - Computer scientist: A catalog row

- **Many purposes for source data**
 - Xmatch
 - Time domain analysis
 - Photometry analysis
 - Spectral analysis
 - Mission specific data publishing
 - Any other business astronomers can imagine.



New Landscape of Source Data

- **New VO landscape**

- Lots of recommended standards applicable for source data
 - Meas/Coord, RegExt, Semantic, PhotDM, VO-DML
- AstroPy
 - No predefined usage of a dataset
 - The model suff might guides the client

- **Decide to resume the JOB**

- Time series discussions within the TDIG
- After Victoria
 - We collect inputs from different people involved in future large survey
- Paris Session
 - DM/Apps/DAL joint session



Paris 2019

● Paris Session

- WG/Apps/DAL joint plenary session
- Get requirements from
 - Data providers
 - Data curator
 - Clients developers
- Get input from
 - Chandra (F. Civano)
 - Euclid (J.Salgado)
 - Gaia (J.Salgado)
 - Vizier (G. Landais)
 - Aladin (P.Fernique)
 - CDS X-match (F.X. pineau)
 - Exoplanets (M. Molinaro)
 - Morphologically complex objects (M. Molinaro)

● And after...

- A proposal sketched in an IVOA note, this topic.



What are the Expectations for a Source DM

- **Scientist**

- Make sure that scientifically relevant data are well described
- Use cases are domain dependant
- Must drive the model design

- **Client**

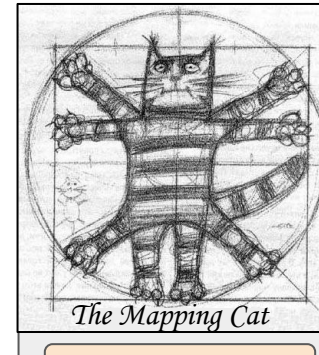
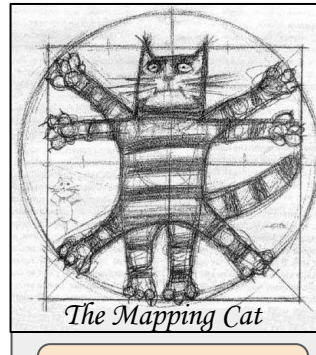
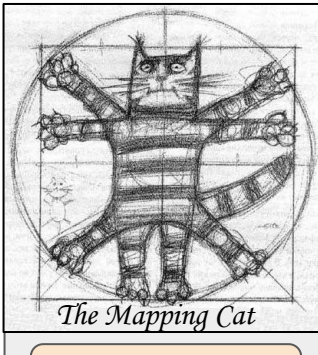
- Help clients to discover available data
- Help clients to process source data from different origins
 - No service-specific code
 - Capability of merging data coming from different services

- **Service**

- Make sure that served data could be correctly interpreted
- Not spending too much resources for this



And Now



- **Do we have to continue?**

- Who's interested?
- On which use-cases?
- In which direction?
- <https://wiki.ivoa.net/twiki/bin/view/IVOA/SourceCatalogs>

- **Starting with reading the note?**

- <https://github.com/lmichel/Model-For-Source-Data/>