Data Model Working Group

Laurent Michel, Jesus Salgado -- Locktown #6 - Oct 2022

Data Modeling

Data modeling

Building an **accurate description** of scientific quantities and of the **way to combine** them

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The IVOA coating

These accurate data descriptions must be **shareable** among different **stakeholders** (data providers, clients, standard editors)

WG Commitment

Core of the group activities

Coordination of the data modeling **activities** in the VO
- **Development** of new models
- **Adaptation** of existing models to new use cases

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After sales service

Provide a **framework** for the **DM integration** in the VO activities
- Identify **use-cases** for which the use of models is relevant
- How to bind **legacy data** with models
- How to **process** modeled **data**
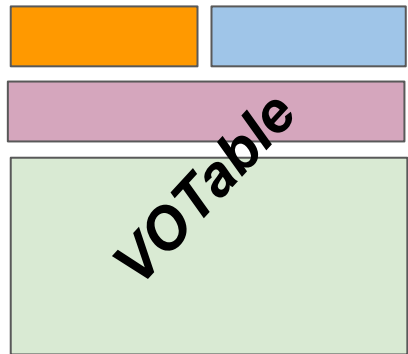
WG Landscape in 2022: Ongoing Models

XSD-like Models

- SpectralDM
- SSLDM
- Characterization
- SimDM
- STC

VO-DML compliant Models

- DatasetDM
- Transform
- Meas/Coords
- PhotDM 1.1
- Mango (src data)
- Cube
- ObsLocTAP
- ObsCore
- FoV DM
- Provenance
- Obs Proposal DM
- Spectrum DM 1.2

MIVOT (data annotation)
S#15 Oct 20 15h
L. Michel Mark Cresitello Dittmar

VOTable

Tools and process

Recommandation

PR

Proposal

WG Landscape: in 2022 Tools and Process

VODML-compliant Models

PhotDM 1.1
J. Salgado et al.

Cube
S#4 Oct 18 15h UTC
M. Cresitello Dittmar

FoV DM
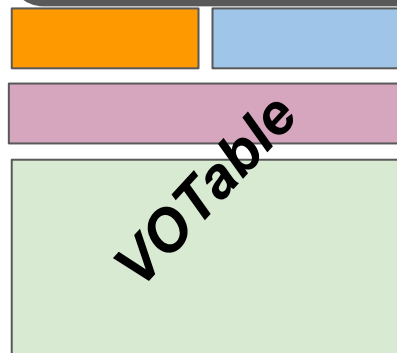S#4 Oct 18 15h UTC
François Bonnarel

Provenance
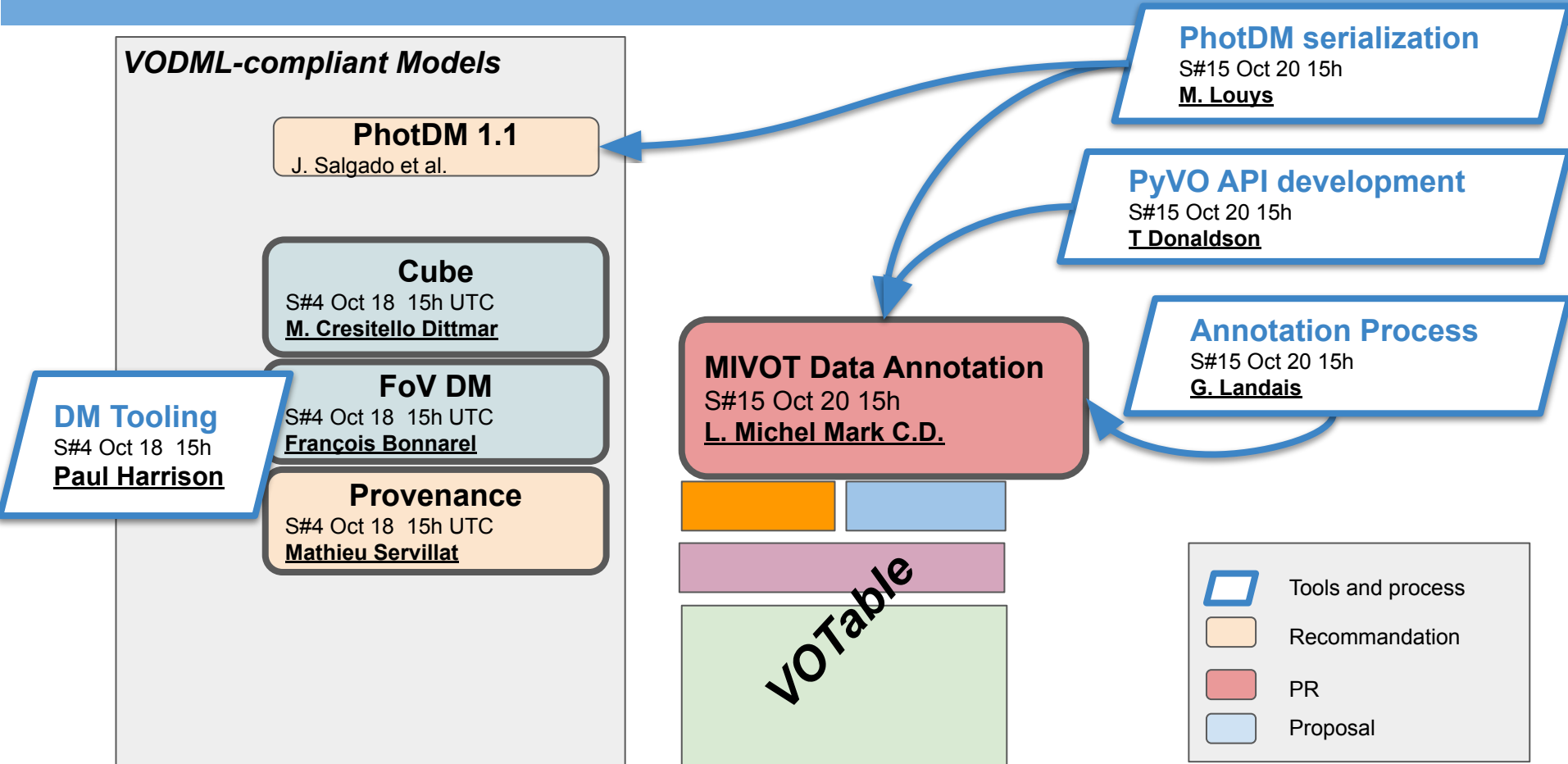S#4 Oct 18 15h UTC
Mathieu Servillat

MIVOT Data Annotation
S#15 Oct 20 15h
L. Michel Mark C.D.

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François Bonnarel

Provenance
S#4 Oct 18 15h UTC
Mathieu Servillat

DM Tooling
S#4 Oct 18 15h
Paul Harrison

PhotDM serialization
S#15 Oct 20 15h
M. Louys

PyVO API development
S#15 Oct 20 15h
T Donaldson

MIVOT Data Annotation
S#15 Oct 20 15h
L. Michel Mark C.D.

Annotation Process
S#15 Oct 20 15h
G. Landais

VOTable

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Let's play with DMs

We have everything we need to use models

- VODML making models machine readable
- VODML-compliant models
- MIVOT: Syntax for mapping VOTable data on models
  - Document ready
  - Dataset sample available
  - Code examples available
  - Service(s) online

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- VODML making models machine readable
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  - Document
  - Dataset sample
  - Code example
  - Services

We would be very happy
- **To get feedback on this work**
- **To enlarge the circle of both contributors and testers**

Backup Slide

What could I do with the models that I can't do now?

- Get a clean representation of the coordinate systems
- Get a clean representation of the errors
- Support cross-columns parameters
  - Columns grouping
  - Complex errors (pos + pm + parallax)
- Gather data from multi-table VOTable (sources + detection)
- Exchange model instance with SAMP

https://github.com/ivoa/dm-usecases

January - June 2021

What happens when a model is updated?

What could I do with the models that I can't do now?

Dataset will never be all annotated; I'll ever have to process raw dataset

Annotating data is a big job for my service, what is the gain?

Why using models?

What happens when a model is updated?