

VODML - generating utypes from vo-dml-xml

The example of CubeDM/DataSetMetadata

On going research

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(thank M.Louys and L.Michel for discussions)



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Legacy utypes in VO-DML context

- Legacy utype : context of class use matters
 - Who is using the class/attribute
 - It is a « point of view » on the model structure for flat serialisation
- Doesn't allow to map the full DM structure on the data
 - Generally incomplete datasets (no DM information on lacking data)
 - Class limits difficult to find out

Legacy utypes in VO-DML context

- Anyway legacy utypes usefull for identifying « data » rôle
- How to define them properly in VO-DML context
 - Derive them from Vo-DML-xml description
- Example : legacy utype for PublisherDID of an NDImage
- # from the PublisherdDID of a SparseCube

NdimageDataset extends
ObsDataset

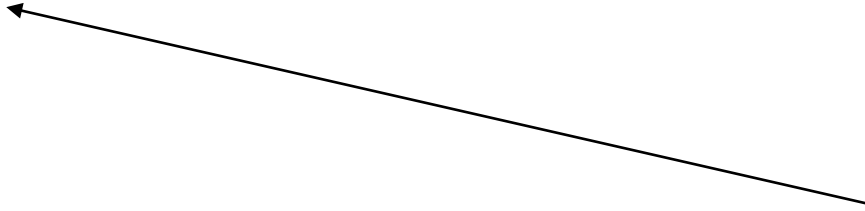
**SparseCubeDataset extends
ObsDataset**

ObsDataset extends the generic
Dataset

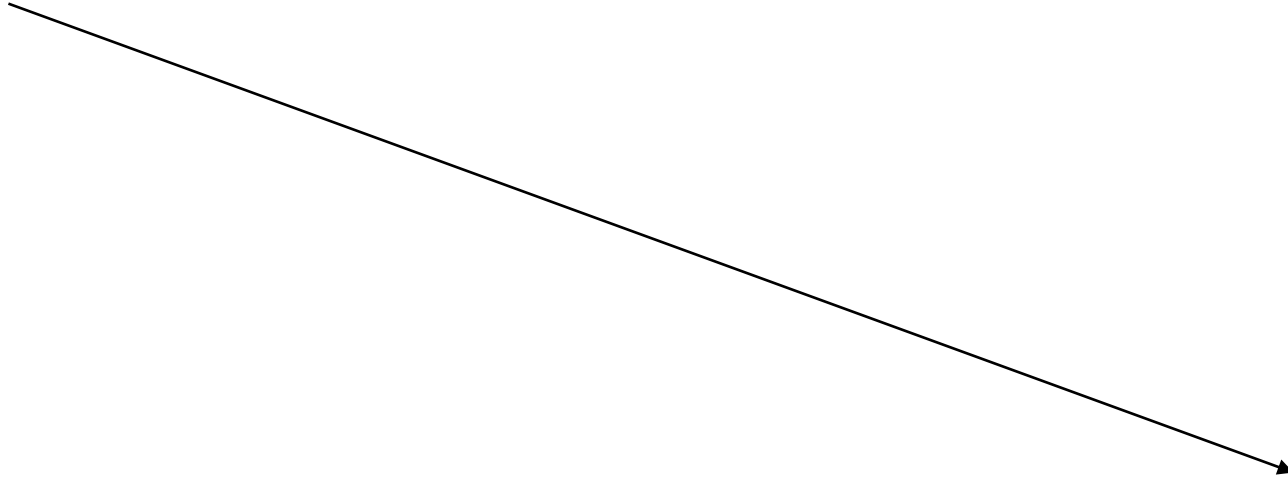
Example 1 : What we want to get

- `NDImageDataSet` extends `ObsDataset` which extends `DataSet`
- `DataSet` contains `Curation` which contains `PublisherDID`
- The `Utype` should be `NDImageDataSet.Curation.PublisherDID`
- It differs from `SparseCubeDaty`
- `SparseCubeDataset.Curation.PublisherDID`

Vo-dml-xml for NDimageDataset



Vo-dml-xml for dataset.Curation



Rule 1

- Start from the name of the top class (NDImage)
- Look to children. Concatenate names
- Or look to Core class (the one the top class expands) and to its children. Concatenate names to the top Class name

Example 2

- Utype for Voxel components in an NDImage
- Should be :
 - NDImageDataSet.image.data.pixelAxes
 - NDImageDataset.image.data.dependentAxis

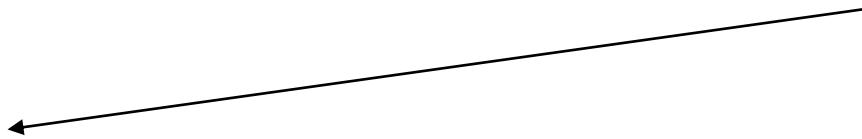
NDIImageDataset made of several
Ndimages

Ndimage details

Vo-dml-xml for NDImageDataset



Vo-dml-xml for NDImage



Rule 2

- When a class contains a reference or a collection
 - Concatenate the name of the reference to the utype
 - Go to the vo-dml-ref in « datatype » in the vo-dml-xml document
 - Look at the children there
 - Go on

Future work

- Check all the combinations of inclusion and relationship and define all the rules
- Complete a python script which build the utypes for a piece of data (leave name) and the top element we want.
- New utypes of char2 could be build this way from the vo-dml-xml description of teh model