



Utypes used in the IVOA

Data Model Working Group , M.Louys, IVOA Interop Meeting ,
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Utypes are used in IVOA services

- ▶ Mostly in VOTable serialisation
- ▶ Now in TAP services to describe items used in queries
TAP/SCHEMA
 - ▶ Identifies a quantity in the context of a data model.
- ▶ Still useful for list of (utype, value) pairs for simple applications



Utypes definitions

- ▶ Simple to derive from a simple data model
- ▶ Mimics the mechanism of Xpath and can stop at any level of encapsulation

Ex: Central reference point on an observation(image)

In CharDM: `Char:char.SpatialAxis.Coverage.Location`

has type: AstroCoords in STC and contains 2 coordinates values
uses a reference to the Coordsystem on the SpatialAxis

Need to browse down to the tiniest bits in AstroCoords:

Position2D.C I



Notation and Documentation

- ▶ Let each model include the subparts that are reused.
 - ▶ Follow down the encapsulated attributes within reused classes
- ▶ from Spectrum DM

Observation.Curation.PublisherDID

- ▶ from STC

Characterisation.SpatialAxis.Coverage.Bounds.limits.Interval.LoLimit2Vec.C1

Characterisation.SpatialAxis.Resolution.refVal.CResolution

- ▶ Publish and document the Utype list with each data model standard document as a reference for implementers and users
- ▶ As in SSA , Observation Data model Core Components, etc.
- ▶ Reuse VO-URP provided by the Theory IG (GL)



Utypes for STC

- ▶ Update of the note “Referencing STC in VOTable” by Markus Demleitner
 - ▶ <http://www.ivoa.net/Documents/latest/VOTableSTC.pdf>
- ▶ Current discussion on DM list and wiki
 - ▶ <http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/STCInVOTable>
 - ▶ Proposed one GROUP to gather AstroCoord System and AstroCoords definition.
 - ▶ Use Utypes on Fieldref instead on fields
 - ▶ Propose a PARAM to define Utypes prefix (instead of a namespace ‘ a la XML’)

```
<PARAM name="URI" datatype="char" arraysize=""  
  utype="stc:DataModel.URI"  
  value="http://www.ivoa.net/xml/STC/stc-v1.33.xsd"/>
```
- ▶ Defines a rule to build up Utypes from STC XML Schema
 - ▶ Pb with substitution groups

