Model Status: coords, trans, meas

Mark Cresitello-Dittmar

Coordinates

WD delivered to group (Nov. 30, 2018)

- Significant discussion on time related elements
- Good level of general feedback
    - Thanks to Markus, Ada, Francois, Laurent, several others

Action items

- Various typo-s and small text description changes
- Change standardized coordinates to be atomic coordinates along standard axes. (more reusable)
- Enhance use case and requirements detail
    - map model elements to requirements

Coordinates

Revised WD delivered. (Mar. 20, 2019)

- Includes all feedback items

Supporting items

- Validated vo-dml/xml
- HTML documentation
- Schema file (.xsd)
- Example serializations
  - Annotated with vo-dml mapping syntax
  - Generated by Omar using his Jovial DSL software

https://olaurino.gitlab.io/ivoa-dm-examples/0000/01/03/Coords.html

Coordinates

Vocabularies

- Worked with semantics group to get these installed
  - http://docs.g-vo.org/rdf/refframe (Reference Frames)
  - http://docs.g-vo.org/rdf/refposition (Reference Positions)
  - http://docs.g-vo.org/rdf/timescale (Time Scale)

- Being reviewed for content
  - Includes members of TDIG, SSIG

Transforms

College Park:

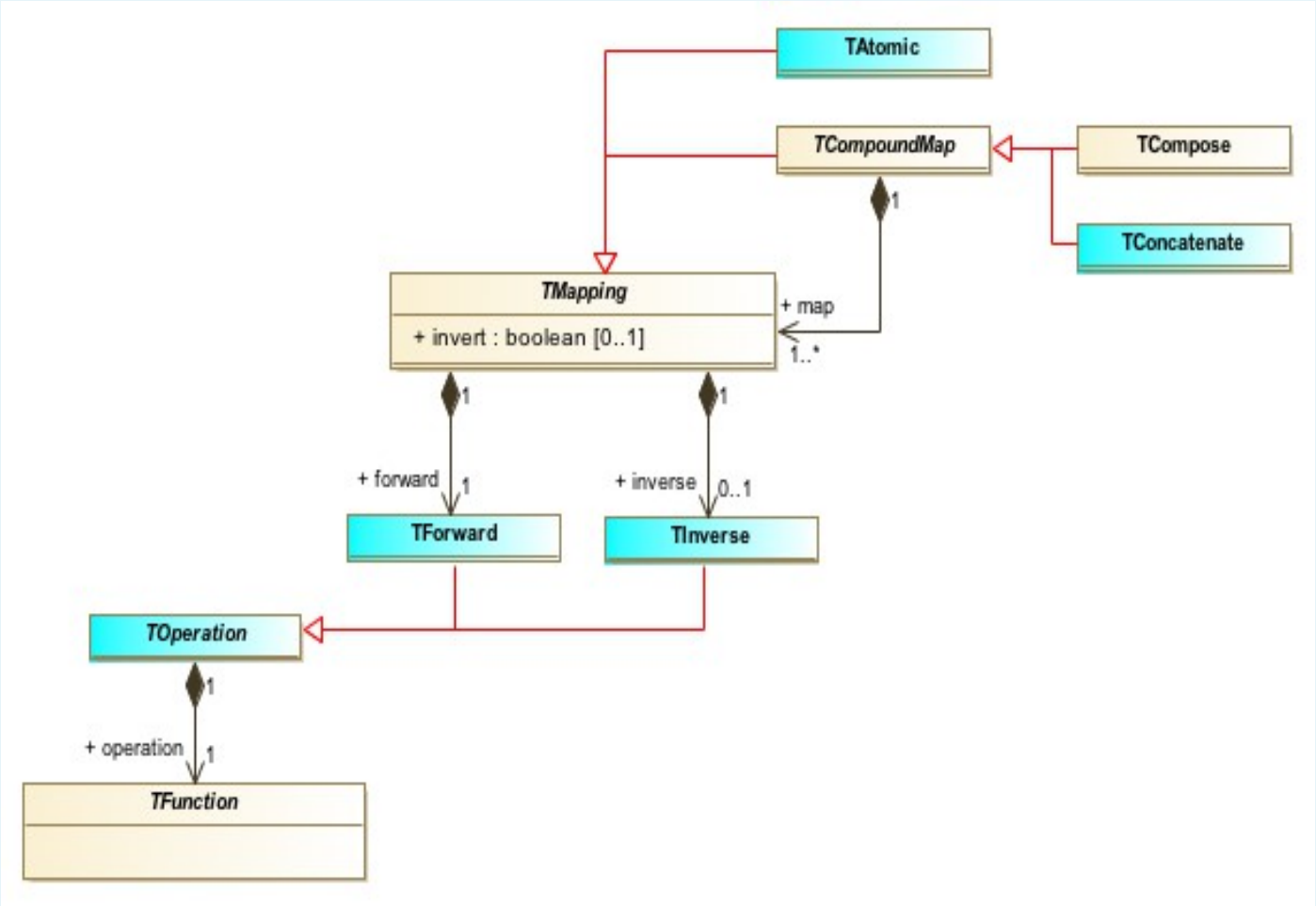
Formed group to exercise the model in real world application.

David Berry	JCMT/EAO	AST Library
Steven Crawford	StSci	AstroPy
Mark Cresitello-Dittmar	SAO/CXC	Data model
Nadia Dencheva	StSci/JWST	GWCS package
Perry Greenfield	StSci	GWCS package
Tim Jenness	AURA/LSST	User
Omar Laurino	SAO/CXC	Mapping
Stuart Mumford	CADAIR	SunPy
Erik Tollerud	StSci	

Transform

- Operations: Good compatibility
  - Needed more modularity with Projection + Rotation portions of supporting WCS paper II
  - Added Euler rotation
  - Refined detail (e.g. Lookup.interpolation)
- Workflow: Lacking
  - Combining in Parallel as well as Series
  - Manipulation of 'axes' between steps (Permute)
  - Explicit control of forward and inverse specs

Transform


TAtomic
TCompoundMap
TCompose
TConcatenate
1
TMapping
+ invert : boolean [0..1]
+ map
1..*
1
1
+ forward
1
+ inverse
0..1
TForward
TInverse
TOperation
1
+ operation
1
TFunction

Transform

WD delivered to working group (Apr. 23, 2019)

Supporting items

- Validated vo-dml/xml
- HTML documentation
- Schema file (.xsd)
- Example serializations
    - In progress

Assessments

- See: Francois Bonnarel's talk from College Park and next

Measurements

Reviewed with TDIG for application in time series extension.

WD delivered to working group (May 01, 2019)

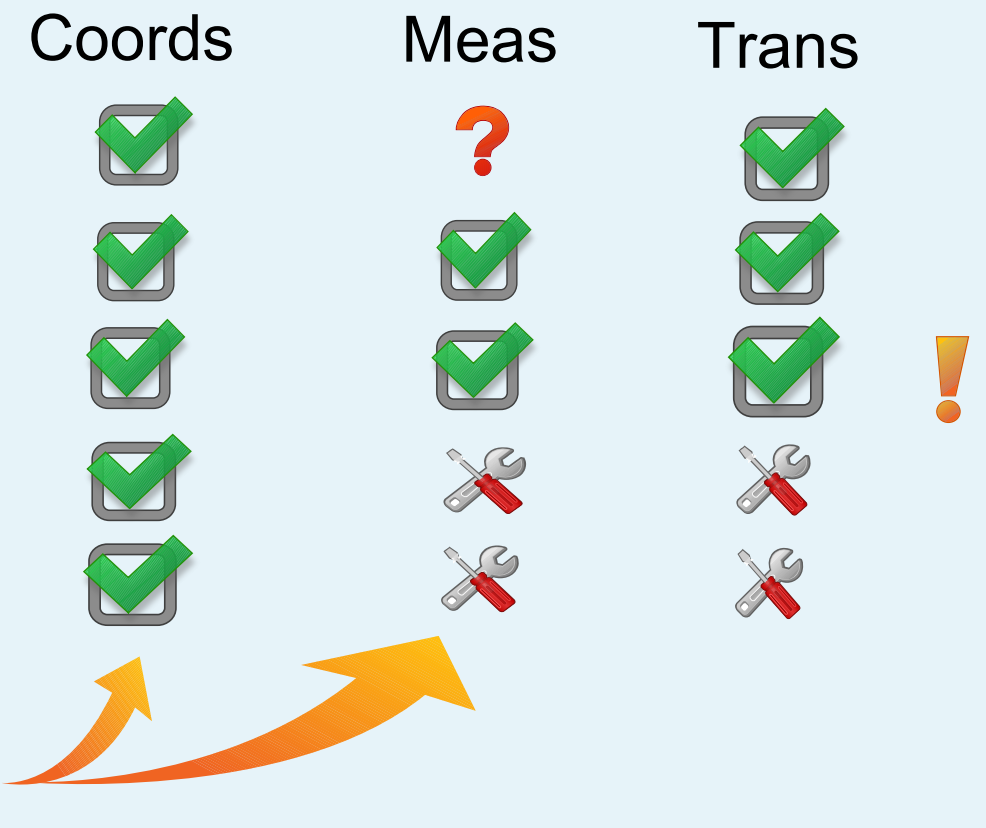
- Added detailed requirements list
- Cut some structural levels of abstraction.
    - A little less explicit; cut ~12 objects
- Restored Velocity, added a ProperMotion

Supporting items

- Validated vo-dml/xml and html documentation
- Schema file (.xsd)
- Example serializations
    - In progress

Ready for PR/RFC?

	Coords	Meas	Trans	
• WG Consensus	✓	?	✓	
• VO-DML Validation	✓	✓	✓	
• Test examples	✓	✓	✓	!
• Use case examples	✓	🔧	🔧	
• Interpretation demo	✓	🔧	🔧	

Ready for PR/RFC?

- WG Consensus
- VO-DML Validation
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