

Proposal Data Model

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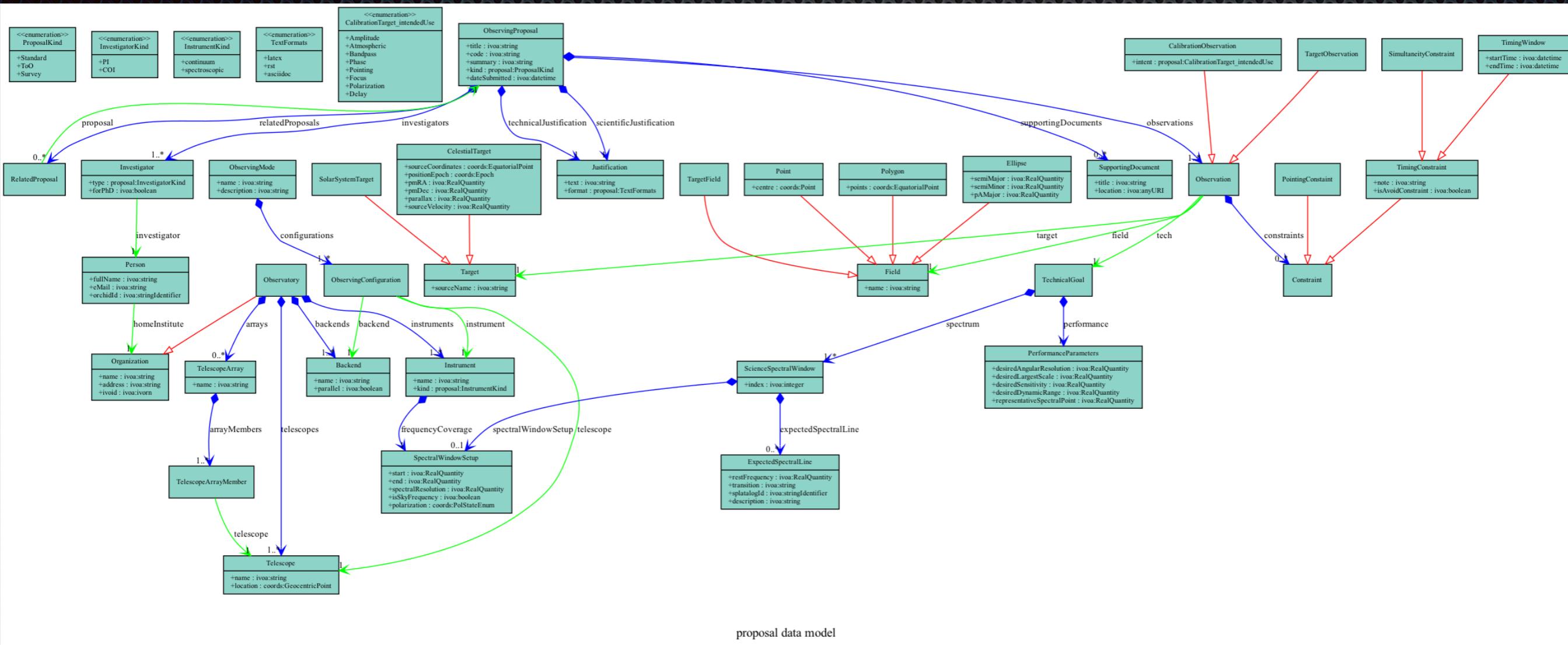
Proposal Data Model

- Inspired by Alan Bridger and Bryan Butler "The ALMA/EVLA project data model: steps toward a common project description for astronomy", Proc. SPIE 7019, Advanced Software and Control for Astronomy II, 70190P (14 July 2008); <https://doi.org/10.1117/12.789262>
- Create formal data model in VODML^{*}
 - Allow for export and interchange
 - easier to interface with other observatory systems - but note only phase 1 model.
 - Try to model scientific requirements rather than instrument specifics
 - Publish model as formal IVOA standard.
- Aim to create the smallest model possible - but it does cover a wide domain.
 - ^{*} actually will use VODSL as a working language

High Level View of PDM

- ✦ Model physically split into two files
 - ✦ Observer's Perspective (Proposal) - concepts such as
 - ✦ Scientific Justification
 - ✦ Source Lists
 - ✦ ...
 - ✦ Observatory Perspective (ProposalManagement) - concepts such as
 - ✦ Observing Cycles
 - ✦ Time allocation committee
 - ✦ ...

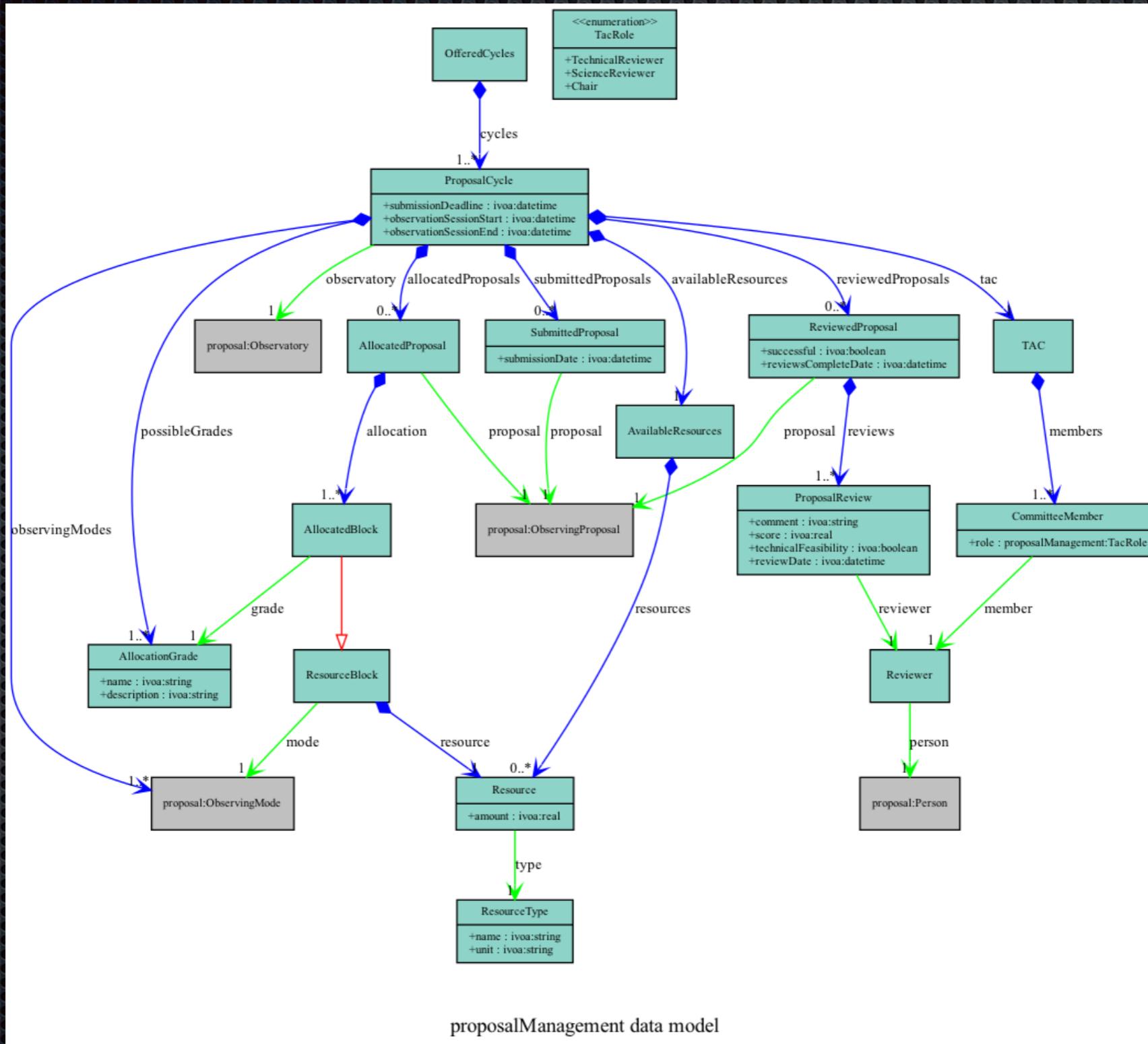
Proposal



proposal data model

41 Types

ProposalManagement



16 Types

proposalManagement data model

ProposalDM Demo

- ✦ Documentation auto-generated with GitHub CI
- ✦ Source code in VODSL
- ✦ Hand-written tests exercise model against auto-generated code
 - ✦ XML round trip - note the 'natural' object hierarchy (cf VOTable)
 - ✦ Rdb round trip

Model TODOs

- ✦ VODSL source has comments indicating where more work is necessary.
- ✦ Some concepts need more detail - e.g. SolarSystemTarget
- ✦ Some constructs could be different - e.g. Telescope, Instrument, Backend groupings.
- ✦ Some concepts might be too general/not general enough - e.g. Resource

Connections with other work

- STC
 - good that specialized points are being re-introduced to Coords
 - would like class that is point on unit sphere (majority of astronomical points)
- Would like a “catalogue source” ObjectType - higher level than STC Measurement...
- DataSetMetadata has some similar concepts, but it would be nice to factor out into smaller parts - with more detail.
 - e.g. Roles from that model?
- Observatory/Instrument Metadata - in the Registry? Its own service?
 - semantics vocabulary lists
- ObsLocTap - service has connections.

Contributing

- ✦ Open collaboration via <https://github.com/ivoa/ProposalDM>
 - ✦ Note that the ultimate model source code is vodsl which is translated into the normative VO-DML.
 - ✦ You can just use your favourite text editor...
 - ✦ Need more observatory specific use-cases expressed as tests
 - ✦ Particularly optical observatory
- ✦ Hack-a-thon tomorrow