

# Proposal Data Model

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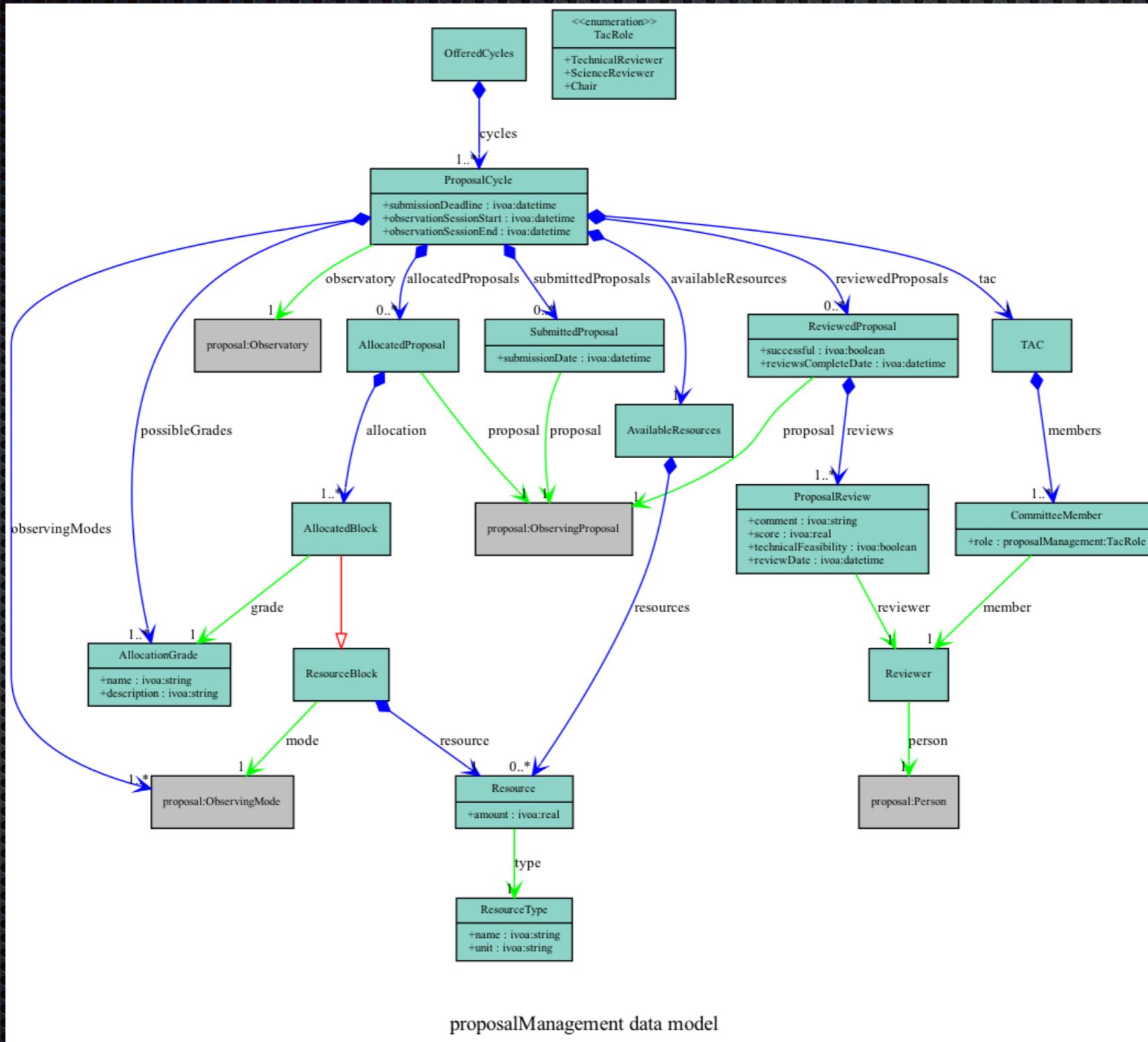
- Inspired by Alan Bridger and Bryan Butler "The ALMA/EVLA project data model: steps toward a common project description for astronomy", Proc. SPIE 7019, Advanced Software and Control for Astronomy II, 70190P (14 July 2008); <https://doi.org/10.1117/12.789262>
- Create formal data model in VODML<sup>\*</sup>
  - 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.
  - <sup>\*</sup> 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
    - ✦ ...



# ProposalManagement



16 Types

# 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