VIRTUAL ASTRONOMICAL OBSERVATORY

Spectral DataModel V2.0

Mark Cresitello-Dittmar, SAO

The VAO is operated by the VAO, LLC.

Introduction

- Spectral-2.0 has been stable PR for quite some time
- User interest in using Spectral-2.0 for their products
- Sufficient benefit to move forward to RFC
- Need to fold-in the directive to express Spectral as extension of ObsCore (Obs-Dataset)
- Update submitted for PR: 2014-03-09
  - http://www.ivoa.net/documents/SpectralDM/20140309
- Announced for RFC: 2014-05-13
  - http://wiki.ivoa.net/twiki/bin/view/IVOA/Spectral2RFC

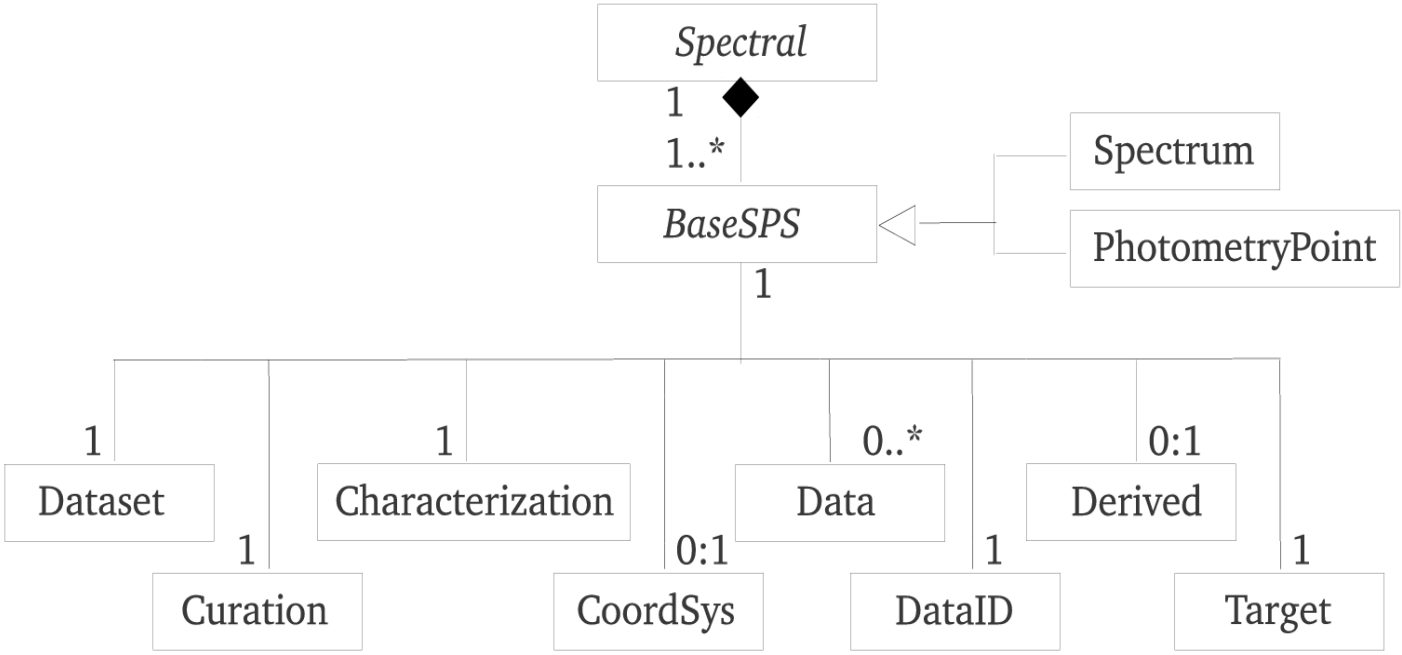
Modifications

- Replace all figures with UML diagrams
- Document Structure
  - Moved Obs-Dataset components to separate section
    - Prepare for migration to external specification
    - Not identical to what was presented in 'CubeDM' Monday.. Dataset/ObsDataset separation
- Modify top level relations to show as extension of Observation-Dataset
  - Define SpectralDataset as extension of generic Dataset, replaces BaseSPS
  - Add ObsConfig and Proposal objects to Dataset tree
  - Moved Instrument, Bandpass, DataSource from DataID to ObsConfig

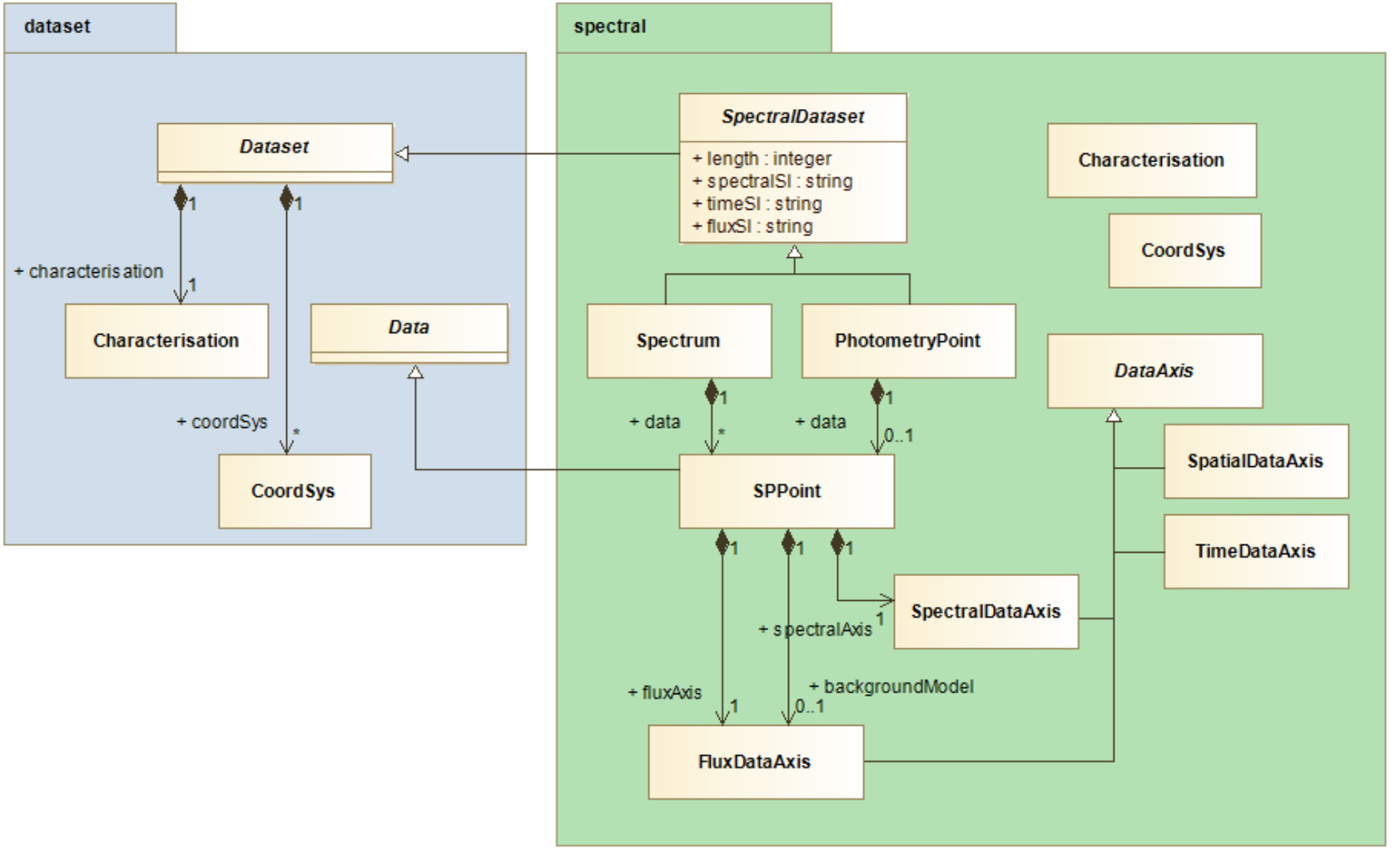
Modifications (cont.)

- Tweaks toward 'CubeDM' framework
  - Allow multiple CoordSys objects
  - Replace "Data" container with SPPoint object used by Spectrum/PP
- Implementation notes
  - Formally defines datatypes for enumerated values (eg: CalibrationStatus, stdRefPosition)
  - 'Date' type defined with format comments consistent with DAL discussion (not quite ISO8601)
  - Type-Os and corrections to casing, etc.

Example - previous



Example - current



UTypes

- Effected Utypes from previous version (20130425).
  - Char.*Axis.QualityDefs.QualityCode.value => Char.*Axis.QualityDefs.QualityCode.CodeNum
  - Char.*Axis.QualityDefs.QualityCode.description => Char.*Axis.QualityDefs.QualityCode.Definition
  - Dataset.dataProductSubType (new from ObsCore)
  - DataID.Instrument => ObsConfig.Instrument
  - DataID.Bandpass => ObsConfig.Bandpass
  - ObsConfig.Facility (new from ObsCore)
  - ObsConfig.DataSource (new from ObsCore)
  - Proposal.Identifier (new from ObsCore)