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Using Vocabularies in CAOM, ObsCore, and TAP services

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CAOM Vocabularies

- in CAOM-2.3 and 2.4 (in development) we have refactored to use **vocabulary** instead of **enum** in several places
  - reduce constraints on values in use
  - allow more rapid evolution of and experimental values between model versions
  - backwards compatible serialisation

- lessons learned
  - base vocabulary values serialised without namespace
  - non-standard values serialised with namespace (flag & self-doc)
  - have to modify content when proposed new term accepted into base vocabulary -- prefer to augment vocabulary first
  - not much experience with child terms

ObsCore Vocabularies

- ObsCore has several fields that are conceptually **enum**
  - calib_level
  - dataproduct_type
- calib_level is an integer (for query simplicity?)
  - non-standard values convey almost no meaning
  - can only be “extended” in two directions so non-standard values from different providers would collide
  - as-is: not a good vocabulary candidate
- dataproduct_type is a string with small set of allowed values
  - new values were added in version 1.1 so it does evolve
  - non-mandatory dataproduct_subtype hints at a concept of more specific terms
  - http://www.opencadc.org/caom2/DataProductType/
  - CAOM-specific terms currently filtered out of ObsCore view

TAP Queries & Vocabularies

- CAOM + TAP: vocabularies are queryable
- ObsCore + TAP = ObsTAP: vocabularies could be queryable
- RegTAP: vocabularies are queryable

- What does this mean for implementing a vocabulary in TAP?
  - dataproduct_type = ‘image’
  - dataproduct_type LIKE ‘image’
  - dataproduct_type IS ‘image’
  - dataproduct_type = ‘image’ AND dataproduct_subtype = ‘bar’
  - base terms in one column && child terms in another?
  - dataproduct_subtype ~ ‘foo’ -- image/foo/bar

- What does this mean for vocabulary evolution? extension?
  - allow non-standard base namespace#term?
  - only allow non-standard child namespace#term?
  - only gain easier evolution of an enum?