WD-DALI-1.2

Patrick Dowler
Canadian Astronomy Data Centre

DALI authors: Patrick Dowler, Markus Demleitner, Mark Taylor, Doug Tody (†)

clarify and relax

- clarify interplay between MAXREC and OVERFLOW indicator

- clarify use/meaning of VOTable VALUES metadata
  - xtype="timestamp" - is a single value so normal VOTable meaning is complete and sufficient
  - xtype="interval" uses normal scalar MIN/MAX, clarify it is minimum lower and maximum upper bound
  - xtype="point" - unspecified
  - xtype="circle" - describe MAX useful circle, input PARAM only, "useful" is context-dependent
  - xtype="polygon" - describe MAX useful polygon, input PARAM only, "useful" is context-dependent

- made VOSI-availability optional (everywhere)
- made VOSI-capabilities only required in registered services

NRC·CNRC

new xtypes

- xtype="shape" datatype="char" arraysize="*"
  - polymorphic type: combines a geometric type label and serialization from more primitive "numeric" xtypes
  - shapes: circle, polygon, multipolygon
  - input: this is the type of the SIAv2 and SODA **POS** parameter
  - output: suitable replacement for "adql:REGION" (in ObsCore)
  - opens up the possibility that uploaded tables contain shapes…

new xtypes

- xtype="shape" datatype="char" arraysize="*"
  - polymorphic type: combines a geometric type label and serialization from more primitive "numeric" xtypes
  - shapes: circle, polygon, multipolygon
  - input: this is the type of the SIAv2 and SODA **POS** parameter
  - output: suitable replacement for "adql:REGION" (in ObsCore)
  - opens up the possibility that uploaded tables contain shapes…

- xtype="moc" datatype="char" arraysize="*"
  - ascii MOC serialization as specified in MOC-2.0
  - open question: allows for a one- or two-dimensional MOC, not explicitly a time MOC, space-time MOC not supported
  - allows input (PARAMs) of MOC
  - allows output (columns) with MOCs
  - opens up the possibility that uploaded tables contain MOCs…

new xtypes

- xtype="multipolygon" datatype="double" arraysize="*"
  - multiple non-overlapping simple polygons (union)
  - array serialization separated by special double value: NaN
  - open question: single NaN or pair of NaN (NaN vertex)?

  - allows input (PARAMs) of multipolygon
  - allows output (columns) with multipolygon (typically complex observation footprint) – existing use cases
  - opens up the possibility that uploaded tables contain multipolygon…

proposed xtypes – not yet in WD

- xtype="uri" datatype="char" arraysize="*"
  - a string that conforms to URI spec
  - issue #16

- xtype="uuid" datatype="char" arraysize="36"
  - a string that conforms to the canonical hex serialization of a 128-bit UUID
  - issue #17

proposed xtypes – not yet in WD

- xtype="uri" datatype="char" arraysize="*"
  - a string that conforms to URI spec
  - issue #16

- xtype="uuid" datatype="char" arraysize="36"
  - a string that conforms to the canonical hex serialization of a 128-bit UUID
  - issue #17

- xtype="range" datatype="double" arraysize="4"
  - an array containing a coordinate range construct
  - already specified in SIAv2 and SODA **POS** param
  - adding it as a "numeric" geometry type and would also add it to **shape**
  - issue #15

- VOTable 2D arrays must have fixed size first dimension
  - no simple list of variable length strings

- xtype="phrases" datatype="char" arraysize="*"
  - a delimited list of strings – not space delimited
  - use case: ObsCore.pol_states delimited by /
  - use case: CAOM keywords delimited by |
    - e.g. "dwarf galaxy|low metallicity"
  - need to specify a delimiter, default delimiter?
  - allow alternate delimiter?

- xtype="words" datatype="char" arraysize="*"
  - a space-delimited list of words
  - simpler than phrases but don't need both
  - examples show that "words" isn't enough

Summary for WD-DALI-1.2

- clarifications
- relax VOSI requirements

- new xtypes: uri, uuid, shape, range, multipolygon

- xtypes to work around 2D array limitations (in VOTable)?

- would like to finalise and go to RFC in ~weeks

NRC·CNRC