DAL concluding remarks
Santiago de Chile Interop meeting
October, 29th, 2017

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Long term standards upgrade

- Pat Dowler →TAP 1.1 spec has been recently upgraded to a PR version.
  - New version of the PR in November
  - beginning of the RFC period soon after
  - VOTable DALI and TAP data typing are now common (datatype, arraysize, xtype)
  - Schema_index has been added
  - CADC implementation ready : hard work to upgrade the datatyping sytem. Also for CAOM
- Solution found with Registry and GWS to
  - differentiate sync and async services.
  - provide a way to have authenticated service access directly known to clients.
- arraysize=1 versus NULL-arraysize has been discussed in Apps

Long term standards upgrade

- Dave -> ADQL 2.1 has been revisited and a new version of the draft will be released just after Interop.
  - REGION removed
  - Changes on CIRCLE text
  - TIMESTAMP is now Date Time, no string
  - VOTABLE STC annotation for CoordSYS required. Not In TAP presently
  - Question: Rand(x,n). Should we suppress the seed n?
  - Check consistency of all DAL documents against the new datatype system. -→ volunteers to do that ?

Long term standards upgrade

- Marco -> SCS1.1 version is in discussion.
  - Better DALI compliance
  - VOTABLE version upgrade ??? Rather yes
  - UCD1+ upgrade ??? Rather no
  - Explain How to build SCS on top of a TAP service.

- Nicolas Moreau (presented by FB) → Upgrade for SLAP 1.1. make model, queries and responses more consistent with VAMDC model evolutions
  - Comments for larger DALI compliancy effort
  - Question about going directely to SLA version 2 based on VAMDC + TAP ??? Could we need both operations?

Implementations and feedback reports

- Simon O'Toole ->TAP implementation into HADOOP at AAO (anglo australian telescope).
  - Distributed data mangment of a large collection of survey data (2DF, 6DF, RAVE, GAMA, etc…). TAP Library implemented. Partial ADQL implementation
  - Future plans : ADQL mapping; SIA2, SSA, SCS, etc…
- Walter Landry → implementation of CAOM to generate SIAV2.
  - Helped a lot eventually. But difficult to implement
  - Parameter based SIAV2 usefull to help users
  - Other protocols questionned (SSA, DataLink etc..)
- F.Bonnarel -> DataLink feedback
  - Outside ObsCore context: Discover via LINK (single base URL) or via utyping the url and format FIELDS
  - Should add semantics for datasets assocaied with astronomical sources

New ideas, new proposals

- Markus D. → proposal to use sql-array like features in ADQL for second generation SODA. WCPS (similar to WCS) works like this in geosiences
- Ole Streicher –→ PROVDAL is a protocol to retrieve the provenance information with a few mandatory parameters. Implementation exists in Postdam
- F.Bonnarel -> ProvTAP is the project of a TAP service for provenance metadata. Work in progress in Strasbourg
- ProvDAL and ProvTAP spec to be extracted from ProvenanceDM draft
- ProvDAL is simpler to implement thanProvTAP.
- Jesus Salgado and ESA propose a new protocol specification for homogeneous access to visibility checkers of space missions. Extendable to ground observations.

TimeSeries discovery and access

- DAL/DM/TDIG common session Friday morning
- Discovery Use cases distinguish source-driven, Obscore-like driven and physical content driven TimeSeries discovery
- Obscore-like may require additional metadata (exposure, sampling, etc…)
  - A wiki page is to be opened by TDIG to discuss the additional metadata
  - TimeSeries discovery and acces requires small changes in several protocols ? Endorsed notes and TimeSeries Implementation "hat" ? → First draft soon.
- TimeSeries representation and serialization in the hands of DM WG

Reports of DAL services errors by validators

- Ops IG recently reported to us a lot of errors on SCS, SIA, SSA, TAP services, etc…
- For SCS some errata have been recently proposed and will fix problems
- Further investigation needed for other protocols