

# TAP Specification

- current draft is TAP 0.5, posted May 16
- agreements from mailing list
- scope:
  - sync and async query execution
  - ADQL queries and PQL queries
- review agreements/changes since last meeting
- review and decide on outstanding issues

# TAP Spec: REQUEST

- agreed: REQUEST=doQuery
  - LANG=ADQL[-version]
  - LANG=PQL[-version]
  - extensible to other languages (e.g. native SQL)
- LANG=ADQL is mandatory per previous agreements
- aside from doQuery, REQUEST is used for VOSI:
  - REQUEST=getCapabilities
  - REQUEST=getAvailability
  - REQUEST=getTableMetadata
- VOSI requests all to /sync endpoint

# TAP spec: async vs sync

- considerable discussion of async: MUST
  - pro: required for robust services and arbitrary queries in an http environment
  - con: more complicated to implement
- agreement: stay with both mandatory

# TAP Spec: case sensitivity

- agreement on case sensitivity
  - query param names are not case sensitive
  - query language decides the case sensitivity of the values of parameters
    - case insensitive for ADQL
  - query language decides the case sensitivity of character comparison operations within a query
    - case sensitive for ADQL

# TAP Spec: HTTP status codes

- agreement: where possible, be lax about status codes in spec so that some implementations can be more specific
  - previous version required 200 when other codes may provide additional conduit of information or may be set by other software layers
  - VOTable error document remains definitive place to describe errors

# TAP spec: mimetype

- what mimetype for VOTable?
- text/xml;content=x-votable
  - MIME dispatch is supposed to ignore param
  - text/xml only defines charset param
- text/x-votable+xml
- application/x-votable+xml
  - currently specified
  - currently recommended style in XML RFC

# TAP Spec: metadata

- touches TAP\_SCHEMA, VODataService, VOTable
  - added foreign keys
  - put off full coordinate system metadata for later
  - use ADQL datatypes
  - mapping of VOTable <-> ADQL datatypes still up in the air, specifically TIMESTAMP, POINT, REGION
  - need explicit mapping so users can know column types for uploaded tables
  - less important but valuable for result table(s)

# TAP Spec: metadata

VOTable FIELD/PARAM	content/format	RDBMS column
datatype="char"	any text	(VAR)CHAR
datatype="char" ref="?" utype="?" ucd="?"	ISO8601	TIMESTAMP
datatype="char" ref="?" utype="?" ucd="?"	STC-S	POINT
datatype="char" ref="?" utype="?" ucd="?"	STC-S	REGION



# TAP spec: async job resources

- in UWS, each parameter is exposed as a resource of the same name, e.g.
  - \$baseURL/async/<jobID>/phase
  - \$baseURL/async/<jobID>/quote
  - \$baseURL/async/<jobID>/executionDuration
  - \$baseURL/async/<jobID>/destruction
  - \$baseURL/async/<jobID>/error
  - \$baseURL/async/<jobID>/results
- plus TAP specific resources?
  - UWS has an XML schema to describe job
  - need TAP or generic extensions

# TAP Spec: async job description

```
<?xml version="1.0" encoding="UTF-8"?>
<uws:job xmlns:uws="http://www.ivoa.net/xml/UWS/v0.9">
  <uws:jobId>zul81hyjhcu7g17x</uws:jobId>
  <uws:quote>2009-05-06 09:31:22.344</uws:quote>
  <uws:termination>300</uws:termination>
  <uws:destruction>2009-05-13 09:26:22.344</uws:destruction>
  <uws:phase>PENDING</uws:phase>
  <uws:startTime />
  <uws:endTime />
  <uws:resultList />
  <uws:error />

  ...

</uws:job>
```

# TAP Spec: async job description

```
<?xml version="1.0" encoding="UTF-8"?>
<dal:dal xmlns:dal="urn:ivoa:dal:uws-param:0.1"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

  <runid>666</runid>

  <mtime>1970-01-01 00:00:00</mtime>

  <maxrec>42</maxrec>

  <param>
    <name>pos</name><value>240 30</value>
  </param>

  ...
</dal:dal>
```