Astronomy Data Query Language

April 2018

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

ADQL 2.1 submitted for PR review
12th Jan 2018

http://www.ivoa.net/documents/ADQL/20180112/index.html

Key issues

- Errors and omissions
  - BNF grammar
  - Text descriptions

- Reference implementations

- ivo_ functions

- 1=CONTAINS

- Coordinate system

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

ADQL 2.1 submitted for PR review
12th Jan 2018

http://www.ivoa.net/documents/ADQL/20180112/index.html

Good feedback in the mailing list discussion

- Errors and omissions
    - BNF grammar
    - Text descriptions

- Reference implementations
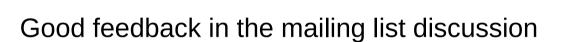
- ivo_ functions

- 1=CONTAINS

- Coordinate system

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

ADQL 2.1 submitted for PR review
12th Jan 2018

http://www.ivoa.net/documents/ADQL/20180112/index.html

Still to be resolved

- Errors and omissions
  - BNF grammar
  - Text descriptions

- Reference implementations

- ivo_ functions

- 1=CONTAINS

- Coordinate system

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

Still to be resolved

- ivo_ functions

- 1=CONTAINS

- Coordinate system

Function names starting with ivo_ are reserved
for functions defined in an IVOA standard.

RegTAP is an example of best practice
for this.

```
ivo_nocasematch()

ivo_hasword()

ivo_hashlist_has()

ivo_string_agg()
```

Note – the standard does not need to be finalized
before a function can be implemented.

Defining the function in a draft standard is enough.

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

Still to be resolved

- ivo_ functions

- 1=CONTAINS

- Coordinate system

Long, long time ago. .. (2014)

I thought we were eventually aiming to replace this :

```
WHERE CONTAINS(…) = 1
```

With this :

```
WHERE CONTAINS(…)
```

Or at least this :

```
WHERE CONTAINS(…) = True
```

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

Yes .. or No ?

Still to be resolved

- ivo_ functions

- 1=CONTAINS

- Coordinate system

Ok – I don't know.

Please, ELI5 – (Explain Like I'm 5)
perhaps over lunch ..

Some tables may have data in different coordinate systems.

TAP_SCHEMA does not include this in the table metadata.

The only way to find out is to query the table and check the metadata for the FIELD element in the VOTable you get back ?

Why are we getting rid of `COORDSYS(column)` ?

What harm/cost/problem are we trying to solve ?

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

- **Acceptance criteria**

  - Good enough for 2.1

  - **Good enough for 3.x**

    Lots of wonderful things ....

    - Machine readable PEG grammar

    - Automatic unit tests

    - Comprehensive set of test queries and data

      - Valid queries that must pass

      - Invalid queries that must be rejected

      - Expected results

      - Error bounds for geometric operations

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

- Acceptance criteria

    - Good enough for 2.1

    - Good enough for 3.x

        - Reference implementations

            - DaCHS

            - 2.1 branch of TAPLib (in collaboration with ROE)

            - … anyone else ?

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

- Acceptance criteria

  - Good enough for 2.1

  - Good enough for 3.x

        - Outstanding issues resolved

        - Specific validation tests for 2.1 changes ?

            - Valid queries that must parse
            - Expected results ?

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

- Acceptance criteria

  - Good enough for 2.1

  - Good enough for 3.x

    - Unlikely to be finished by the meeting in May.

      - Limited developer time available.

      - Please send BNF fixes as diff files.
      - Try to make them as small as possible.

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018

- Acceptance criteria

  - Outstanding issues resolved

    - Lyonetia GitHub project
      https://github.com/ivoa/lyonetia

      - Issue tracking system
      - JSON syntax for test queries

      Should we have issue tracking
      for all our standards ?

      Should we use the *same* issue
      tracking system ?

GitHub

Do we need an IVOA issue
tracker ?

I need something, I keep
loosing things.

D.Morris
Institute for Astronomy,
Edinburgh University
April 2018