



ADQL 2.1
Progress report
May 2017

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Function name prefixes

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Adding a short prefix to the names of our custom functions will make the names unique.

align()
convert() → wfau_align()
 wfau_convert()

Enables users to distinguish between different functions provided by different TAP services

WFAU TAP service → wfau_align()
 wfau_convert()

GAVO TAP service → gavo_align()
 gavo_convert()





Function name prefixes

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Special 'ivo' prefix reserved for functions
that are part of an IVOA standard

For example - the following functions are defined in RegTAP

```
ivo_nocasematch()  
ivo_hasword()  
ivo_hashlist_has()  
ivo_string_agg()
```





Deprecating coordsys param

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Deprecating the coordinate system string param for the geometric functions.

Section on coordinate systems simplified to specify ICRS only.

Remove text referring to cartesian coordinate system.
– no longer relevant.

String param removed (deprecated) from all of the geom functions.

`circle('ICRS', point, radius)` → `circle(point, radius)`

`box('ICRS', point, point)` → `box(point, point)`





Deprecating coordsys param

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Removing the coordsys param causes problems for a few use cases.

These can be met with a small set of coordinate system specific functions.

`circle('GALACTIC', float, float, float, float)`



`galactic_circle(float, float, float, float)`

`box('EQUATORIAL', int, int, int, int)`



`equatorial_box(int, int, int, int)`





Validating the grammar (BNF)

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At the October 2016 interop we decided to delay version 2.1 until the BNF could be validated.

Since then, we have discovered :

- The BNF in the appendix is not BNF
- Strict machine readable BNF is not human friendly
- Defining things like 'not in the list of reserved words' is not possible in BNF

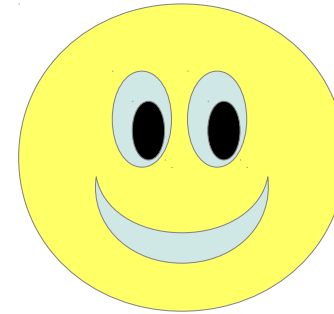




Validating the grammar (PEG)

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There is a solution



Parsing Expression Grammar (PEG)

- Machine readable PEG is human friendly
- Defining things like 'not in the list of reserved words' is easy
- At least one group in the VO are already using it





Next steps

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Proposed plan of action

- Complete version 2.1 with the current grammar
- Work together on the PEG grammar in Lyonetia GitHub project
 - Both the grammar itself and on validation tests for it
<https://github.com/ivoa/lyonetia>
- PEG grammar will form the basis for next version of ADQL
 - Version 2.2 or 3.x depends on the level of changes

