

Fig. 1



Fig. 2



Fig. 3

1. VOResource and Datacite

(cf. Fig. 1)

Markus Demleitner
 msdemlei@ari.uni-heidelberg.de

(cf. Fig. 2)

- The VO Registry: What you already know...
- ... what may be new to you...
- ... and what's new this year.

(cf. Fig. 3)

2. The VO Registry

The VO Registry is built on top of library tech:

- A collection of metadata records...
- ... mostly on data services in astronomy.
- Superset of Dublin Core
- ... including *source* (find data for paper)
- Records disseminated using OAI-PMH

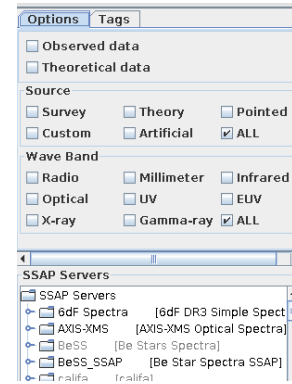


Fig. 4

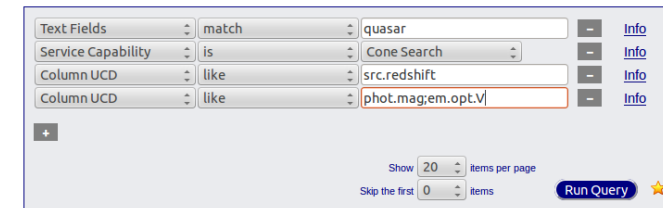


Fig. 5

3. But: Data Services

In addition to plain Dublin Core, to properly deal with services VOResource has:

- capabilities ("image service", "database service", "metadata endpoint", "availability endpoint"...))
- each with 0...n interfaces (access URL, parameters with names, types, units, ...)
- tablesets (columns in underlying tables, with names, types, utils...)
- Sky/time/spectral coverage (conceptually...)

Actually, this type of metadata is more commonly used in the current VO than conventional Dublin Core metadata: "give me all spectral services" is a fairly common thing to query for).

4. Usage of the Registry

Transparently in applications (this is actually the overwhelmingly more common use)

(cf. Fig. 4)

Dedicated interface – here: WIRR¹

¹ <http://dc.g-vo.org/WIRR>

► Large Quasar Astrometric Catalogue 2 (LQAC-2) (Souchay+, 2012) [SCS](#)

▼ Magellanic Quasars Survey: QSOs behind SMC (Kozłowski+, 2011) [SCS](#)

Description
 We report the spectroscopic confirmation of 29 new, 12 plausible, and three previously known quasars behind the central $\sim 1.5\text{deg}^2$ region of the Small Magellanic Cloud (SMC). These were identified in a single 2df/AAOmega observation on the Anglo-Australian Telescope of 268 candidates selected primarily based on their mid-IR colors, along with a smaller number of optically variable sources in OGLE-II close to known X-ray sources.

Last Update
 2013-04-15

IVOA Identifier ("ivoid")
<ivo://cds.vizier/japs/194/22>

► NOT GL survey of multiply imaged quasars (Jaunsen+, 1995) [SCS](#)

Fig. 6

(cf. Fig. 5)

(cf. Fig. 6)

5. Behind the Curtains

RegTAP is a standard mapping of VOResource to about a dozen tables.

Clients use this via TAP to access the Metadata. A TAP endpoint you can use to query this data is <http://reg.g-vo.org/tap>; you can use that together with, for instance, TOPCAT. It's probably a good idea to start with sample queries from the spec².

(cf. Fig. 7)

(you're not supposed to read this; if interested, see 2015A&C....11...91D)

² <http://ivoa.net/documents/RegTAP/index.html>

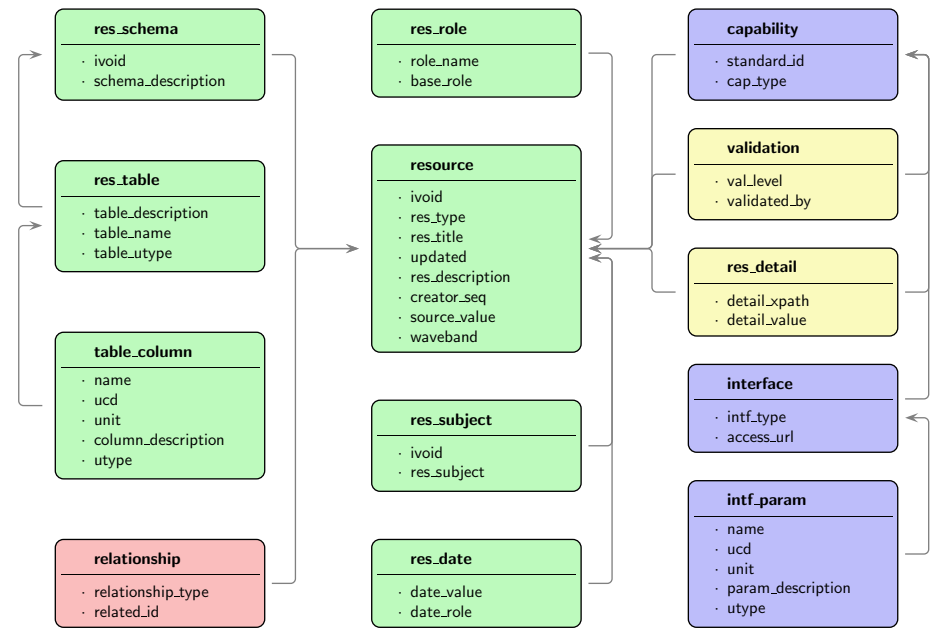


Fig. 7

6. Plus DataCite: VOResource 1.1

VOResource 1.1 tries to enable automatic translation of VOResource records to DataCite records (the other direction wouldn't work as VOResource has the rich metadata on capabilities and tables).

- altIdentifier for specifying DOIs and ORCIDs
- relationship vocabulary has most of DataCite's relationType
- date/role terms are the ones from dateType
- rights and rightsURI are as in DataCite.

There's even a VOResource → DataCite XSLT³.

³ </home/msdemlei/gavo/inputs/voidoi/doitransform/vor-to-doi.xslt>

7. Also in VOResource 1.1

- *subject* should now be taken from the UAT (rather than the IVOA thesaurus)
- Be explicit about uniform author form (Last, F.)

8. Summing up

- The VO Registry arguably is the largest metadata collection for astronomical data collections
- ... containing access URLs, parameter descriptions, table metadata.
- Largely compatible with DataCite
- ... so, if you have data collections, register them (More Info⁴).

Oh, and:

```
select access_url, standard_id
from rr.capability natural join rr.resource natural join rr.interface
where source_value='2010AJ...139.2440R'
```

(In case you're wondering: this is a RegTAP query to find all resources that claim to have a paper on the PPMXL catalog as their bibliographic source; that's the IVOA-endorsed way to search for published data for a given publication.)

⁴ <http://www.g-vo.org/edp-forum-2016/slides/demleitner-registry.pdf>