Writing a Resource Record People Will Find

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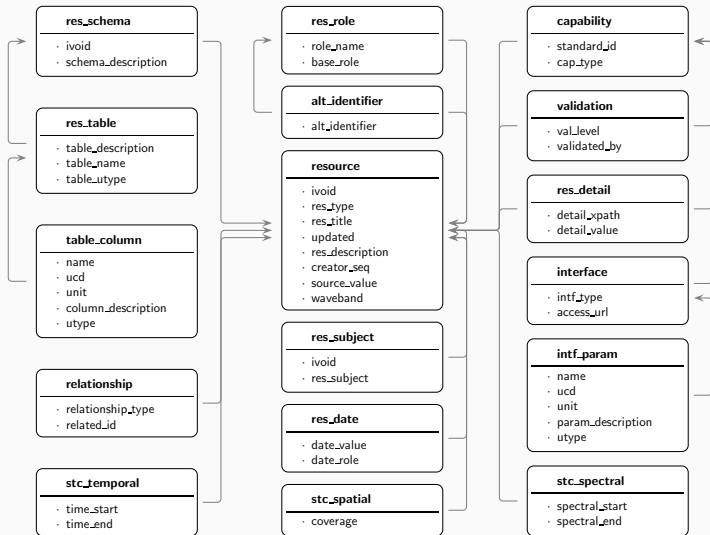Registry WG

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The Problem

In July 2024, I wanted to locate the exoplanet merged catalog ExoMerCat from all of TOPCAT's SCS and TAP windows, and with reasonable pyVO and WIRR queries.

- TOPCAT found exomercat, but WIRR and pyVO didn't
- "exoplanet merged catalogue" did work in pyVO but not in TOPCAT's TAP window
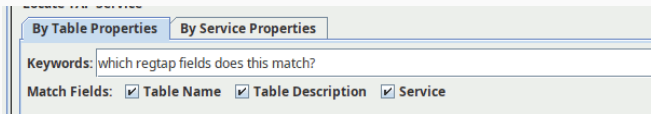- "exoplanet merged catalog" did not work anywhere

How come?
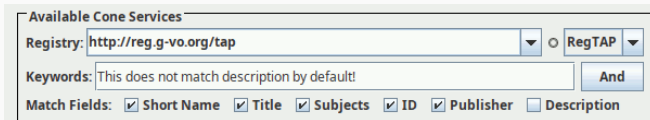
Background: The RegTAP Data Model

Who Matches What?

TOPCAT's default TAP search:

TOPCAT's SCS search:

pyVO and WIRR:

```
base_queries = [
    " 1=ivo_hasword(res_description, {{{parname}}})",
    " 1=ivo_hasword(res_title, {{{parname}}})",
    " rr.res_subject.res_subject ILIKE {{{parpatname}}}"]
```

What Gives?

- Make sure that both your acronym and its expansion is present in both the *resource* title and, if it's a TAP table, in the *table* description.
- Whatever you write in your description will be found in pyVO (and WIRR) but not by default in TOPCAT.
- Authors are never considered by TOPCAT, and are not included in WIRR and pyVO full text searches (but there are special constraints for them).
- As a user, be aware that TOPCAT's RegTAP searches generally do not search description unless you switch it on.

Even Better: Shun Full Text Searches

The root evil is of course the full text search as such.

It would be so much better to search by physics: UCDs, UAT terms, coverage:

"Give me a catalogue-like resource with full-sky coverage which has a column with phys.mass UCD and subject of exoplanet-astronomy or a bit narrower."

I will give you that at this point, this yields fewer resources. But better curated ones, too.

https://dc.g-vo.org/WIRR can be used as a registry component supporting these for TOPCAT (except for TAP, regrettably).

Homework: a Registry Synonyms

That searches for catalog and catalogue yield different results is positively lame.

There is a way around this at least for postgres-based RegTAPs: synonym dictionaries.

Who would be in for maintaining such a thing?

I already have a few pairs.