UCD Assignation tools & Good practices

Tips & tricks for the Semantics enthusiasts

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- What is the problem ?

« Right ascension » → pos.eq.ra
pos.eq.ra;meta.main

« Radial velocity » → spect.dopplerVeloc.opt
or spect.dopplerVeloc.radio
but not   phys.veloc

- It is not an easy task...
  - Extreme case of text mining : find relevant vocabulary words (and combinations) from (very) short definitions
  - The vocabulary is large (>500 words), with some subtleties
  - UCD have special syntactic rules to combine words: syntax codes PSQECV
    - Allowed : P, PS, QS, PQ, ES, PSS, CSS...
    - But NOT : S, SQ, QP, …
- … for expert humans or machines

☐ ASSIGNATION TOOLS

- Several tools and studies...
  - Expert systems
  - Machine learning
  - ...
- ... for few users
  - Few data providers need to assign UCDs on a regular basis
  - → hard to keep knowledge

ASSIGNATION TOOLS

http://cdsweb.u-strasbg.fr/UCD/tools.htx

☐ ASSIGNATION TOOLS

- How to deal with different vocabularies ?
  - Official list of words
  - Test new list of words
    - Test assignation of new words
    - DO NOT BREAK the tool for previous words
  - Need reference examples (definition + UCD) for automated checks

☐ GOOD PRACTICES

- Provide practical examples on common cases
  http://wiki.ivoa.net/twiki/bin/view/IVOA/UCDsUseCases

- A table containing several coordinate values for each tuple :

Column name	alpha1	delta1	alpha2	delta2	...
Description	Raw right ascension	Raw declination	Adjusted right ascension	Adjusted declination	...
UCD	pos.eq.ra	pos.eq.dec	pos.eq.ra;meta.main	pos.eq.dec;meta.main	...

In this case, there are two right ascensions (and declinations), and so it can be useful to append ;meta.main to **one** of the values: this will indicate that if a tool has to pick one right ascension value, the column described by pos.eq.ra;meta.main is to be preferred (*alpha2* here). Therefore, one should avoid to attach identical UCDs containing meta.main to several column within a single table, as it would create ambiguities.

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GOOD PRACTICES

- Related to new Ops IVOA WG ?
  - Help data providers in practical implementation, does not require reading all standard documents
- Complete page with more examples
  - Inputs from individual projects with their feedback

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