DS5

CDS/INAF proposals for Stage 03

Registry query tool

- Follow-up of work in Stages 1-2
- Move to UCD1+
- Explore use of standard query methods (ADQL), and apply to other registries (AG)
- Support standard interfaces for catalogue retrieval (VOTable)
- Demo in august at IAU, Prague

Ontology of object types

- Alexandre Richard will start working @CDS on april 1, 2006 (INAF)
- Complete ontology to include ***all*** SIMBAD types, and work on annotations
- Refine some concepts with more detailed description available in the Thesaurus
- Identify links to other knowledge bases (UCDs, other data models)
- Implement first use case (related to registry search)

Study registry contents

- Variety of keywords used to describe resources
- Try to normalize descriptions (VO semantics)
- Link with the ontology of object types (labels)
- Provide hints on ways to do intelligent resource discovery in the registry

<Resource xmlns:cs="http://www.ivoa.net/xml/ConeSearch/v0.3"
xmlns="http://www.ivoa.net/xml/VOResource/v0.10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="vs:TabularSkyService" xsi:schemaLocation="http://www.ivoa.net/xml/VOResource/v0.10
http://www.ivoa.net/xml/VOResource/VOResource-v0.10.xsd
http://www.ivoa.net/xml/VODataService/v0.5 http://www.ivoa.net/xml/VODataService/VODataService-
v0.5.xsd http://www.ivoa.net/xml/ConeSearch/v0.3
http://www.ivoa.net/xml/ConeSearch/ConeSearch-v0.3.xsd">
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<curation>
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<creator>
<name>Gregorini L., de Ruiter H.R., Parma P., Sadler E.M., Vettolani G., Ekers R.D.</name>
</creator>
<contributor>Patricia Bauer [CDS]</contributor>
<date role="creation">1997-12-09T18:24:16Z</date>
<version>14-Oct-1994</version>
<contact>
<name>CDS support team</name>
<address>CDS, Observatoire de Strasbourg, 11 rue de l'Universite, F-67000 Strasbourg, France</address>
<email>question@simbad.u-strasbg.fr</email>
</contact>
</curation>
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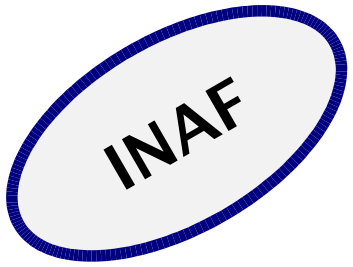
Object Names recognition

- Goal: identify object names in literature, automatically!
- Study and specifications have been made:
  - Text formatting: HTML, PDF, ... to ASCII
  - Tagging (using Dic. of nomenclature, etc)
  - Tool for documentalists to add links, entries in SIMBAD, etc...
- Work on the Tagging task, and compare performances to previous works



Keywords in literature

- Study semantics of keywords in literature
  - In which context do keywords appear
  - What related concepts can be identified
- Explore articles to find expressions corresponding to
  - Ontology concepts
  - Thesaurus entries

e.g.: Neutron Stars

#O = Measured/Derived/Observed properties
O neutron_star cold
O neutron_star hot
O neutron_star radio-quiet
O neutron_star transient
O neutron_star transient X-rays

#P = Physical processes
P neutron_star accreting
P neutron_star accretion
P neutron_star bursting
P neutron_star coalescing
P neutron_star cooling
P neutron_star evolution
P neutron_star glitches
P neutron_star magnetar
P neutron_star magnetized
P neutron_star mergers

#G = Geometrical/Morphological properties
G neutron_star atmosphere
G neutron_star bare
G neutron_star binaries
G neutron_star binaries close
G neutron_star center
G neutron_star core
G neutron_star crust
G neutron_star double
G neutron_star isolated
G neutron_star magnetosphere
G neutron_star magnetosphere active
G neutron_star polarCaps
G neutron_star precessing
G neutron_star surface
...