

SKUA – persisting and sharing annotations

(with a little bit of semantics)

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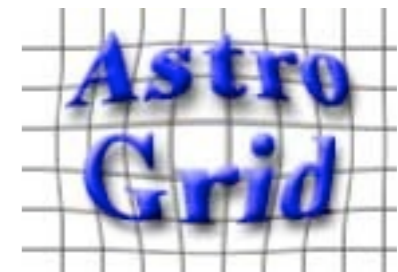
University of Leicester & University of Glasgow, UK

IVOA Interop Strasbourg, 2009 May 28

JISC



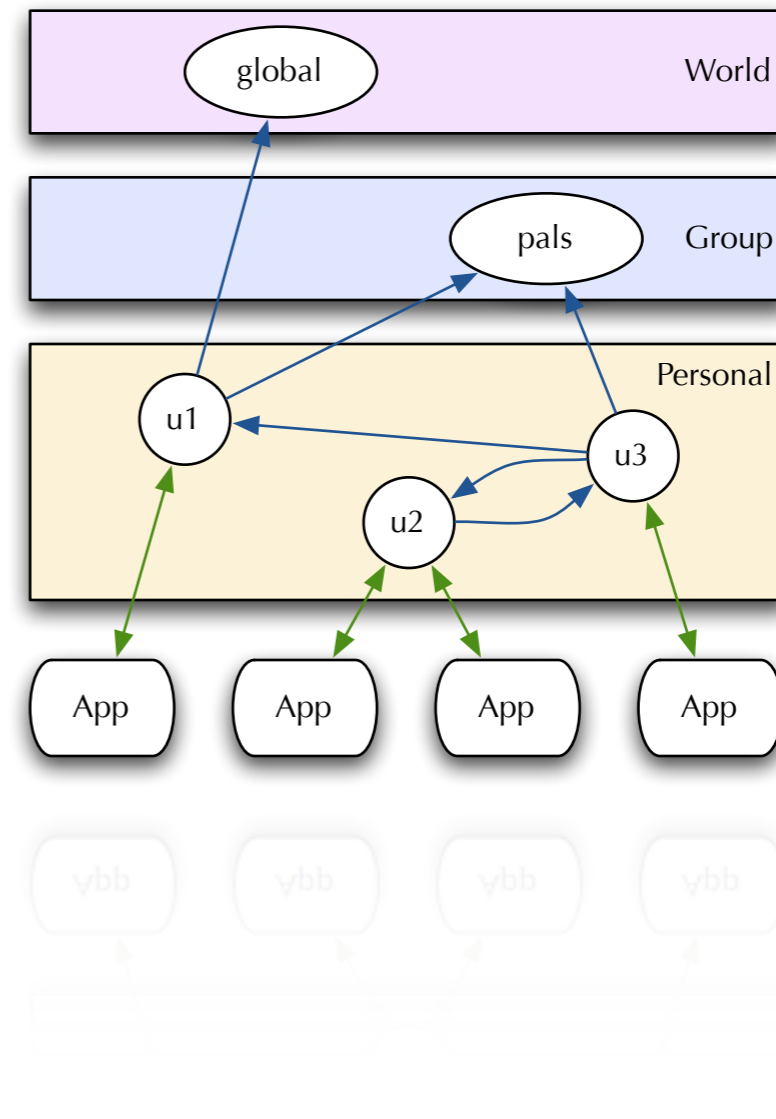
University of
Leicester



SKUA

Storing and sharing annotations, with lightweight semantics.

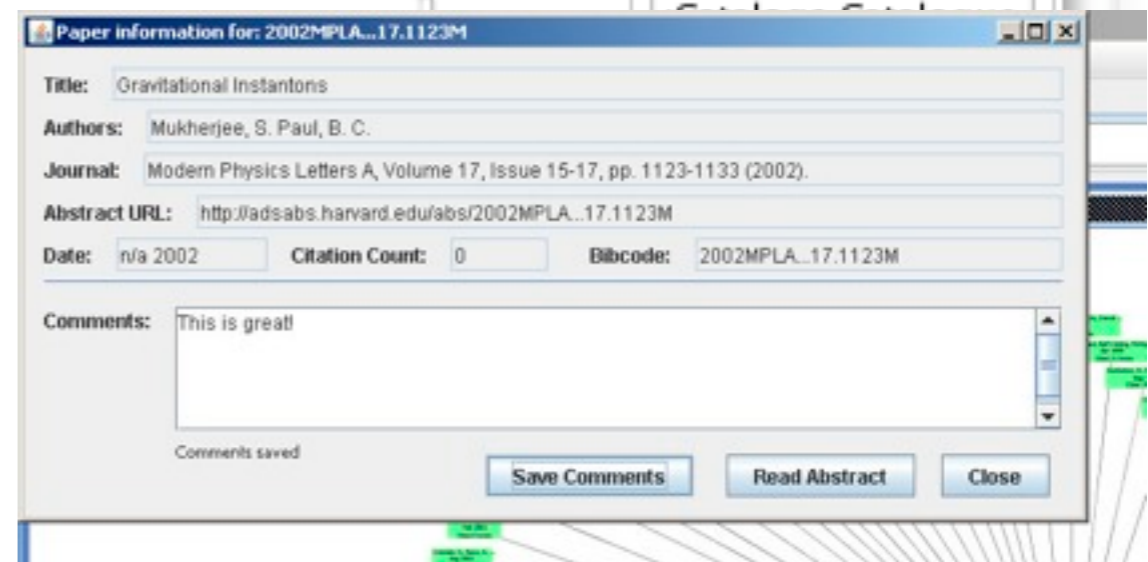
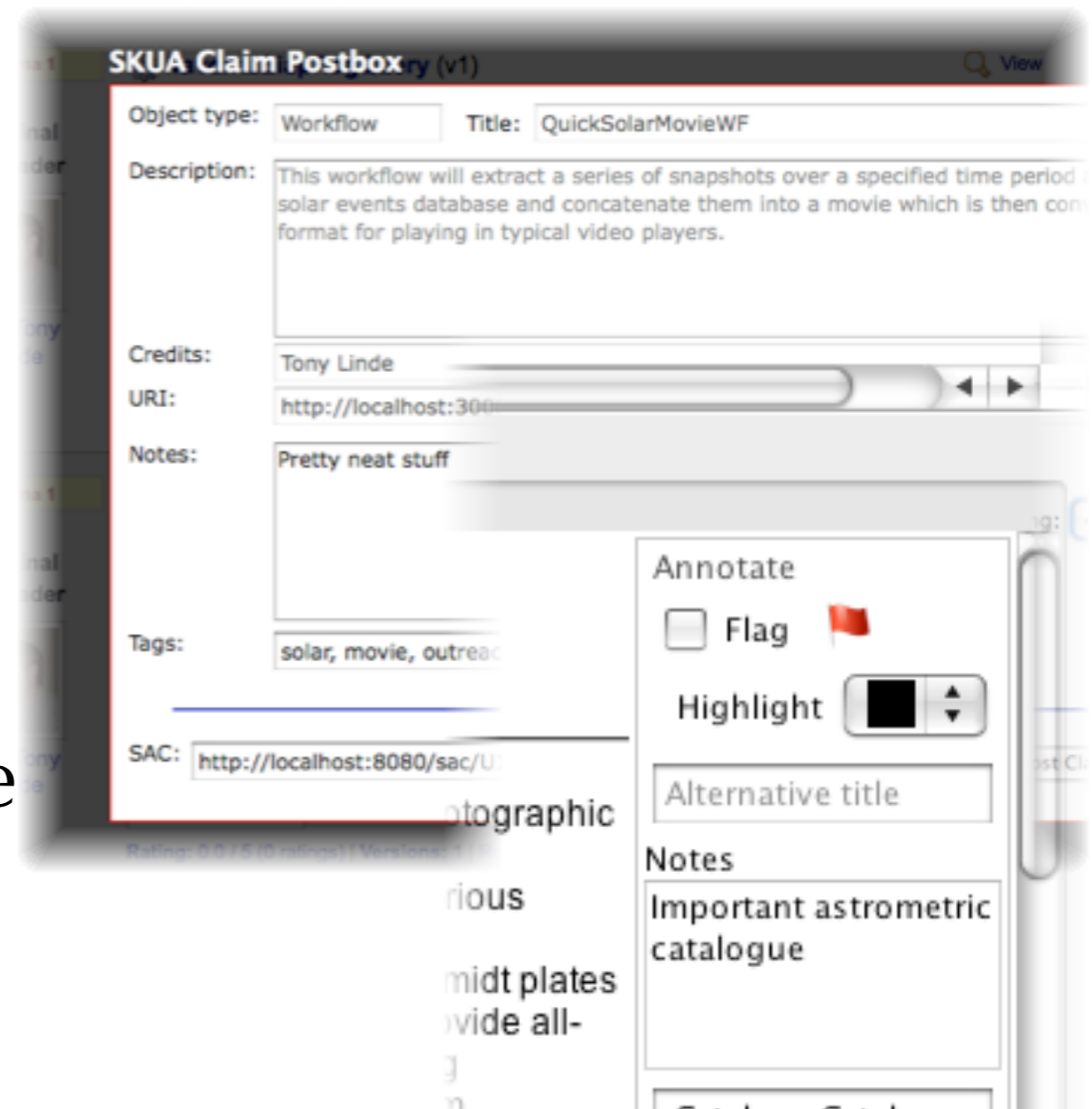
Simple interface – REST
+queries: it's easy to retrofit semantics.



Apps

🍷 Spacebook stores its state in SKUA. 🍷 VOExplorer can store and retrieve annotations using SKUA, and an in-development version can query these.

🍷 PaperScope will shortly be able to store comments using SKUA.



- 'bookmark this resource'
- 'paper X is rubbish'
- 'I think object X is a quasar'

VO Explorer - Cone search examples

Contents of Cone search examples - 5 resources

Filter result:

| Flag... | Title | Capability | Valida... | Date | Tags |
|---------|--|------------|-----------|------------|--------------------|
| | 2MASS All-Sky Extended Source Catalog | | | 2008-04-07 | |
| | 2MASS All-Sky Point Source Catalog | | | 2008-04-07 | aakeys:Surveys |
| | IRAS Point Source Catalog, Version 2.0 | | | 2008-10-03 | |
| | Third Reference Catalog of Bright Galaxies | | | 2008-10-03 | |
| | USNO-B1 Catalogue | | | 2007-04-11 | aakeys:Ephemerides |

Information Table Metadata

USNO-B1 Catalogue

Short Name USNO-B1 ID ivo://fs.usno/cat/usnob
 Type CatalogService Created 2005-03-29T20:18:15 Updated 2007-04-11T08:52:38

Content Type catalog Subject astrometric catalogue, optical astronomy, finding charts, photographic images Level secondary education, community college, university, research, amateur
 USNO-B is an all-sky catalog that presents positions, proper motions, magnitudes in various optical passbands, and star/galaxy estimators for 1,042,618,261 objects derived from 3,643,201,733 separate observations. The data were obtained from scans of 7435 Schmidt plates taken for the various sky surveys during the last 50 years. USNO-B1.0 is believed to provide all-sky coverage, completeness down to V=21, 0.2" astrometric accuracy at J2000, 0.3 mag photometric accuracy in up to five colors, and 85% accuracy for distinguishing stars from nonstellar objects. A brief discussion of various issues is given here, but the actual data are available from the US Naval Observatory Web site and others. [Further Information...](#)

Source Reference 2003AJ....125..984M
 Waveband Coverage optical

Annotate

Flag

Highlight

Alternative title

Notes

Important astrometric catalogue

:Catalogs Catalogue

Resource Lists

- Examples
 - Recent Changes
 - VO taster list
 - Cone search examples
 - Image access example
 - Spectrum access exam
 - Remote applications
 - Queryable database e
 - IR redshift
 - Solar services
 - SWIFT follow up

+ New Smart List

Actions

Query

About

Selection: CatalogService

Further Info

Email Curator

voexplorer annotations

- VOExplorer already has an annotation interface, which saves to a local file
- ... and can now save to a SKUA node
- ... and read from your own and your friends' SKUA nodes



skua assertions

@base <http://blah/my-sac>.

@prefix s: <http://myskua.org/claimtypes/1.0/>.

@prefix dc: <http://purl.org/dc/elements/1.1/>.

@prefix aa: <http://www.ivoa.net/rdf/Vocabularies/AAkeys>.

<#b1>

a s:bookmark;

s:ref [

a s:resource;

s:url <ivo://fs.usno/cat/usnob>;

dc:title "USNO-B";

s:extended "The USNO-B catalogue"

];

s:tag "catalogues";

s:subject aa:Ephemerides;

s:time "2009-05-21T18:11:58Z".

(...or in RDF/XML)

```
<?xml version="1.0" encoding="utf-8"?>
<rdf:RDF xmlns:aa="http://www.ivoa.net/rdf/Vocabularies/AAkeys"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:s="http://myskua.org/claimtypes/1.0/"
  xml:base="urn:example.org">
  <s:bookmark rdf:about="http://blah/my-sac#b1">
    <s:ref>
      <s:resource>
        <s:extended>The USNO-B catalogue</s:extended>
        <s:url rdf:resource="ivo://fs.usno/cat/usnob"/>
        <dc:title>USNO-B</dc:title>
      </s:resource>
    </s:ref>
    <s:subject
      rdf:resource="http://www.ivoa.net/rdf/Vocabularies/AAkeysEphemerides"/>
    <s:tag>catalogues</s:tag>
    <s:time>2009-05-21T18:11:58Z</s:time>
  </s:bookmark>
</rdf:RDF>
```


query using vocabulary relations

SPARQL query:

```
prefix skua: <http://myskua.org/claimtypes/1.0#>
prefix aa: <http://www.ivoa.net/rdf/Vocabularies/AAkeys#>
prefix skos: <http://www.w3.org/2008/05/skos#>

SELECT ?uri ?kw
WHERE {
  ?claim skua:ref [ skua:uri ?uri ].
  ?claim skua:keyword ?kw.
  ?kw skos:broader aa:AstrometryAndCelestialMechanics.
}
```

Response:

```
% curl --data-binary @get-astrometry.rq \
  -H content-type:application/sparql-query -H accept:text/csv \
  http://localhost:8080/qsac/sac/desktop-sac
uri,kw
ivo://fs.usno/cat/usnob,http://www.ivoa.net/rdf/Vocabularies/AAkeys#Ephemerides
%
```

- You don't have to have drunk the SemWeb kool-aid to fill in a string template for some Turtle assertions
- Nor do you have to know lots of theory to use a SPARQL template
- And every scripting language can do HTTP

- Version 0.4 available from <http://skua.googlecode.com>
- Documentation is at <http://myskua.org/doc/qsac/>
- Persistence and delegation are available now
- Authentication and authorization are coming soon
- People: Norman Gray and Tony Linde (Leicester, UK) and Kona Andrews (ROE, UK)

myskua.org
skua.googlecode.com
nxg.me.uk/norman

