VO & Astro-Wise

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What will we see?

VO: what, why and how?
Astro-Wise data in VO: how to publish
VO data in Astro-Wise: how to use

Why VO?

CADC/CCDA

ADAC
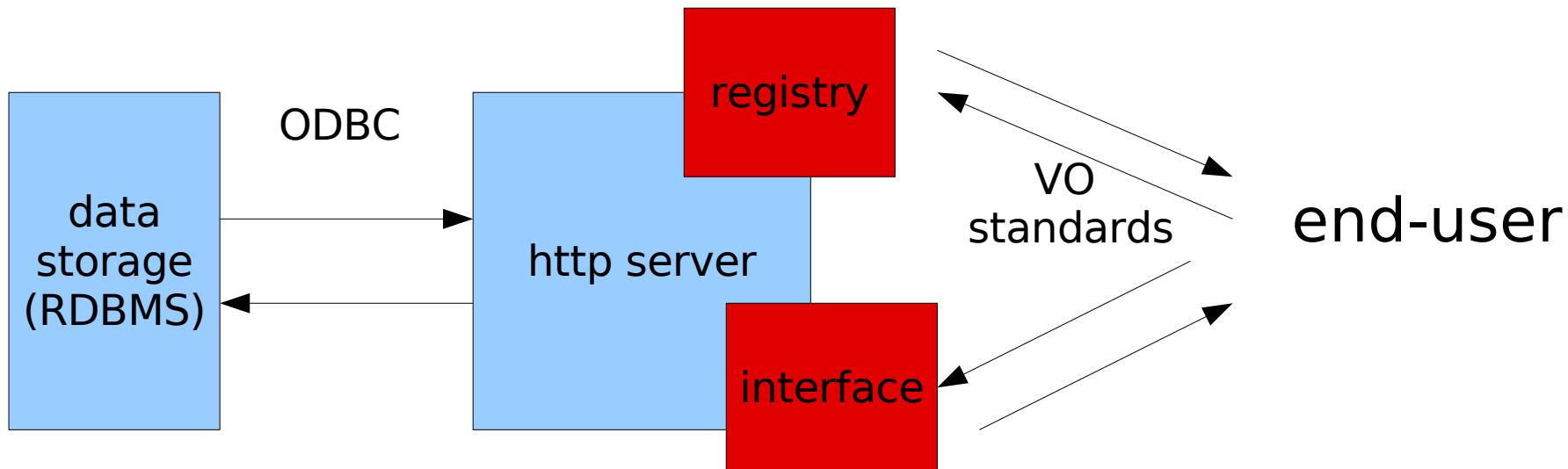
standards

Plastic
RoR
European registry

implementation

CDS CENTRE DE DONNÉES ASTRONOMIQUES DE STRASBOURG

ads NASA

CDS CENTRE DE DONNÉES ASTRONOMIQUES DE STRASBOURG

EURO VO DATA CENTRE ALLIANCE

1970   1980   1990   2000   2010

Publishing in VO

- put data in a place available for an external user

- provide a standard VO service (ConeSearch-STA, SIA, SSA)

- register data

Description of resources: XML
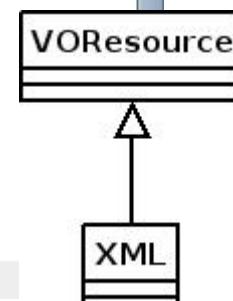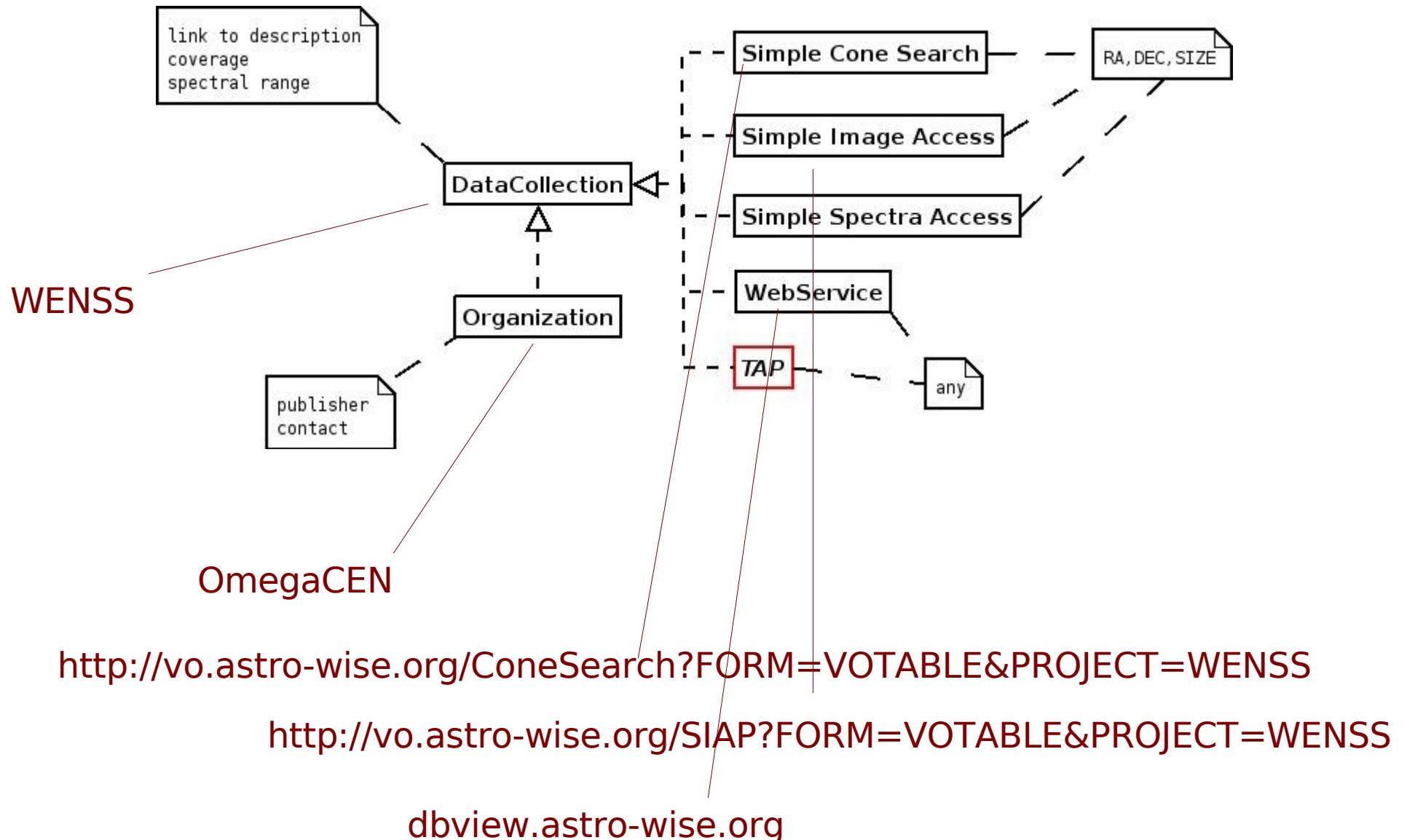
```
- <ri:VOResources xsi:schemaLocation="http://www.ivoa.net/xml/VOResource/v1.0">
  - <ri:Resource status="active" updated="2007-03-28" xsi:type="Organization" created="2007-03-28">
      <vr:title>Astronomical Wide-field Imaging System for Europe</vr:title>
      <vr:shortName>Astro-Wise</vr:shortName>
      <vr:identifier>ivo://AW/AW</vr:identifier>
    - <vr:curation>
        <vr:publisher ivo-id="ivo://AW/registry"> Astro-Wise VO Registry</vr:publisher>
      - <vr:contact>
          <vr:name>Edwin A. Valentijn</vr:name>
          <vr:email>valentyn@astro.rug.nl</vr:email>
        </vr:contact>
      - <vr:contact>
          <vr:name>Gijs Verdoes Kleijn</vr:name>
          <vr:email>verdoes@astro.rug.nl</vr:email>
        </vr:contact>
      </vr:curation>
    - <vr:content>
      - <vr:description>
          Astro-Wise is a federated informational system for astronomy. The Astro-WISE information system started out being used for data
          from one particular astronomical optical wide field imager: OmegaCAM.
        </vr:description>
        <vr:referenceURL>http://www.astro-wise.org</vr:referenceURL>
        <vr:contentLevel>University</vr:contentLevel>
        <vr:contentLevel>Research</vr:contentLevel>
      </vr:content>
    </ri:Resource>
  </ri:VOResources>
```

Done
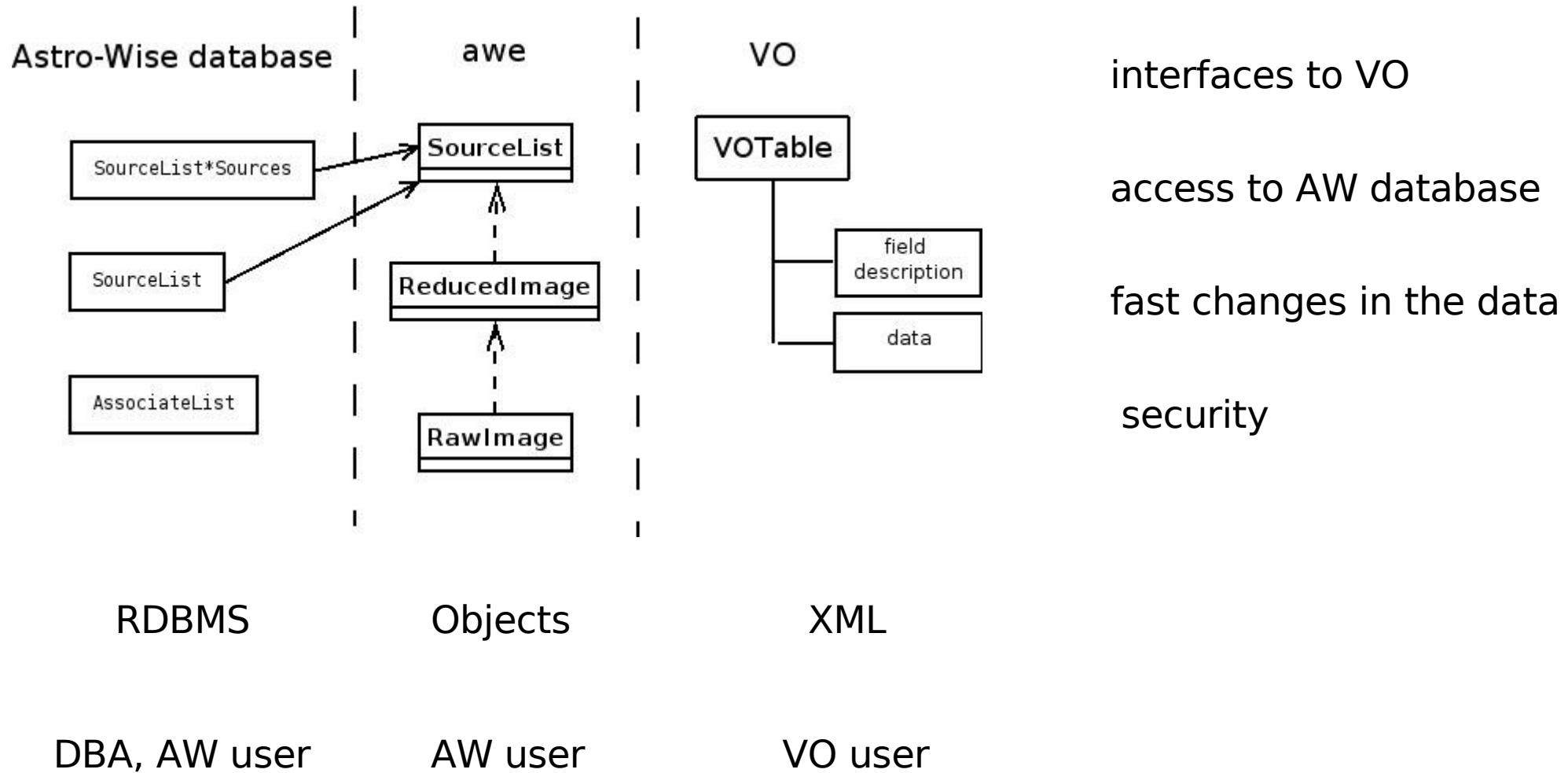
VOResource

XML

Hierarchy of resources

link to description
coverage
spectral range

DataCollection

WENSS

Organization

publisher
contact

OmegaCEN

Simple Cone Search — RA,DEC,SIZE

Simple Image Access

Simple Spectra Access

WebService

TAP — any

http://vo.astro-wise.org/ConeSearch?FORM=VOTABLE&PROJECT=WENSS

http://vo.astro-wise.org/SIAP?FORM=VOTABLE&PROJECT=WENSS

dbview.astro-wise.org
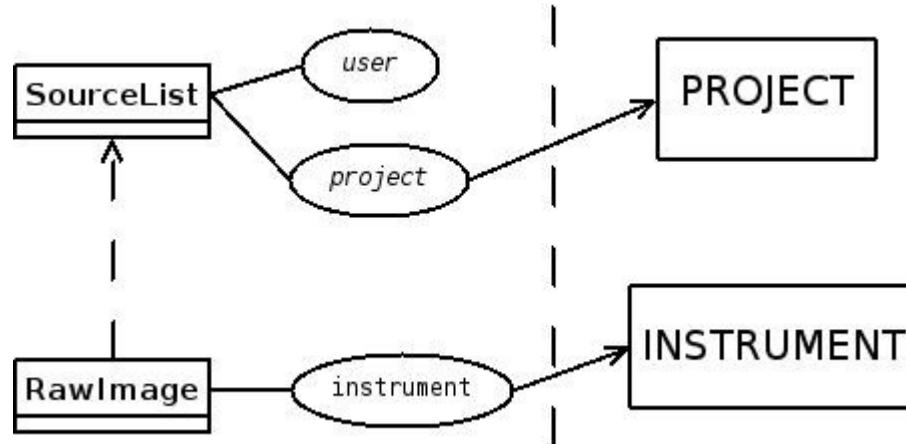
Astro-Wise problems: Data

Astro-Wise database	awe	VO
SourceList*Sources	SourceList	VOTable
SourceList	ReducedImage	field description
AssociateList	RawImage	data

interfaces to VO

access to AW database

fast changes in the data

security

RDBMS	Objects	XML
DBA, AW user	AW user	VO user

Astro-Wise problems: Access

uniform identifier
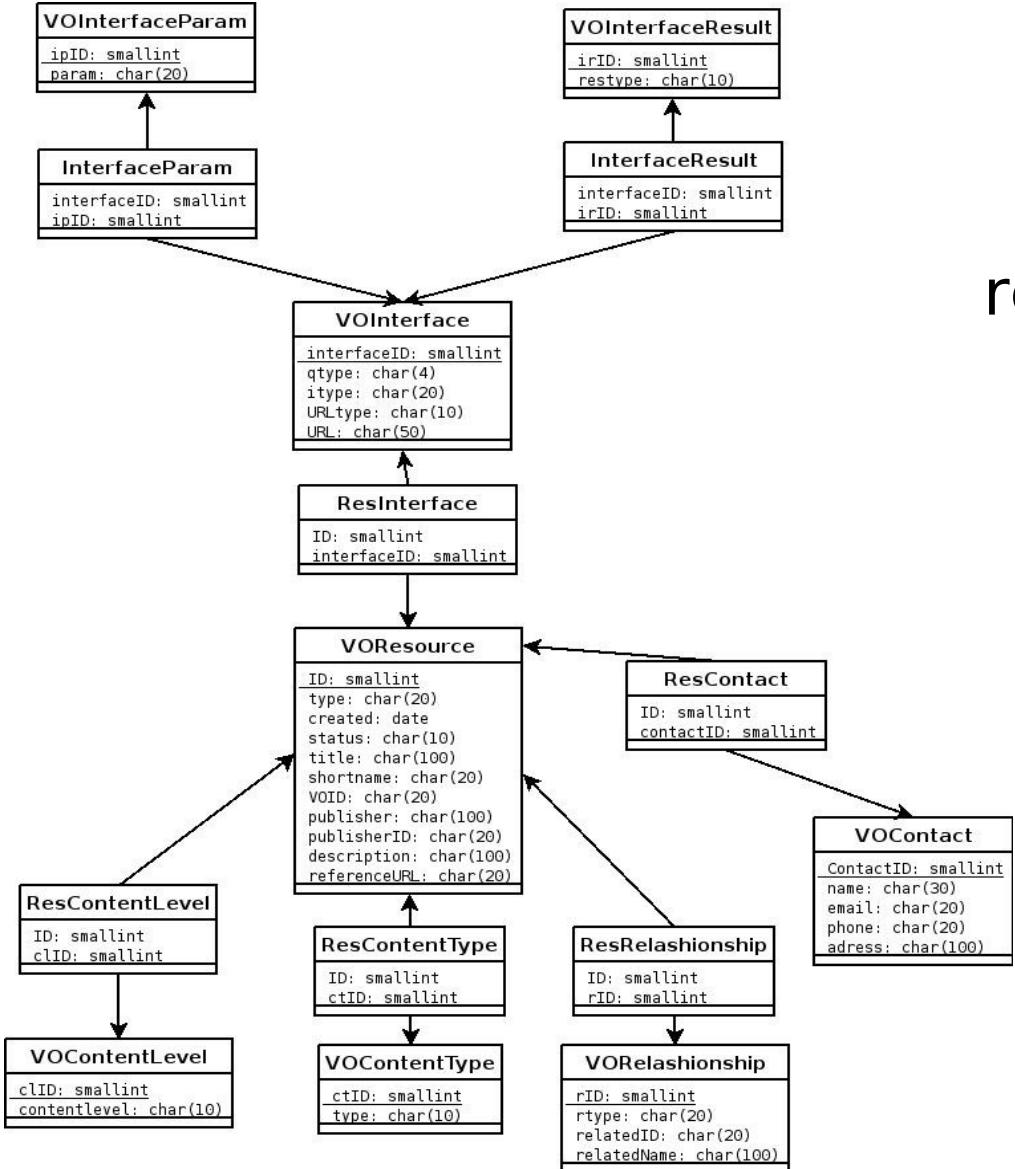
access by project, instrument

as less changes in AW concept as possible

VO layer on top of AW

more functionality

Registry

VOInterfaceParam

ipID: smallint
param: char(20)

InterfaceParam

interfaceID: smallint
ipID: smallint

VOInterfaceResult

irID: smallint
restype: char(10)

InterfaceResult

interfaceID: smallint
irID: smallint

VOInterface

interfaceID: smallint
qtype: char(4)
itype: char(20)
URLtype: char(10)
URL: char(50)

ResInterface

ID: smallint
interfaceID: smallint

VOResource

ID: smallint
type: char(20)
created: date
status: char(10)
title: char(100)
shortname: char(20)
VOID: char(20)
publisher: char(100)
publisherID: char(20)
description: char(100)
referenceURL: char(20)

ResContact

ID: smallint
contactID: smallint

VOContact

ContactID: smallint
name: char(30)
email: char(20)
phone: char(20)
adress: char(100)

ResContentLevel

ID: smallint
clID: smallint

VOContentLevel

clID: smallint
contentlevel: char(10)

ResContentType

ID: smallint
ctID: smallint

VOContentType

ctID: smallint
type: char(10)

ResRelashionship

ID: smallint
rID: smallint

VORelashionship

rID: smallint
rtype: char(20)
relatedID: char(20)
relatedName: char(100)

local publishing registry

relational database-like structure
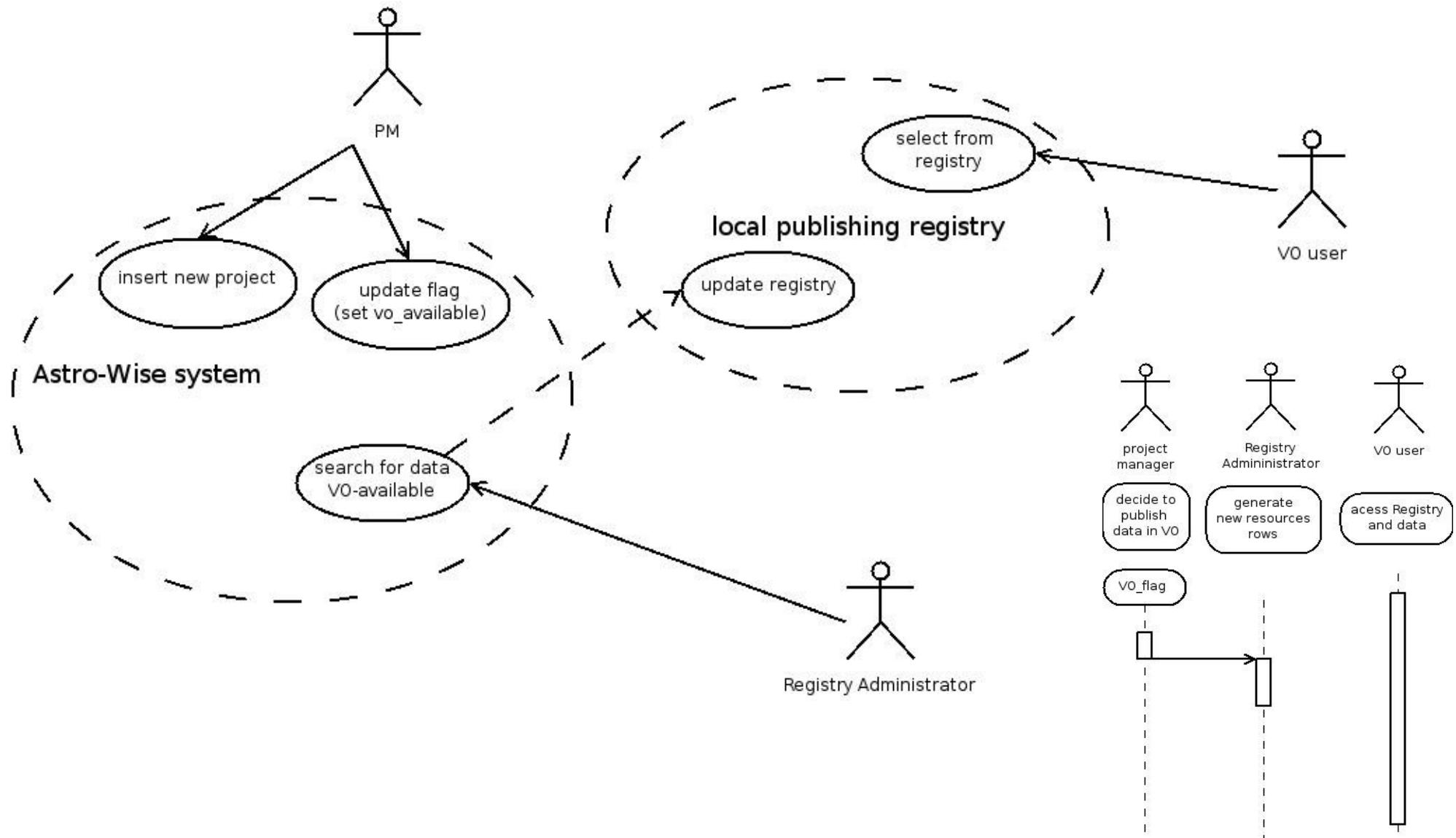
python

compact: 50 records

AW class

Registry

local *dynamic* publishing registry

VO services

catalogs, images   ➡   ConeSearch, SIA

http://vo.astro-wise.org/ConeSearch?FORM=VOTable&PROJECT=ESO-LV

http://vo.astro-wise.org/ConeSearch?FORM=VOTable&INSTRUMENT=WFI@2.2m

http://vo.astro-wise.org/SIAP?FORM=VOTable&PROJECT=ESO-LV

http://vo.astro-wise.org/SIAP?FORM=VOTable&PROJECT=ESO-LV
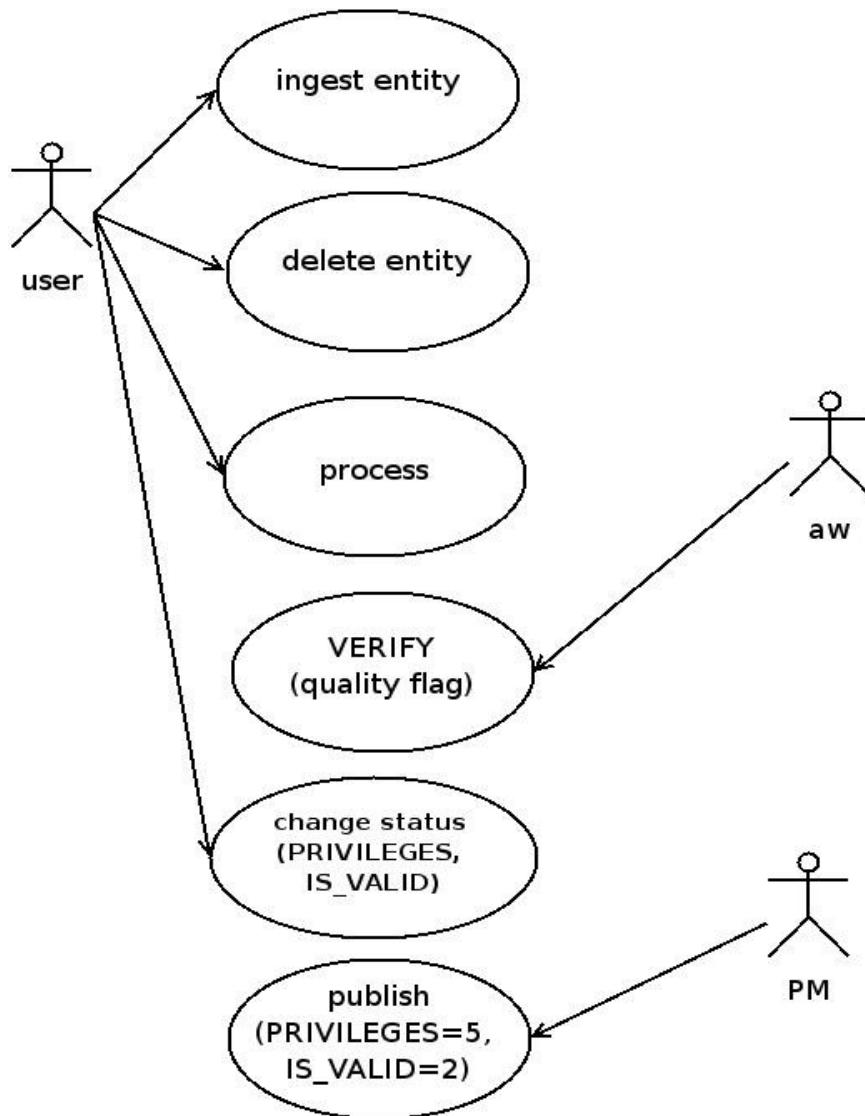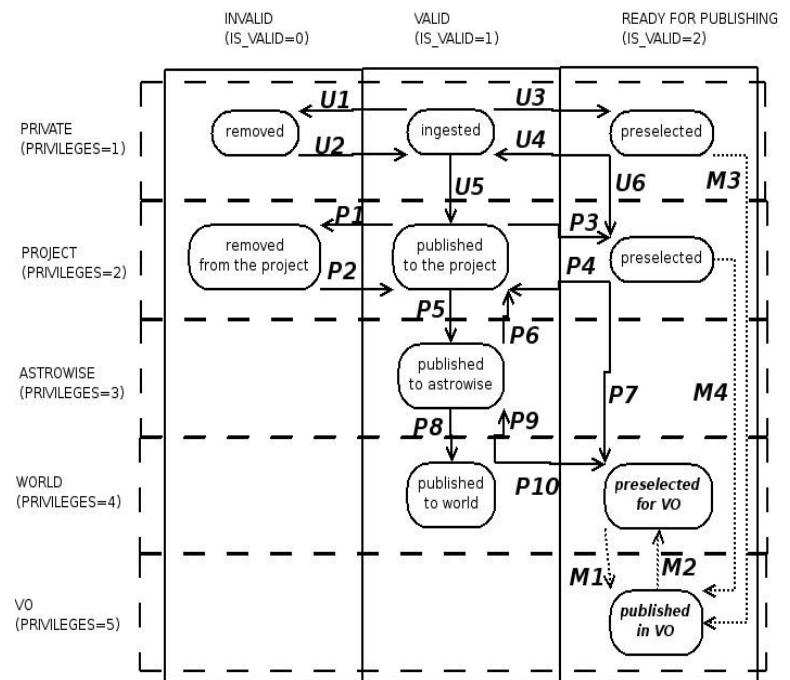
Publishing in Astro-Wise
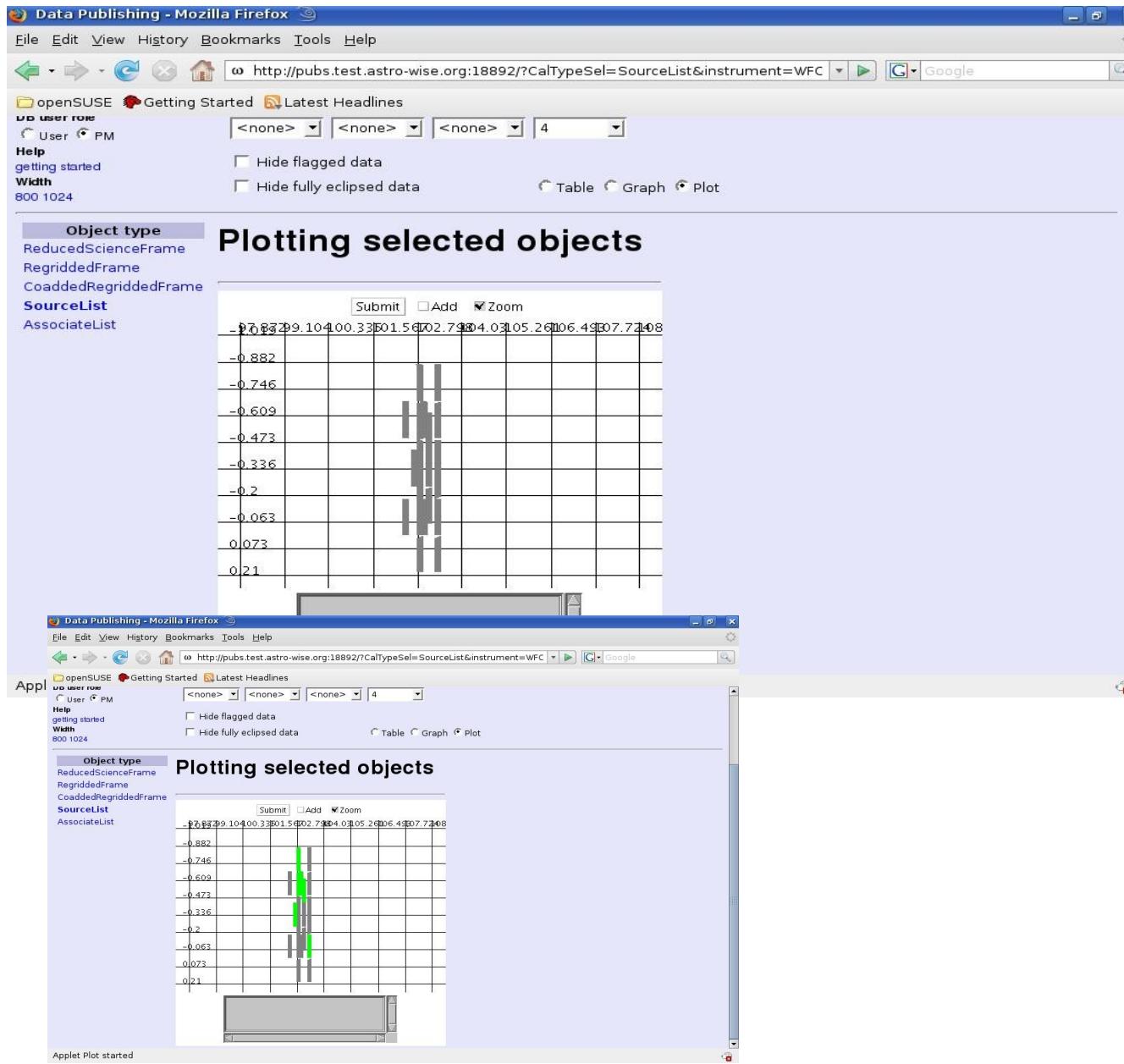
old Astro-Wise aproach for new goals

context
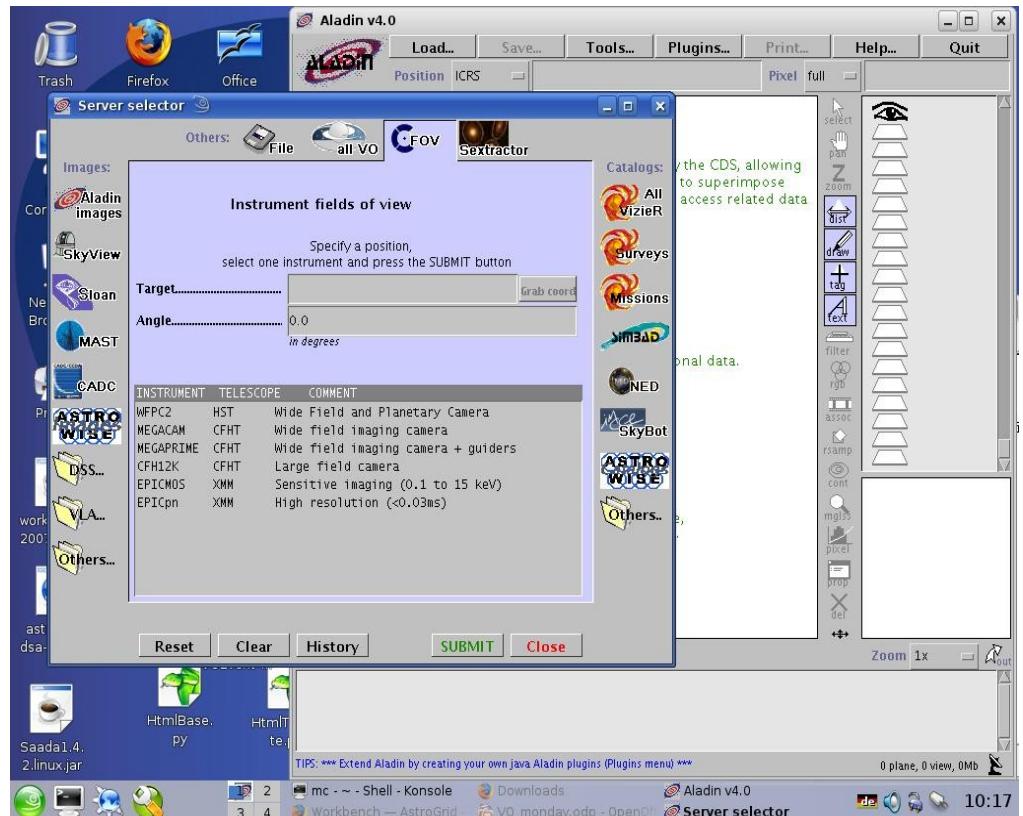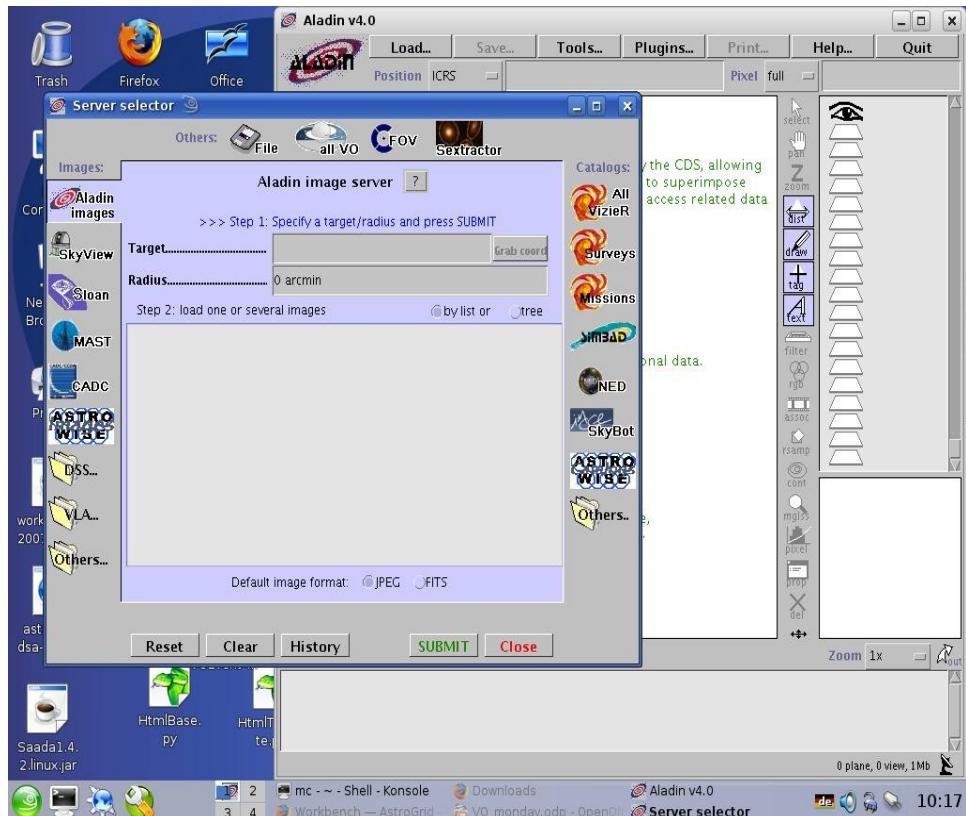
change privileges

pubs service

two levels: **PM**
user

data release

not only for
VO publishing
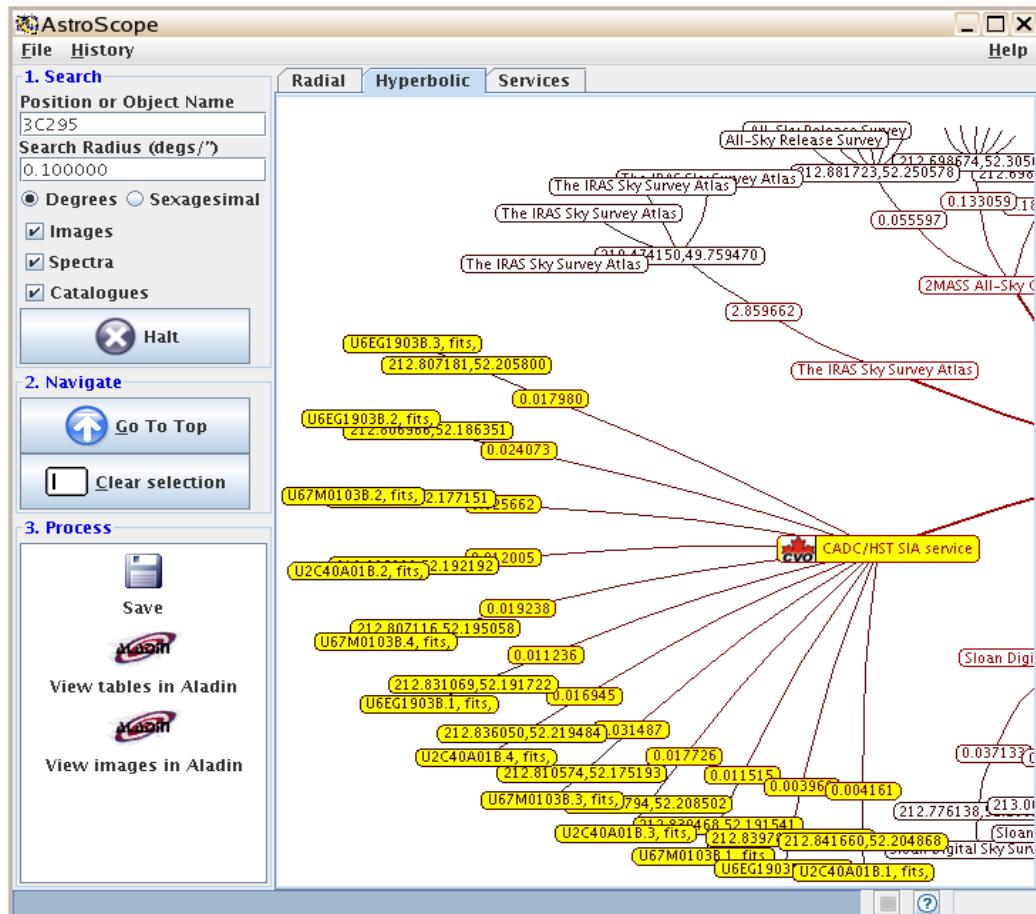
Aladin

catalogs, images

FOVs

Tools: Astrogrid
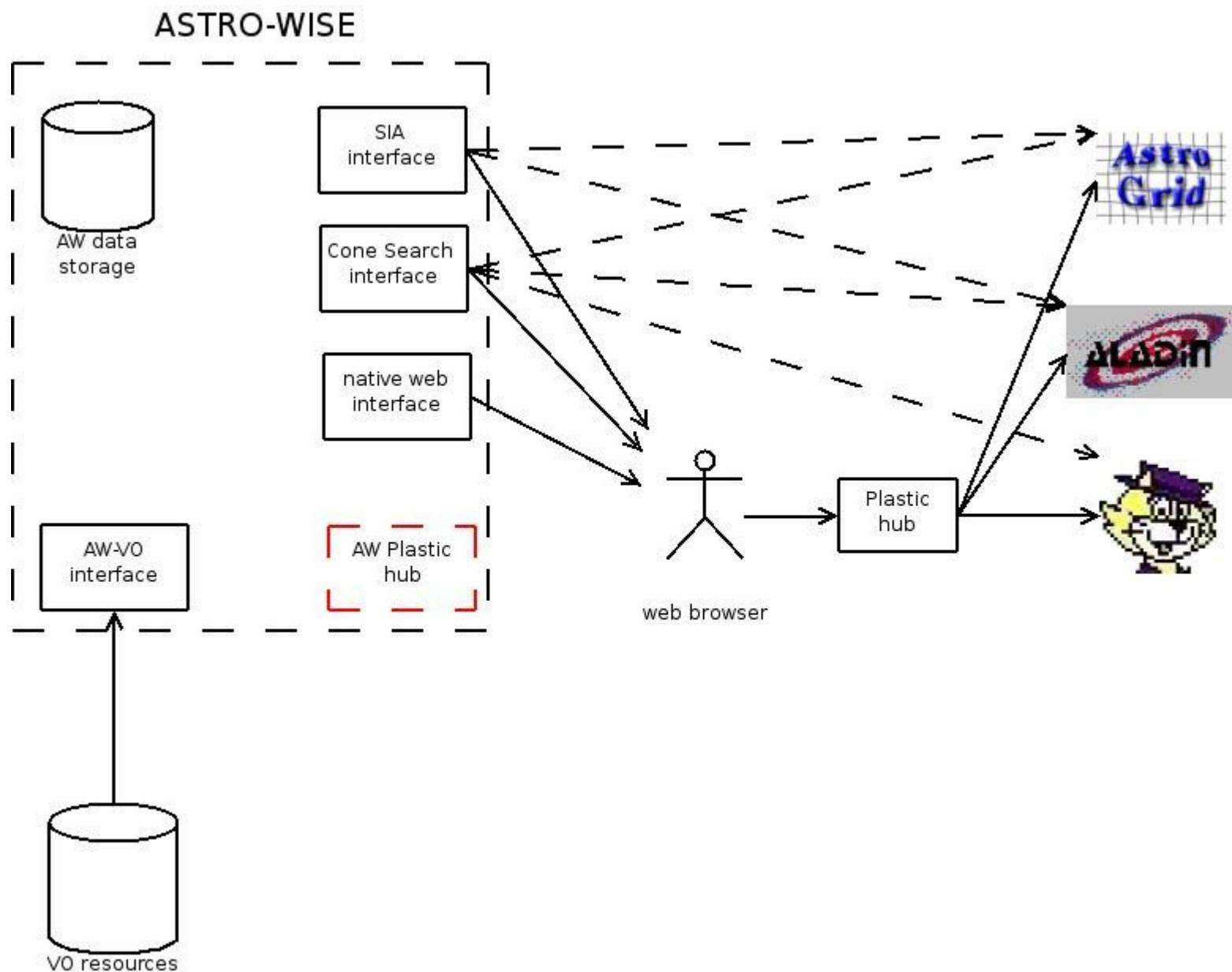
DSA in AW

XSLT approach

no direct access
               to database

ConeSearch, SIA, ADQL

SkyNode

Tools: Plastic

Publishing in VO from Astro-Wise

- PM for each project
- new context
- responsibility
- description
- registration on fly

VO in Astro-Wise: Example

VO in Astro-Wise: Example

Access to VO data

VOTable to SourceList

dictionary in AccessVOResource

dictionary attached to VOResource file

new SourceList: up to 20 new magnitudes

*limited subselection of attributes*

SIA result to AW
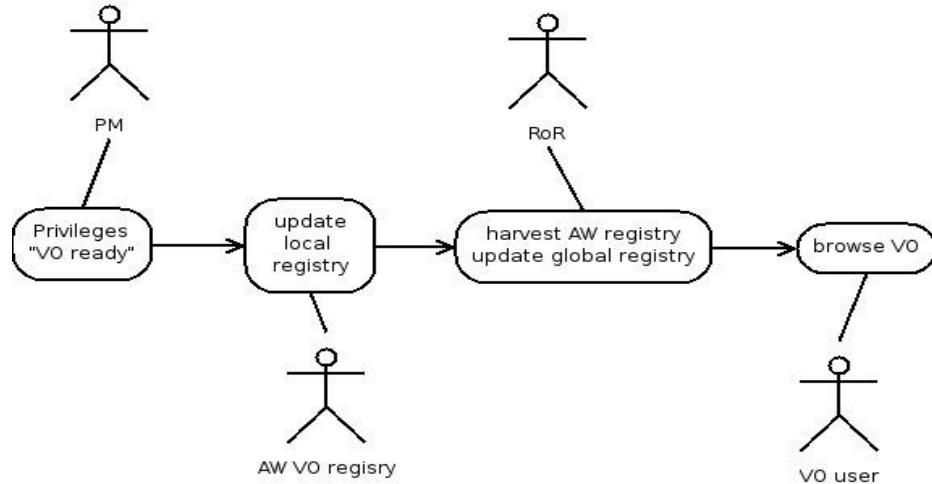
limited subselection of attributes

AW image: depend on other AW objects
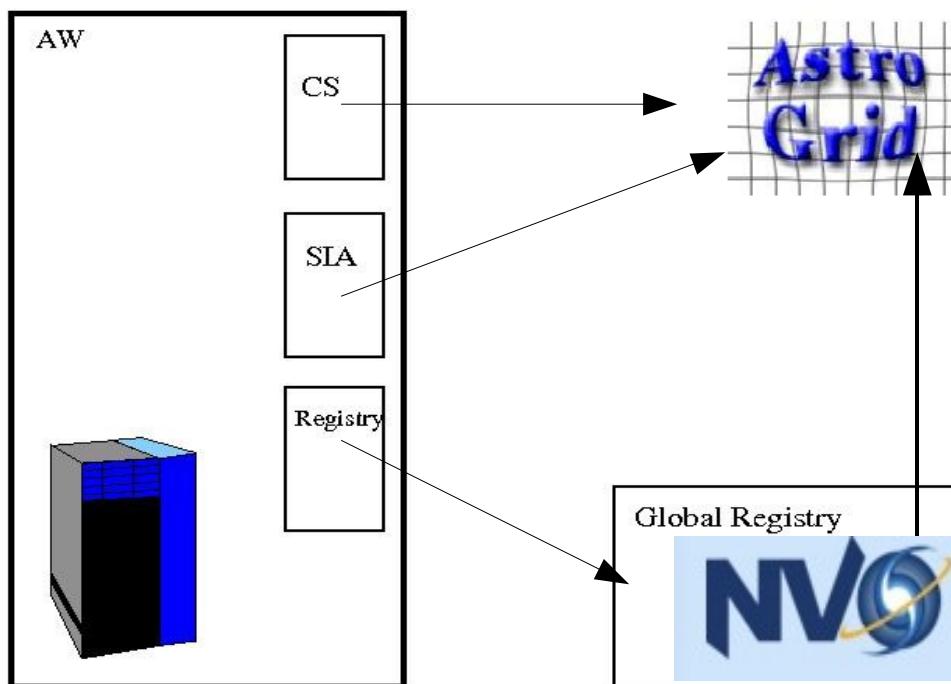
private or public

restriction on the available space

Future plans: RoR
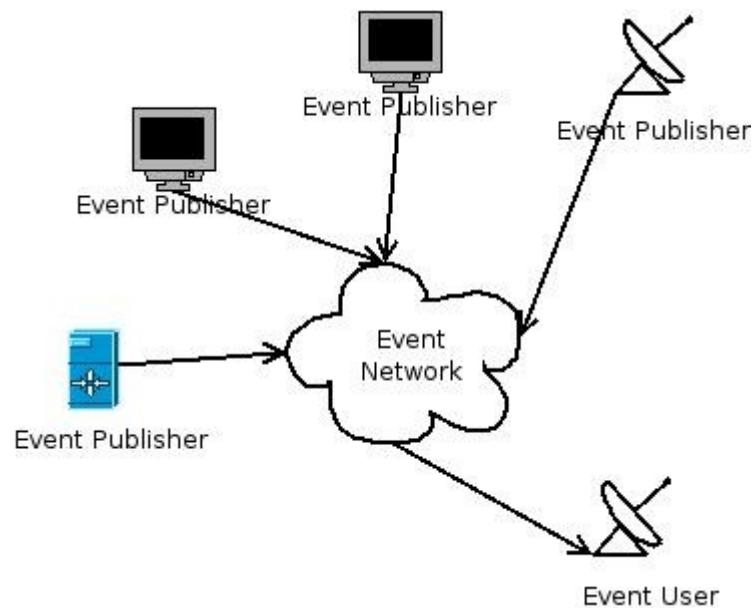
registration in AW registry -
registration in global registry
data are open for access

one step process for publishing

Future plans: VOEvent

VOEvent: registry for transient events

PLEASE, PUT THE DATA IN