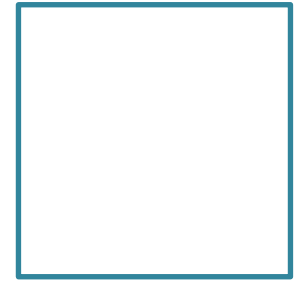


Datalink SI/V2 and SODA feedback



F. Bonnarel
acknowledges a lot of people



Goal

- Review feedback discussions
- Propose solutions in Victoria
- Implementation notes or errata

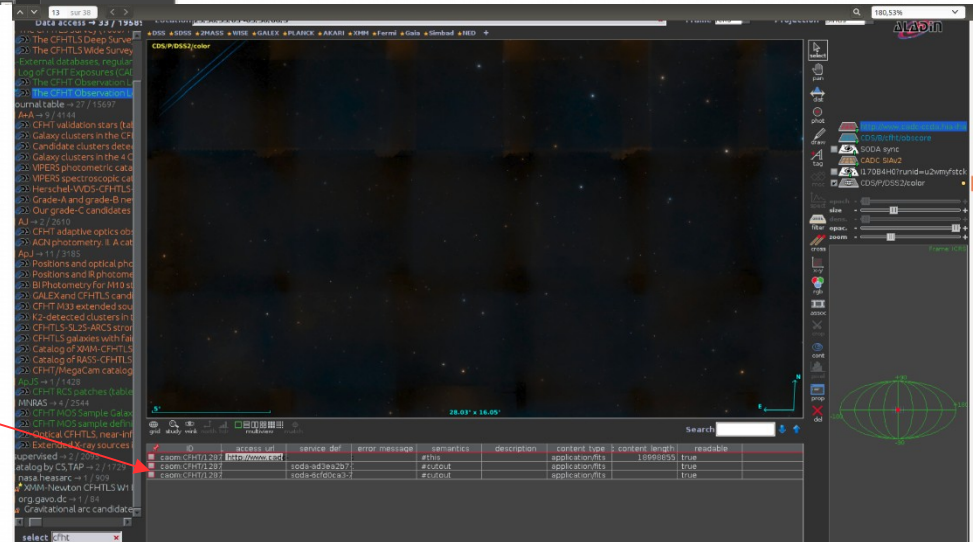


The datalink issue



The field with the Datalink url is not recognized as such. Client cannot prepare appropriate behavior (DataLink popup window)

DataLink table is displayed in a wrong mode / not recognized as such



Current specification

- If the table doesn't contain the {links} resource URL the specification says:
 - A DataLink Service descriptor helps us to define the {links} resource URL :

```
<RESOURCE type="meta" utype="adhoc:service">
<PARAM name="standardID" datatype="char" arraysize="*" value="ivo://ivoa.net/std/DataLink#links-1.0"/>
<PARAM name="accessURL" datatype="char" arraysize="*"
value="http://example.com/mylinks" />
  <GROUP name="inputParams">
    <PARAM name="ID" datatype="char" arraysize="*" value="" ref="primaryID"/>
  </GROUP>
</RESOURCE>
```

--→ Reluctancy to use it, look for other solutions at implementaion level



PROPOSALS

- Use classical VOTABLE LINK instead (attached to the table level) with new `content-type = « votable/xml;datalink »`

<FIELD/TABLE...> <LINK content-type="xxx" href="xxx" ...>

Example for a FITS image:

```
<FIELD name="Image" ucd="meta.ref.url" datatype="char" arraysize="1">
  <DESCRIPTION>[YN] Epic image of this observation (FITS)</DESCRIPTION>
```

```
  <LINK content-type="image/fits" title="Image" href="http://vizier.u-strasbg.fr/viz-bin/nph-htx/A?
  %5cvizContent%7b${Image}foo&bar"/>
</FIELD>...
```

- Current list of content-types : image/fits, spectrum/fits, catalog/fits , etc..
- Behavior of application (Aladin) changes according to that
- Add content-type = "votable/xml;datalink"

```
<TABLE name=« Catalogue" >
```

```
  <LINK content-type=« votable/xml;datalink" title="Image"
  href="http://dummy.service/datalink/ID=${source}/foo&bar"/>
```

....





PROPOSALS : ucd

- Add a complement to the url ucd of the field

`<FIELD name="url" ucd="meta.ref.url;meta.type.datalink" datatype="char" arraysize="128*">`

- Pros :

- Self consistent easy ? Mark and Markus in favor

- Cons :

- Ucd approach difficult to generalize: Fuzzy+fuzzy not always gives accurate meaning
- Ad hoc solution
- Ucd is generally for FIELD content, not return.



Discussion : LINK

- Pros :
 - Extends already working functionality.
 - URL templating
 - Already used by ESO. Works in Aladin
- Cons :
 - Doesn't work if url format changes from line to line
 - Extend the VOTABLE standard too heavy



The non-ObsCore table already contains {links} URL

- ◌ If the table contains a URL with dataLink. How do we tag it ?
 - ◌ In Obscore context, the column « format » beside the « reference » column tells us if the URL is a datalink .
 - ◌ The value must be « application/votable+xml;content=datalink »



Proposal

- ◌ Add a GROUP with two columns with Obscore utypes (or more)

```
<RESOURCE ID="yCat_102009" name="B/xmm">
  <DESCRIPTION>XMM-Newton Observation Log (XMM-Newton Science Operation Center, 2012)</DESCRIPTION>
  <COOSYS ID="J2000" system="eq_FK5" equinox="J2000"/>
  <TABLE ID="B_xmm_xmmlog" name="B/xmm/xmmlog">
<DESCRIPTION>The XMM-Newton Observation log (2017-04-24)\vizContent{image/fits}</DESCRIPTION>
...
  <GROUP utype="Obs:access">
    <FIELDREF ref="B" utype="Obs:access.format" />
    <FIELDREF ref="C" utype="Obs:access.reference" />
    <FIELDREF ref="D" utype="Obs:dataID.title" />
  </GROUP>
<FIELD ID="B" name="Format">
  <DESCRIPTION>Encoding format</DESCRIPTION>
</FIELD>
<FIELD ID="C" name="Image" ucd="meta.ref.url" datatype="char" arraysize="1">
  <DESCRIPTION>[YN] Epic image of this observation (FITS)</DESCRIPTION>
</FIELD>
<FIELD ID="D" name="Label">
  <DESCRIPTION>Product label</DESCRIPTION>
</FIELD>
...
<DATA><TABLEDATA>
  <TR>
    ...
    <TD>application/votable+xml;content=datalink</TD>
    <TD>http://vizier.u-strasbg.fr/viz-bin/nph-htx?myimage3145</TD>
    <TD>image 3145 datalink
```



Discussion

- Pros :

- Utype/ucd complementarity
- Allows variability from line to line
- Full description
- Reuses ObsCore.

- Cons

- Requires adding fields (or params) and a group
- Do we really need a standard for that ? Use obscure names ?

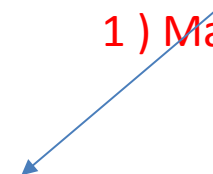


```

<RESOURCE type="results">
  <INFO name="QUERY_STATUS" value="OK"/>
  <TABLE>
    <DESCRIPTION>SpeX Prism Library. Published spectra.</DESCRIPTION>
    <PARAM name="Creator" utype="ssa:DataID.Creator" datatype="char" arraysize="*" value="SVO"/>
    <PARAM name="DataSource" utype="ssa:DataID.DataSource" datatype="char" arraysize="*" value="survey"/>
    <PARAM name="CreationType" utype="ssa:DataID.CreationType" datatype="char" arraysize="*" value="archival"/>
    <PARAM name="Publisher" utype="ssa:Curation.Publisher" datatype="char" arraysize="*" value="SVO/CAB"/>
    <PARAM name="PublisherID" utype="ssa:Curation.PublisherID" datatype="char" arraysize="*" value="ivo://svo.cab"/>
    <PARAM name="PublisherDID" utype="ssa:Curation.PublisherDID" datatype="char" arraysize="*" value="ivo://svo.cab/cat/spex"/>
    <PARAM name="Reference" utype="ssa:Curation.Reference" datatype="char" arraysize="*" value="http://svo2.cab.inta-csic.es/vocats/v2/spex/documentation.php"/>
    <PARAM name="Contact.Name" utype="ssa:Curation.Contact.Name" datatype="char" arraysize="*" value="Enrique Solano"/>
    <PARAM name="Contact.Email" utype="ssa:Curation.Contact.Email" datatype="char" arraysize="*" value="esm@cab.inta-csic.es"/>
    <PARAM name="input:RA" datatype="double" value="180.000000"/>
    <PARAM name="input:DEC" datatype="double" value="0.000000"/>
    <PARAM name="input:SR" datatype="double" value="20.000000"/>
    <PARAM name="input:VERB" datatype="int" value="2">...</PARAM>
    <FIELD name="RA" ucd="POS_EQ_RA_MAIN" unit="deg" datatype="double">...</FIELD>
    <FIELD name="DEC" ucd="POS_EQ_DEC_MAIN" unit="deg" datatype="double">...</FIELD>
    <FIELD name="dis" ucd="POS_ANG_DIST_GENERAL" unit="arcsec" datatype="float">...</FIELD>
    <FIELD ID="name" name="name" ucd="ID_MAIN" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD name="name_link" ucd="meta.ref.url" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="name2m" name="name2m" ucd="" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="jmag" name="jmag" ucd="" unit="mag" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="hmag" name="hmag" ucd="" unit="mag" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="ksmag" name="ksmag" ucd="" unit="mag" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="optspty" name="optspty" ucd="" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="nirspty" name="nirspty" ucd="" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="ref" name="ref" ucd="" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD ID="dateobs" name="dateobs" ucd="" unit="" datatype="char" arraysize="*">...</FIELD>
    <FIELD name="access_format" ucd="meta.note" utype="obscure:Access.Format" type="hidden" datatype="char" arraysize="*">...</FIELD>
    <FIELD name="access_url" ucd="meta.ref.url" utype="obscure:Access.Reference" datatype="char" arraysize="*">...</FIELD>
  <DATA>
    <TABLEDATA>
      <TR>
        <TD>181.9465583</TD>
        <TD>2.7402583</TD>
        <TD>12099.007703582</TD>
        <TD>SDSS J120747.17+024424.8</TD>
      </TR>
      <TR>
        <TD>
          http://simbad.u-strasbg.fr/simbad/sim-basic?Ident=SDSS+J120747.17%2B024424.8
        </TD>
        <TD>J12074717+0244249</TD>
        <TD>15.58</TD>
        <TD>14.561</TD>
        <TD>13.986</TD>
        <TD>L8</TD>
        <TD>T0</TD>
      </TR>
      <TR>
        <TD>
          Looper, Kirkpatrick, and Burgasser (2007) AJ, 134, 1162
        </TD>
        <TD>2006 Dec 21</TD>
        <TD>application/x-votable+xml;content=datalink</TD>
      </TR>
      <TR>
        <TD>
          http://svo2.cab.inta-csic.es/vocats/v2/spex/dl.php?ID=SDSS+J120747.17%2B024424.8
        </TD>
      </TR>
    </TABLEDATA>
  </DATA>
</TABLE>

```

SVO Example .
Cortesy of Carlos Rodri
1) Main Table




```

</FIELD>
▼<FIELD ID="semantics" arraysize="*" datatype="char" name="semantics" ucd="meta.code">
  ▼<DESCRIPTION>
    What kind of data is linked here? Standard identifiers here include science, calibration, preview, info, auxiliary
  </DESCRIPTION>
</FIELD>
▼<FIELD ID="content_type" arraysize="*" datatype="char" name="content_type" ucd="meta.code.mime">
  <DESCRIPTION>MIME type for the data returned.</DESCRIPTION>
</FIELD>
▼<FIELD ID="content_length" datatype="long" name="content_length" ucd="phys.size;meta.file" unit="byte">
  <DESCRIPTION>Size of the resource at access_url</DESCRIPTION>
  <VALUES null="-1"></VALUES>
</FIELD>
▼<DATA>
  ▼<TABLEDATA>
    ▼<TR>
      <TD>2MASS J11463232+0203414</TD>
      ▼<TD>
        http://svo2.cab.inta-csic.es/vocats/v2/spex/ssap.php?ID=2MASS+J11463232%2B0203414&label=spec_vot
      </TD>
      <TD>Spectrum (votable)</TD>
      <TD>#this</TD>
      <TD>application/x-votable+xml</TD>
      <TD>-1</TD>
    </TR>
    ▼<TR>
      <TD>2MASS J11463232+0203414</TD>
      ▼<TD>
        http://svo2.cab.inta-csic.es/vocats/v2/spex/ssap.php?ID=2MASS+J11463232%2B0203414&label=spec_txt
      </TD>
      <TD>Spectrum (ASCII)</TD>
      <TD>#auxiliary</TD>
      <TD>text/plain</TD>
      <TD>-1</TD>
    </TR>
    ▼<TR>
      <TD>2MASS J11463232+0203414</TD>
      <TD>http://adsabs.harvard.edu/abs/2004AJ...127.2856B</TD>
      <TD>Reference: Burgasser et al. (2004) AJ, 127, 2856</TD>
      ▼<TD>
        http://www.ivoa.net/rdf/Vocabularies/UCD#Metarefurl
      </TD>
      <TD>text/html</TD>
      <TD>-1</TD>
    </TR>
    ▼<TR>
      <TD>2MASS J11463232+0203414</TD>
      <TD>http://pono.ucsd.edu/~adam/browndwarfs/spexprism/</TD>
      <TD>Reference: SpeX Prism Library web page.</TD>
      ▼<TD>
        http://www.ivoa.net/rdf/Vocabularies/UCD#Metarefurl
      </TD>
      <TD>text/html</TD>
      <TD>-1</TD>
    </TR>
  </TABLEDATA>
</DATA>

```

SVO Example .
Cortesy of Carlos Rodri
2) Datalink Table



Semantics Field

Semantics tells what's the status of the resource we link to the dataset with respect to it

- This ---> an avatar of the record itself
- Preview ---> a preview of the dataset
- Cutout, proc ---> service applied to the dataset
- Auxiliary ---> associated file
- ----> usefull to say that the associated file is a TimeSeries, a spectrum, or a text/html description

Proposal : add spectrum, image, TimeSeries etc ... to the auxiliary branch

Other semantics Fields propsoed by Markus :

How do we adopt them ? Erratum-like process ?



□ Description and Descriptor / table relationship

- + Description field very useful to distinguish fields with the same semantics (see Chaitra Talk)
---> recommend adding it

- + In general service descriptor addresses all the main table lines
How to process Service descriptors in {links} resource ?
Can be managed but....

- In DataLink Next : replace that by service autodescription ?
To simplify management of links resource rows
- + Local URIs = paths in filesystem or





SIKV2 feedback

+ COLLECTION, FACILITY, INSTRUMENT
INPUT PARAMETERS :

- Values are unknown.

+ Virtual data discovery :

- Have SIAV2 + SODA in one shot
- Additional parameter to tackle this ?

+ Service with SIAV2 and SIAV1 at the same time

- Two different endpoints or VERSION parameter





SODA feedback

- + Feedback is poor. With Aladin interface
 - + GAVO is working fine
 - + CADC sometimes fails
 - + CASDA
 - probably only working in script mode at the moment
 - + ALMA, LOFAR didn't implement it for the moment

