*Fig. 1*


*Fig. 2*

# 1. Async "AccessData"

(cf. Fig. 1)

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(cf. Fig. 2)

datalink service definition
+
UWS
=
Window to complex server-side data processing
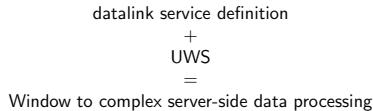
This is a brief report on an experiment to see what it takes to let my "AccessData" (server-side data processing) services work asynchronously. Turns out, not much on the spec side; what needs to be defined is:

- Async service discovery
- UWS details

(cf. Fig. 3)

# 2. Discovery in Datalink

Declare together with sync endpoint?

+ no repetition of metadata when parameters are identical (as in TAP)

- either all AD services have to support async or there'd need to be some fancy technique to sense async capabilities

⇒ make async separate service in datalink definition. StandardIDs tell clients how to talk to them.

# 3. Datalink Example

```
<RESOURCE ID="apptmeh" type="meta" utype="adhoc:service">
  <GROUP name="input">
    <PARAM datatype="float" name="DEC_MIN"
      ucd="par.min;pos.eq.dec" unit="deg" value="">
        <DESCRIPTION>The latitude coordinate, lower limit</DESCRIPTION>
        <VALUES>
          <MIN value="15.9438963186"/>
          <MAX value="15.9638963473"/>...
    <PARAM datatype="float" name="DEC_MAX"
      ucd="par.max;pos.eq.dec" unit="deg" value="">...
  <PARAM arraysize="*" datatype="char" name="standardID"
    value="ivo://ivoa.net/std/SSDP#sync"/>

<RESOURCE ID="apptmel" type="meta" utype="adhoc:service">...
  <PARAM arraysize="*" datatype="char" name="standardID"
    value="ivo://ivoa.net/std/SSDP#async"/>
```

Full record[1]

Known bug alert: The published service currently produces identical IDs for the two service declarations. A fix is being brought online RSN.

# 4. Service Operation

No excitement, plain UWS just works.

For want of an actual client, try

```
curl -L \
  -F ID="ivo://org.gavo.dc/~califa/datadr2/UGC12519.V500.rscube.fits" \
  -F LAMBDA_MIN=3.8e-07 -F LAMBDA_MAX=3.801e-7 \
  http://dc.zah.uni-heidelberg.de/califa/q2/dl/dlasync
```

(you can operate the job with your browser from
http://dc.g-vo.org/califa/q2/dl/dlasync).

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[1] `http://dc.zah.uni-heidelberg.de/califa/q2/dl/dlmeta?ID=ivo%3A%2F%2Forg.gavo.dc%2F%7E%3Fcalifa%2Fdatadr2%2l`