UWS comments and proposition from usecases by VOParis & CNES

Jonathan Normand, Pierre Le Sidaner

Observatoire de Paris

Jean-Christophe Malapert
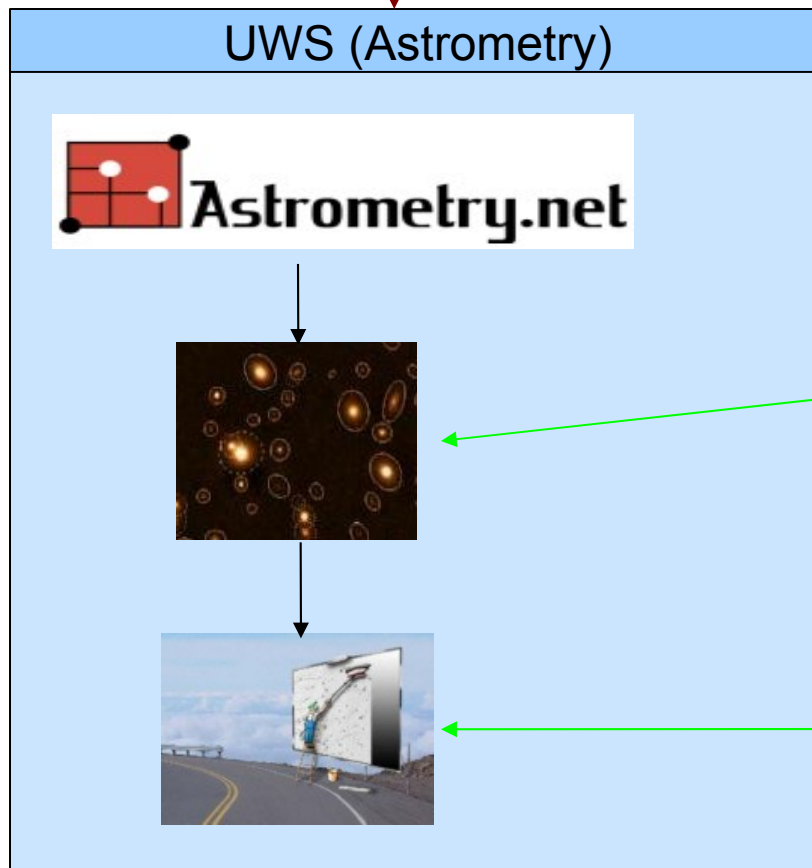
CNES

Context

SI TOOLS 2
INFORMATION SYSTEM TOOL

Create jobs / Get Jobs status

UWS (Astrometry)

Astrometry.net

take the result of astrometry.net to compare source extraction (sextractor) with catalogues and make polynomial approximation of correction

projection in tan plane using swarp

Context

- Others UWS services at Observatoire de Paris:

  - Astrocheck service to validate astrometry

  - Skybot process in progress

Step by step protocol pb

- ## Section 2.2.1 Job

  - o HELD is useless : a job is stopped and can not be automatically executed = suspended. If job is started it's anyway in the queue

  - o Aborted and suspended is enough

- ## Section 2.1.11 parameter list

  - o To many choices => to complex in use. 3 possibilities to add parameters in rest service, 3 solutions for no reason

  - o No way to remove a parameter

  => How clients know behavior of a server

  why don't use something conforms to REST philosophy (one url + one verb = one action).

Section 2.2.3.1 Creating a Job

The paragraph is clear until "One use of this facility might be to have the job placed into a potentially running state by adding PHASE=RUN to the job creation step." => two ways to run a job

Why don't you want to use REST as it Is made for : One URL + one verb = One action.

Running a job is done further on

Section 2.2.3.2 Deleting a Job.

o Why sending job list after delete? Could be long.

o Unique sol : DELETE /{job}/{job-id}

   Tunneling API exists for server application to handle delete.

o One action …

Step by step protocol pb

Services description

Practical example

Extentions

Service response

- **Section 2.2.3.2 & 2.2.3.3 Changing duration & destruction time**

  As I don't see the real interest of this feature. What the service should respond if not implemented ?

- **Section 2.2.3.5 Starting a Job**

  If you **MAY** start a job using … how you must start a job ?

- **Section 2.2.3.6 Aborting a Job**

  In REST to abort a job, we just could use an uri as /{jobs}/(job-id)/abort, why adding phase=abort as parameter ?

Virtual Observatory
Paris Data Centre

cnes
CENTRE NATIONAL D'ÉTUDES SPATIALES

Services description

Step by step pb

Practical example

Extentions

Service response

UWS document proposes you two way to run a job Astrometry
1) in 3 steps
    - Create the job post of /astrometry
    Action is redirect to /astrometry/job-id
    - setting parameter to the job, there is **3 options**
    Post on /astrometry/job-id parametrer-name=value
    Post /astrometry/job-id/parameters parameter-name=value
    Put /astrometry/job-id/parameters/parameter-name
    Run the job with a Post
    /astrometry/job-id/phase with parameter phase=run

2) But you can also do 3 phases on one
    - post /astrometry with param and phase=run

What is the interest of implementing 3 methods for one action !
You make 3 more time to understand the document
and 6 more time to implement (client + server)
REST is one URL one action not 3.

Services description

Step by step pb

Practical example

Extentions

Service response

➤ Need ROA (Resource Oriented Architecture) design (too many actions for one resource, status not well defined)

➤ Need sequence diagrams

➤ Need to upload files

➤ Need pagination capability for job list

➤ Need a simple way to describe the REST web service

To be compliant with ROA methodology

A REST service is based on ROA (Resource Oriented Architecture) :

- Creating a domain model such as OOA/D
- Deriving a resource model from the first step
- Defining unique identification of the resource
- Defining for each resource which HTTP methods are supported
  and what service(s) they provide
- Defining method status
- Defining the formats of representation exchanged between your
  server and client applications

Example :

Resource name
Resource identifier
Resource Verb : HTTP status : Representation

- Status meaning - Resource description

See resources model that we propose Or text format

The Evolution asked for UWS

➤ File upload capability (multipart/form-data)
to use UWS from desktop, upload configuration files
(application/x-www-form-urlencoded is not enough)

➤ JDL description by the use of WADL
(allows a larger user community)

➤ Sequence diagrams are needed to explain
when resources can be handled during the UWS process

➤ Pagination at job list level to handle long job list