An Archive in the VOSphere
Experimenting with VOVIEW and SAMP

Data Providers mind User Experience

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VOVIEW

ESO Archive: still using the WDB (1994) query engine which allows html, ascii, and (2006) votable output

How to improve user experience on result page?

VOVIEW greatly improves the user experience:

- Client-side moving, hiding, selecting, sorting columns
- Client-side pagination
- Client-side filtering (via XSLT)

VOVIEW: proved very easy to integrate with WDB

VOVIEW (2)

- Typical VOVIEW criticisms:
  - Entire votable dowloaded first
  - Not good to support millions of records
  - Better to paginate on the server side

- Answers:
  - Browsing archival data (not catalogs) is a different thing.
  - Nobody wants to browse/visualise/sort/etc. 100,000+ product records (no scientific analysis involved)
  - Browsing up to ~10-20,000 records seems reasonable
  - Archive requirement is to handle max 50,000 records
  - VOVIEW handles up to 50/100,000 records very efficiently

SAMP

- Extremely easy to plug in and use
  - once you have the VOTable required by voview

- Astronomers benefit interoperability:
  - Improved visualisation, interactivity
    - E.g., display of footprints onto all-sky surveys (Aladin), overlay other catalogs, etc.
  - Selection of data products in VO apps (TOPCAT, Aladin, VOPlot, etc) result into records marked for data retrieval in the VOVIEW web browser.

A nice archive paradigm

- Clear and clean separation on what the archive developers should do, and what they shouldn't

- Archive focuses on providing the necessary metadata in the usual way (browsers)
  - Votable: observation metadata, preview images, footprints

- High level functionalities are left to SAMP-aware tools
  - Table manipulation (voview), visualisation, overlay, inspection, cross-matching, etc. (topcat, aladin, voplot, etc).

- Astronomers can choose the tools they like the most
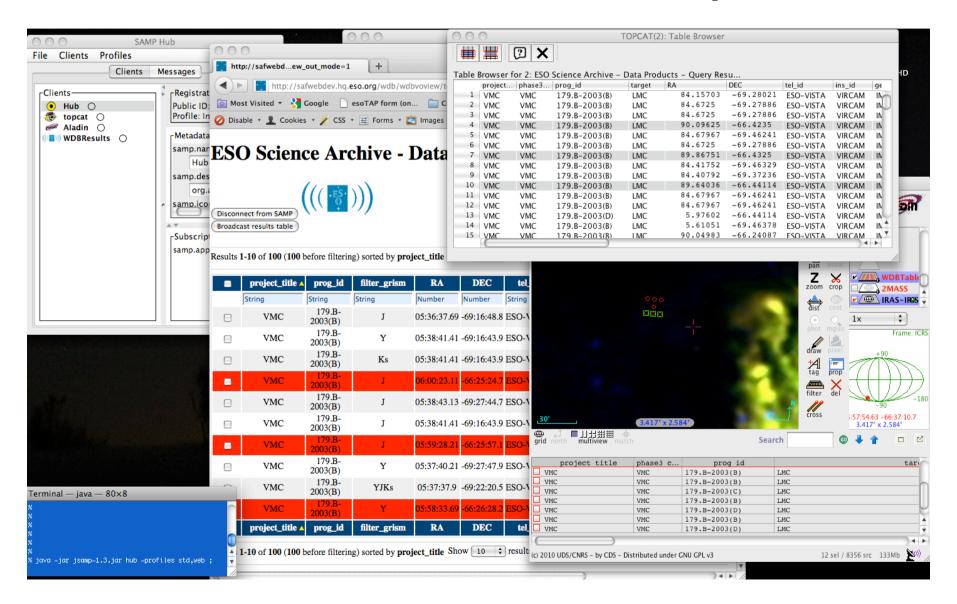
- Improved user experience

A little experiment

I used:

- JSAMP (M.Taylor) with web profile activated

- Some javascript (T.Boch) for SAMP callback functions

- VOVIEW (D.Hinshaw), installation and smart hints provided by F.Stoehr.

- JQuery to visualise/mark for retrieval records in VOVIEW

- In no time, I was up and running (thanks to all).

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Sub-optimal user experience

- Astronomers have to launch JSAMP

  – Should I use WebSampConnector instead?

- Same UI action in different apps results into different SAMP messages:

  – confusing to astronomers

  – complex for archive developers

User action	TOPCAT	ALADIN
Mouse hovering	None	Table.highlight.row
Click	Table.highlight.row	Table.select.rowList
Drag-a-box, create-a-subset	Table.select.rowList	Table.select.rowList

Conclusions

VOVIEW

- There is definitely room for VOVIEW in the VO world
- Easy to integrate with custom archive solutions
- Improved archive user experience
- Suggestion: integration with SAMP would be quite useful
- Plea: please do not drop VOVIEW development!

SAMP

It would seem useful if:

- All VO apps by default activate a web-profile hub
- Same UI actions in different applications could send same messages

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