



ADEC Feedback to IVOA on TAP/ObsTAP

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The ADEC and the VAO

- NASA Astrophysics Data Centers Executive Council (ADEC)
 - Coordinates activities of data centers and archives funded by NASA's Astrophysics Data Curation and Archival Research (ADCAR) program.
 - Members: ADS, HEASARC, IRSA, LAMBDA, MAST, NED, NSSDC, CXC, SSC
 - VAO attends meetings to foster a strong partnership
- VAO is representing the NASA/ADEC to the IVOA
- Archives and data centers are responsible for delivering VO-compatible services, *but they have limited resources.*
- VAO will support ADEC in developing services and validating them as part of its charter.



Implementation of TAP/ObsTAP

- ADEC reviewed ObsTAP in Summer 2012
- CXC and HEASARC implemented ObsTAP services
- Overall comments on TAP and ObsTAP
 - Both are seen as complex and require major investments
 - Scientific benefits to archives are not apparent
 - Appear to mix data discovery and data access mechanisms
 - Currently, the standard contains ambiguities and lacks adequate descriptions for certain types of observations and data products.

Specific comments on ObsTAP From CXC

- Design of service was difficult
- ObsTAP not aware of all data types
 - Current model used in identifying data types is heavily “image centric”
 - Created new data types for data products
- Limited support for different types of noise statistics
 - Created metadata element to describe Poisson noise
- Could not expose observations in a simple manner
 - Had to generate 7 times as many records as needed
 - Arose because CXC serves compound data sets
 - Could point to VO services or lists of items instead of pointers to data products
- But implementation was relatively straightforward once design workarounds were in place

Specific comments on ObsTAP From HEASARC

- ObsTAP addresses major limitations of VO standards for accessing HEASARC data. Devil is the details!
- ObsTAP is a discovery protocol but does not allow ‘automated’ context-free distributed data analysis.
 - This is fine!
 - Linked data will differ even when ObsTAP description is similar.
- What would make it easier for HEASARC to provide data:
 - Unambiguous support for pointers to Observations
 - Nulls
 - URLs -> directories
 - Clear description of what is to be done when multiple values of a controlled vocabulary are applicable: XMM OM image with optical and UV data in single file.
 - Not having to worry about geometry column in DB (probably more of an issue to some other sites).



Next Steps for ADEC

- Due to complexity of ObsTAP summarized here, ADEC will refocus on reviewing updated versions of other IVOA recommendations with a view to ensuring uniform implementation across all archives.

