Radio astronomy IG update

Mark Lacy, NRAO

The IVOA Radio Interest Group
(Chair: M. Lacy, Vice-Chair F. Bonnarel)

- Provides a platform for discussion of how best to integrate radio data into the VO, including development of use cases for data discovery, access and visualization.

- Identifies any metadata concepts needed by radio astronomy data that are not currently supported by the VO.

- Provides a well identified point of contact for radio projects with IVOA, and actively encourages their use of VO standards and protocols.

Implementation Note

- Intended to be an overview of VO services relevant to radio astronomy, and to provide a resource for future VO service providers.

- Includes "storytelling" from established radio astronomy VO implementations.

- Now in a fairly mature state on GitHub (https://github.com/ivoa/RadioVOImplementation)

Obscore extension

- To better serve the radio astronomy community, an extension to Obscore has been proposed. See following talks by F. Bonnarel and M. Kettenis.

Other activities

- In the US, we have been working with Arecibo Observatory, IPAC and the "CI Compass" NSF Cyberinfrastructure Center of Excellence to set up a TAP service to expose the vast archive of historic Arecibo radio astronomy observations.

- In Europe, the ESCAPE project continues to play an important role in organizing and funding VO services, especially for radio astronomy.

- We are also studying how to best incorporate pulsar/FRB and single dish data into the VO.

- In particular, the question of how best to represent time-dependent spectra in the VO is very relevant to representation of these types of data, and we expect to hold some meetings on this topic in the coming months, in collaboration with the time domain interest group.

Current VO holdings by collection – image data (including cubes)

Collection/Facility	SIA1	SIA2	TAP	Datalink	SODA	HIPS	MOC
ALMA		🟩	🟩	🟨			
Apertif (ASTRON)	🟩	🟩	🟩	🟩		🟩	🟩
ASKAP (CASDA)		🟩		🟩	🟩	🟩	
CGPS (CADC)	🟩	🟩		🟩	🟩	🟩	🟩
DRAO (CADC)	🟩	🟩		🟩	🟩		
FIRST (Skyview/GSFC)	🟩						
NVSS (Skyview/GSFC)	🟩						
LoFAR surveys (ASTRON)		🟩	🟩				
TGSS-ADR (ASTRON)		🟩				🟩	🟩
SKA (sims)						🟩	🟩
VGPS (CADC)	🟩	🟩		🟩	🟩		🟩
VLASS (CADC)	🟩	🟩		🟩	🟩		

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Current VO holdings by collection – source catalog data

Collection/Facility	ConeSearch	TAP
ALMA		
Apertif	✓	✓
ASKAP (CASDA)		
ATOA		✓
PSRDA		✓
CGPS (CADC)		
DRAO (CADC)		
FIRST (CDS/MAST)	✓	✓
NVSS (CDS)		✓
LoFAR surveys (ASTRON)	✓	✓
TGSS-ADR (ASTRON)	✓	✓
VGPS (CADC)		
VLASS (CADC, CDS)		✓

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Current VO holdings by collection – correlated visibilities/raw SD data

Collection/Facility	ObsTAP	TAP	Datalink	SCS
ALMA			🟩	
Apertif				🟩
ASKAP (CASDA)	🟩			
ATOA	🟩			
PSRDA	🟩			
MWA	🟩			
DRAO (CADC)				
FIRST/NVSS (Legacy VLA)				
JIVE	🟨		🟨	
LoFAR surveys (ASTRON)				
VLASS (Jy-VLA)				
Nancay/NenuFAR	🟨	🟩	🟩	
INAF	🟨			
Arecibo Observatory		🟨		

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